

Montessori At Home!



**A Complete Guide to Doing
Montessori Early Learning Activities at Home
With 3-6 Year Old Children**

Third Edition

By John Bowman

montessoriathomebook.com

Montessori at Home!

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This information is offered as a guide and resource. Parents and children all have unique dynamics. Not every child will experience the same results from using the activities in this book. Not every parent will be successful doing learning activities at home. No claims or guarantees regarding the results of doing these activities is expressed or implied.

Safety Note

Safety is the first concern when working with young children. Many activities use small objects that are a choking hazard and are not appropriate for children under 3. Parents are responsible for their children's safe use of all materials. Do not allow your child to use materials if he or she has not developed the skills required to do so safely. Do not let your child use any material independently or alone unless you are certain he can do so safely.

Table of Contents

Introduction	4
Using this PDF eBook	7
Quick Start Guide	8
Maria Montessori and Early Childhood Education	9
Using Montessori Principles in Parenting	35
Parent's Guide To Using Learning Materials at Home	62
Practical Life	111
Sensorial	173
Art and Music	247
Digital Life	260
Science	272
Mathematics	349
Reading and Writing	394
Printables	435

Introduction



Welcome to a new adventure in parenting. I invite you to use this book to better understand your preschool age child and help her realize more of her potential. The activities shown here can have a dramatic positive effect on a young child's growth and development.

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It has been well over a century since Dr. Maria Montessori created the first Prepared Environment for 2-6 year olds. The approach she called a '*Help to life*' is carried on in over 20,000 Montessori schools spread all over the world.

Montessori preschools are wonderful, but not all children can attend one. If you understand and apply the principles of Montessori, your child can have many of the benefits of a Montessori school right at home. Wonderful learning materials can be made using common items you may already have, or which can be easily obtained. This book will show you how to put Montessori concepts into practice in your home; and how to provide your 2-6 year old with a wealth of excellent early learning activities and experiences.



Photo above: **Sorting activity**, Julie Josey



You do not need to be a trained Montessori teacher to help your child develop strong brain architecture, a positive self-image, and skills that will give him a head start for success in school. Read the information and follow the directions here and you will see your child respond. Do activities in a spirit of fun and discovery, letting your child explore freely. Many of the best learning moments happen quite by accident.

Photo at left: **Letter Tracing**, Julie Smithey



Photo: **Pouring**, Julie Josey

Early learning is not done according to rigid schedules. Young children should have fun and the freedom to choose what they want to do and for how long. Montessori is all about *following the child*. If you and your child are having fun and your child is eager to learn and do more, you are on the right track. Be patient, be positive, and encourage your child's efforts.

The primary benefits of early learning activities happen *inside* a child. The first six years of life are a unique time of incredibly rapid brain development. The brain architecture your child is building is fluid and rapidly changing. Every experience opens new brain nerve pathways.

In my younger years, I was privileged to create Montessori Prepared Environments and help children use them. Like all Montessori Teachers, I watched children develop very rapidly when they have access to these experiences. My goal now is to show parents how to incorporate Montessori principles and activities into their family life. Many of these activities may seem very simple at first. It may take a leap of faith to see what they can do for your child. I encourage you to take that leap, create different activities, and watch for the spark of interest and focused attention that means you have hit the mark. When your child starts using activities regularly, she will surprise you.

There are many fabulous Mom Blogs with pictures and accounts of Montessori activities done at home. You will find photos from many of them in the pages here. They often show incredibly crafty materials of all kinds and can sometimes be intimidating. "*Where do I start? How do I find the time to make all these things? I'm not terribly crafty, how can I do Montessori activities at home? How can I organize all this information?*"

These are questions many parents have. Rest assured, any Mom or Dad who sincerely wants to help her child learn can do the activities in this book. Young children are not impressed by incredible crafts. They just want to get their hands on activities and get started. It is easy to make very nice materials using common items. This eBook will show you how. All the information you need is organized here in an easy to read and use eBook you can refer to for years as your child grows. To get started, read the early chapters and use the **Quick Start Guide** on page 8. By the way, **Dads can do Montessori at home, too!** Parental and work roles have evolved. Dads can be excellent home teachers. Your kids will love sharing experiences with you. They are only kids once!

Parents often ask, "*What are the essential things I need to remember when doing learning activities at home?*" Here are some core Montessori principles to keep in mind:

- **Early learning should be a natural, fun process of exploration, discovery, and gradual mastery of skills.** Pressure and stress have no place in early learning.
- **Read the first chapters to see what it's all about and what materials will probably be appropriate for your child. Make different materials available, observing your child for sparks of spontaneous interest and focused attention.** That spark is like starting a campfire - small at first, but with the proper encouragement it becomes a flame. As your child finds more materials of interest and spends time using them, his ability to *concentrate* will improve. This is the key to Montessori.
- **Allow your child uninterrupted time to work with and repeat favorite activities.**
- **When your child masters an activity or skill, provide something slightly more challenging.**
- **When your child shows a spontaneous interest in numbers and words, start the Math and Reading Sequences.**
- **Follow your child's interests from day to day.** Montessori is about following the inner teacher in each child that guides their development. We don't make lesson plans to decide what children should learn and when. Instead, we encourage children to trust themselves and their own instincts, interests, and abilities. Montessori creates confident, independent people who welcome new challenges.

Will every activity go perfectly? Of course not. They don't in Montessori schools, either, so don't worry. Preschoolers are in a unique time of life, enjoy it with them. As long as you are trying new things, giving your child the freedom to follow her interests, and having fun, you are on your way. When your child has frequent opportunities to find materials that arouse his spontaneous interest and attention, he will surprise you.



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Using this PDF eBook

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Quick Start Guide

There is a lot of information here, and Montessori does take some explaining and understanding. That doesn't mean you can't get started pretty quickly. Use this guide for doing your first activity:

1. **Read the first three chapters.** This is the basic information you should be aware of before you start doing Montessori activities. It won't take long, I promise.
2. **Check out pages 70-72 and page 75.** This will help you narrow down your search for a first activity. Start with a simple **Practical Life** or **Sensorial** activity. Look over the activities in this eBook with your child and let her choose one she is interested in. Let her help you get the materials together and prepare. Montessori is about following the child, so this will be good practice.
3. **Have your child make a work area.** Let your child lay down a placemat at a table or a small rug on the floor as a work area, depending on the type of activity you've chosen. This will be a great introduction to the **Activity Cycle** (page 84).
4. **Let your child bring the activity to the work area and use it.** Give her a quiet little demonstration if needed and then turn the activity over. Let her use it as long or short a time as she likes. Don't worry if this trial run ends pretty quickly. There will be plenty of time for things to click when your child gets used to this.
5. **When your child is finished, have him put the mat or rug away, then let him pick a place in his room to place the material.** If you're not quite comfortable with this yet, or don't have a spot in your child's room, tell your child you will keep the material on a shelf in the kitchen or somewhere else so she can use it again when she wants to.
6. **When you can, set up low shelves in your child's room or elsewhere to display her materials for easy access (see pages 76-81).** Get a small table and chair.

Follow these steps with each new material.

Soon, you will have a great home Montessori school.

People will be asking you how you did it!

Maria Montessori & Early Childhood Education



“The most important period of life is not the age of university studies but the first one, from birth to the age of six. For that is when man’s intelligence itself, his greatest instrument, is being formed.”

Maria Montessori

“Early environments and experiences have an exceptionally strong influence on brain architecture.”

The [Center on the Developing Child](#), Harvard University

Dr. Maria Montessori 1870 - 1952



Today we understand that young children are in their most formative years. We know children learn rapidly from birth to age six, and realize the importance of **early childhood education**. We buy learning toys, download educational iPad apps, visit Mom Blogs for activity ideas, and try to help our children understand their world. Day care is not enough; we want preschool activities for our children.

How did we get here? One woman, **Dr. Maria Montessori**, started it all. Beginning around 1900, she developed a new, radical view of early childhood as the most important period of human development. She gave the world a new understanding of young children and what they need to develop optimally and realize more of their true potential. She created a unique approach to doing this that has been used in over 20,000 **Montessori schools** with great success for over a century. This book will help you use the Montessori approach at home.

Montessori's Observations of Children



In 1900, young children were considered to be cute, sometimes misbehaving little curiosities that were to be mostly seen and not heard. Then **Dr. Maria Montessori** turned her attention to them. Her observations, methods, and materials totally changed the way we look at young children and defined the fields of early childhood development and education for future generations.

Maria Montessori was the first woman to receive a medical degree in Italy's history. She started working with children with learning and other disabilities. Trained as a scientist, Montessori began observing the children to see what she could learn. These children had been written off as unable to learn; but Montessori achieved remarkable results. Since her methods worked

so well, Montessori decided to see how more normally developed children would respond. This was the beginning of her life's work.

Montessori based her approach on her **observations** of children. She started by observing children to understand their natural patterns of growth and development. Let's look at Montessori's major observations. Quotes are from Maria Montessori unless noted.

The Inner Teacher

"We discovered that education is not something which the teacher does, but that it is a natural process which develops spontaneously in the human being."



By age six, children become individuals ready to live in the time, place, and culture of their birth. Young children spontaneously learn to walk, understand and speak their language, think, control their movements, and learn basic life skills at about the same times in their development. Montessori saw that an inner teacher and guide lives in each child, leading development according to a natural pattern. Montessori believed that *trusting the inner teacher* should be the first principle of education. Rather than lead the child, she decided to '**follow the child**'. Photo: **Julie Josey**

Movement

"Watching a child makes it obvious that the development of his mind comes through his movements."



Montessori observed that young children are constantly moving and "*taking possession of the world with their hands.*" She saw that **movement is intimately tied to development** in early childhood. Learning to purposefully control and coordinate movements directly develops a child's brain. Through movement a child acts on the world and makes discoveries.

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Independence

“Little children, from the moment they are weaned, are making their way toward independence.”



Montessori observed that young children are highly motivated to become independent and do things for themselves. They eagerly respond to the chance to practice and master life skills. **Children have an inner sense of urgency to become independent, functional people.** They want to learn to use their bodies and minds, do practical life tasks by themselves, learn about numbers and words, and understand their world. All

their activities are a reaching out to create people who are prepared to take their place in life. One child famously asked Montessori to “***Help me do it myself.***”

Photo: Building their own sandbox, **Julie Josey**

Absorbent Mind

“Whereas an adult admires their environment a child completely absorbs it. This absorption transforms the child and forms part of his or her soul.”



Montessori observed that young children, rather than acquiring information in a logical, linear fashion like adults, absorb inputs from their environment **globally, from all directions at once. Their brains function differently** than at any other time of life. Montessori suggested that when a child is focused on repeating an activity, she is doing the inner work of creating fundamental brain structures that she will use for life.

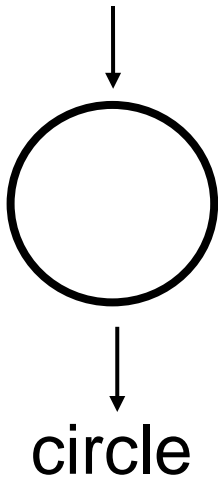
This assertion has been confirmed by modern neuroscience (page 26). A young child’s brain opens new **brain nerve pathways** with stunning speed every second for years. Young children absorb their environment into themselves until they are a fully participating part of it.

Photo: Cleaning a horse 'Montessori style' at [Discovery Days and Montessori Moments](#)

“There is in a child a special kind of sensitivity which leads him to absorb everything about him; and it is this work of observing and absorbing that alone enables him to adapt himself to life.”

Concrete Experience

“The hands are the instruments of man’s intelligence. The human hand allows the mind to reveal itself.”



Above: *Progressing from concrete to abstract: circular objects, a graphic image, a word that stimulates thoughts of roundness.*

Photo: **Apple slicing** activity at
Counting Coconuts

Montessori saw that young children primarily need **concrete** experience - contact with **three dimensional objects**. Real world experience must come first in order for a child to later learn to use **abstract thought** (p. 90). For example, before a child can understand the *concept* of roundness and *visualize* a circle mentally, she must first handle numerous circular **objects** with her hands as she looks at them. The sense impressions need to come first. Once a child has received enough direct sensory impressions of the world, he gradually becomes able to consider objects and ideas in the *abstract* as images, thoughts, and eventually words. This is illustrated at left.

An architect conceives of a design mentally, makes drawings and blueprints, then builds a building. He works from the **abstract to the concrete**. A young child works the other way, from the **concrete to the abstract**.

She handles an object, absorbing its qualities through her senses. Soon, he recognizes the object’s shape in drawings and photos. Finally, she learns to associate the object’s qualities with words. This sequence is especially important as it relates to computers, tablets, and other video screen devices. Montessori saw that children, “*Take possession of the world with their hands.*” She recognized that children

need to explore their world by holding it in their hands. This became the theme of her **Prepared Environment** (page 17).

Play as Work

“The child can develop fully by means of experience in his environment. Such experience is not just play; it is the work he must do in order to grow up.”



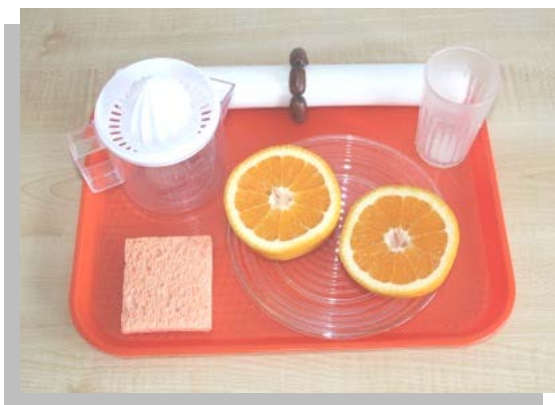
As she closely observed young children, Montessori developed a deep respect for what we call their play. She realized that children's spontaneous actions are not random or disorganized. She saw that **children's play is directed** at accomplishing their prime objective: creating an independent individual ready to live in the time, place, and culture into which she is born.

Photo: Using home-printed **Three Part Cards** at [Discovery Days and Montessori Moments](#)

The **Prepared Environment** that Montessori created for children is designed to help children find experiences closely aligned with their naturally expressed developmental needs. A Montessori school provides materials, time, and the freedom to explore. You can give your child these experiences at home, also.

Concentration & Normalization

“The first essential for the child's development is concentration.”



Photos: Squeezing orange juice at [Counting Coconuts](#)

At left above is a very nice Montessori **Practical Life** (page 111) material. It is self-contained on its own tray and includes a work mat, clean up sponge, and everything else a child needs to squeeze juice. Materials like this attract children by their design and the promise of new, fun things to do. Mastering the activity requires concentration, seen in the photo of the child at right. **Concentration** is the key to learning.



When Montessori gave children the materials she designed for them, she made a major discovery. Two year olds used the materials with **extended concentration**. This focused attention was previously considered impossible for a young child. Montessori realized that when given materials and experiences that feed their need to develop their brains and bodies, young children are capable of great attention and concentration. [Blog post on Concentration & Normalization.](#)

Photo: Concentrating on a **cylinder block** at [Discovery Days and Montessori Moments](#)

As she watched children develop their powers of concentration, Montessori made another major observation. These children gradually became **calmer, happier, and more confident**. Whatever behavior issues they may have had started to recede as **calmer, more secure children** emerged. As children worked in the Prepared Environment, using materials and learning how to interact with and respect each other, Montessori saw them developing certain characteristics. These included:

Concentration Love of work Sociability Self-discipline

Montessori believed that young children who have opportunities to develop these characteristics will, as adults, more easily find their natural areas of work and interest. Montessori called this transformation in the children **Normalization**.

“Normalization is the single most important result of our work.”

The ability to concentrate allows a child to learn anything more easily. This is one reason children in Montessori schools often learn to read, write, use numbers, and understand science concepts before they enter kindergarten or elementary school.



“ The more the capacity to concentrate is developed, the more often the profound tranquility in work is achieved, then the clearer will be the manifestation of discipline within the child.”

Photo: Focused on **Spice Grinding** at [Tot School](#)

Sensitive Periods

A sensitive period is a time when a child becomes especially interested in learning about and experiencing a specific aspect of his environment.



Photo: A cooperative **Calendar Activity** at [The Education of Ours](#)

Montessori borrowed the term **Sensitive Periods** to define naturally occurring times in a child's development when the child is highly attuned to learning about a specific aspect of the environment, and actively seeks out experiences that help her to do so. Montessori identified a number of Sensitive Periods in young children, for such things as: **order, language, numbers, small objects, motor skills, spatial relationships, writing, and more.**

Modern neuroscience has confirmed the existence of these critical periods of heightened sensitivity and ability to process information about a specific aspect of the environment. In Montessori, we **observe and follow the child**. By doing this, we see when he shows an intense interest in certain types of activities, skills, and information. We can then provide activities in that area during the sensitive periods.

The time from birth to around six years of age can be thought of as one big sensitive period. At no other time of life are we more open to absorbing information about our world and mastering the skills needed to function in it.

"...specific experiences affect specific brain circuits during specific developmental stages – referred to as sensitive periods – it is vitally important to take advantage of these early opportunities in the developmental building process."

The Center on the Developing Child, Harvard University

"When one of these psychic passions is exhausted, another is enkindled. Childhood thus passes from conquest to conquest in a constant rhythm that constitutes its joy and happiness."

Maria Montessori

Sensory Experience

"There is nothing in the intellect that was not first in the senses."
Aristotle



After observing that children need to experience the world through their hands and their other senses, Montessori developed **Sensorial Materials** (page 173), like the **Pink Tower** shown in use at left. These teach simply by being handled; and involve a child in making **comparisons and decisions** based on sensory information. This opens up millions of new brain nerve pathways, encourages concentration, and refines and educates a child's senses.

Photo: Working with the Pink Tower, *Discovery Days & Montessori Moments*

In a Montessori school, the **Practical Life** and **Sensorial** materials are the foundation of the program for 2-6 year old children. These activities help children focus their attention, develop their ability for abstract thought, control and coordinate their movements, educate their senses, and build their self-confidence. Children who have access to these experiences from 2-4 years of age find mathematics, reading, and writing to be natural extensions of skills they have already developed. The foundation of skills and knowledge is already there.

The Prepared Environment



The Montessori School of Los Altos

After making her observations and developing her first materials, Montessori followed through on her work by creating the first **Prepared Environment**.

She saw that development is guided by nature in an intelligent, inner process. She wondered if it was possible to **help life** as it unfolds within the child. Rather than implement an educational philosophy designed by an adult, Montessori sought to nurture and help the **naturally occurring** developmental process that all children experience.

"This is education, understood as a help to life."

"To aid life, leaving it free, however, to unfold itself, that is the basic task of the educator."

She considered everything she had learned about young children: They absorb their environment. They want to be independent and need to move their bodies. They need sensory experience. They can learn to focus their attention, and doing so positively affects their personality development. Their play is the vitally important work of creating functional people. They need to learn to get along with others. What would you come up with considering all these observations?

Montessori decided to create something quite revolutionary: **an environment prepared just for young children**, containing all kinds of hands-on materials and experiences for them; a special place where they could grow and learn.

"The environment must be rich in motives which lend interest to activity and invite the child to conduct his own experiences."

She decided that this **Prepared Environment** would have specific characteristics, some of which are:

Child Sized Furniture



Montessori decided to use **child sized tables, chairs, shelves, and other furnishings**. This was a radical new idea for the time. Montessori felt that it was the adults who should look out of place in this children's environment, rather than the other way around.

The child sized furniture we see everywhere today started as Maria Montessori's idea for her Prepared Environment. Children see a beautiful environment created just for them and immediately respond to it.

Beauty and Order



Totara Hill Montessori Preschool

Montessori observed that children literally absorb their immediate environment. She designed the environment to be **beautiful, clean, and orderly**, so that the children would absorb these qualities. It would have natural light, attractive wooden furniture and materials in excellent condition, flowers in glass vases, works of art, and beautiful decorative items made of natural materials. Montessori planned for the children to take chief responsibility for keeping their special place clean and organized for use each day.

Free Choice with Responsibility



Children's Haven Montessori School

In the Prepared Environment, we trust that the natural process of development will express itself in a child's interests on a daily basis. Montessori felt that young children deserve to **freely choose what they want to do**, how long they work with an activity; and whether they work alone or with others. This shows **respect for each child's unique journey** within the universal process of early childhood development.

Montessori saw that children need to learn that they live in a world full of other people and must learn to get along with them. Each child needs to learn to exercise freedom, but with responsibility. They are free to do what they want to do, within limits that consider everyone's right to use the same space. To teach this, Montessori established a few simple rules for children in the Prepared Environment:

- If a material a child wants to use is being used, they must wait for it to be available.



The low shelves in a Montessori Prepared Environment that hold the children's materials are placed to create natural separations between areas: Practical Life, Sensorial, Language, Mathematics, Geography and Culture, and Music. Each material has its place on a shelf and is returned there after it is used.

Photo: [Gulfstream Montessori](#)



With a little creativity, parents can find places for low shelves where their child's materials can be displayed. It is not necessary to have all the materials in a Montessori classroom available at home all the time. A few well-chosen materials that fit your child's current interests can always be out. These can be supplemented with activities you do in the kitchen and around the home. As your child's interests change, the materials change along with them.

Photo: [Montesecrets](#)

Video: [Infants and toddlers in a Montessori school](#)

Mixed Ages

"Our schools have shown that children of different ages help each other. The small one sees what the elder one does and asks about it, and the older one gives an explanation. There is a sort of harmony and interchange of ideas between them which is not possible between an adult and a child so small. There is a natural mental osmosis between them. All the older children become heroes and teachers and all the small ones are great admirers."

Maria Montessori, The Absorbent Mind

Montessori's Primary level Prepared Environment is designed for use by a mixed age range of children from about 2 ½ - 6. Montessori discovered that, starting with birth to around 3, children develop in roughly three year increments. Each span of time has its own unique characteristics. Children communicate more effectively and develop their own natural patterns of behavior in a mixed age range group.

A Different Role for the Teacher



Markus Althoff



Abbamouse

Montessori trained her Teachers to take a different role than in traditional schools. A traditional teacher is the center of attention. She creates lesson and activity plans and **follows the program** each day. She usually works to keep a group of children all focused on the same task or project. The children learn to seek her approval and positive feedback. She is the primary source of knowledge and the children learn to be dependent on her.

A Montessori Teacher follows the naturally expressed interests of the children. **She follows the child**. She is an important element of the environment, but not the center of attention. She observes children, creates and helps maintain the environment, introduces and demonstrates materials, and works with children individually and in small groups. She helps children follow the simple rules of the Prepared Environment as they **freely move** about, **freely choosing** what they

want to do and working alone or with others. She is a **guide and facilitator** and helps children follow their naturally unfolding process of development as they learn and grow toward independence.

“The task of the teacher then becomes not one of talking but one of preparing a series of motives for activity spread in a specially prepared environment.”

Maria Montessori, The Absorbent Mind

One important thing a Montessori Teacher learns to do is nothing! In the Prepared Environment, children make their own discoveries and solve their own problems most of the time. This process gradually instills in each child **initiative** and a **sense of responsibility** for themselves, their choices, their learning, and their interactions with other children. Mistakes and errors are seen as instructive moments and learning opportunities, not a cause for alarm or criticism.

Key Points of Montessori

- Young children have an inner guide directing their development.
- Young children are strongly motivated to become independent people, ready for life.
- From birth to about age six, children have Absorbent Minds that accept sensory inputs from their environment readily. They absorb their environment until they are a functioning part of it.
- For young children, concrete experience with three dimensional objects they can hold in their hands and experience with all of their senses precedes the development of abstract thought.
- Children need to move in order to learn.
- The early years are the time to help children understand how to live cooperatively and positively in a world full of other people.
- Young children experience naturally occurring Sensitive Periods to learning about many different aspects of their environment.
- If we place interesting, developmentally appropriate materials in front of young children, they will respond by freely choosing those that most interest them, and are most helpful for their development, at any given time.
- When children find materials interesting enough to focus their attention on, they learn how to concentrate, which opens the door to all learning. Concentration promotes an internal discipline which helps a child become happier, calmer, and more satisfied with life.
- Young children absorb their immediate environment, so we need to make their spaces beautiful, clean, and orderly.

The Montessori Movement



From the simple beginnings of the first Prepared Environment, the popularity of Montessori's new approach to helping children spread all over the world. Montessori devoted her life to the cause of the child by training teachers, writing many books, and encouraging a new respect and appreciation for children as the future of our planet.

Montessori was a pioneer. She developed, explored, or pointed the way to many of the developments in education of the last century. The universal appearance of child sized learning environments in preschools, day care centers, and kindergartens is attributable to Montessori's Prepared Environment. We generally acknowledge now that young children are in a highly formative period of life and can learn rapidly and effectively. There are Montessori preschool and elementary programs in every country on earth. The materials Montessori created are still in use today, and fascinating children just as they did over one hundred years ago. How many things can you say that about?



Photo: Baking project, Julie Josey

Educators and parents have discovered that the Montessori approach encourages children to become **enthusiastic, self-directed learners**. Children in Montessori schools learn to trust their interests, freely explore, and take responsibility for their actions, their decisions, and their place as members of a larger society. By exploring all kinds of special, hands-on materials in an atmosphere of fun and discovery, children grow and learn.

You can bring many aspects of a Montessori experience into your home. Start by arranging your home and interactions to promote your child's natural interest in learning about the world. Then, you can make materials and activities that will help your child build strong brain architecture, develop a positive self-image and a love of learning, and master skills that will provide a great preparation for success in school and beyond.

The key to Montessori for 3-6 year olds is preparing **an attractive environment containing interesting objects they can handle and use** to accomplish real things. Then we encourage and support their interests and activities as they follow their Inner Teachers.

In Maria Montessori's Words

"Children are human beings to whom respect is due, superior to us by reason of their innocence and of the greater possibilities of their future."

"Concentration had never been recognized in children of three years, yet it is a basic factor because it means to take intense hold of the environment, item by item, exploring each one of them and dwelling on each of them."

"In a small child of three years that mysterious teacher which urges the child to work is still active within him; and when we speak of a free child we speak of a child free to follow the powerful guides of nature within him. These guides are extremely wise, and lead the child to seek exactness, precision, and the full achievement of what he undertakes."

"The natural laws of development compel the child of this age to experiment on the environment by the use of his hands...."

"The necessity of a prepared and well organized environment for the child and freedom for the child to expand its soul within it stands out very clearly now."

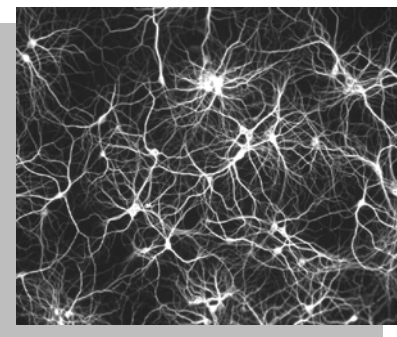
"The mind of man is a flame, an all-devouring flame, it is never still, but always active."

"The questions of children are also interesting if one considers them not as a nuisance, but as the expression of a mind seeking information."

"...each period lays the foundation for the next period. It is like the caterpillar and the butterfly...so different to look at and in their habits; yet the fineness of the butterfly is attained by the true life of the caterpillar it was before, and not by imitating...another butterfly. The more fully one period is lived... the more successful the next period will be...If the environment is favorable, the result is a strong healthy being."

"Children are less able to learn if they have not met with good conditions of development in the previous period. If a child has been neglected from 3 to 6 years, he may not have the moral conscience that develops from 7-12 years, or he may not have the normal intelligence."

The Neuroscience of Early Childhood



Much has been learned about children since Montessori developed the approach she called a “*Help to life*”. Of special interest to parents are the advancements in understanding what is happening in our children’s **brains** as they grow.

Early childhood is a unique period of brain development. At birth, your child had around one billion neurons, or nerves, in his brain – about the number of stars in our Milky Way Galaxy. Each brain nerve has many branches that connect with branches on other nerves. The possible nerve connections in a young child’s brain number in the *trillions*.

Nerves transmit electrical impulses. When your child takes in sensory impressions, thinks, moves a muscle, even dreams, new **electrical pathways** between brain nerves are opened. A young child opens as many as **700 new brain nerve pathways every second** during the first six years of life.

The young brain is fluid and changing. As your child gathers experience, brain nerve pathways are strengthened and reinforced. They become ‘superhighways’ for brain activity. Gradually, in the early years of life, these nerve pathways organize into what is called **Brain Architecture** - a network of critical nerve channels inside the brain.

The foundational brain architecture we use for life is formed by six years of age.

Starting around age six, another brain process begins. Nerve pathways that have not been opened and established begin to be *eliminated* in a process called **pruning**. As unused nerve pathways are pruned away, the brain architecture is revealed. Our brains retain a good deal of **plasticity**, the ability to change and adapt, throughout our lives. **It is only in the first years of life that brain nerve pathways open so freely and rapidly.** The brain architecture we use for the rest of our lives is largely in place by the time the pruning process begins around age six. We have just a few golden years in which to help our children develop the best possible brain architecture for life.

Executive level brain functions refer to higher level activities like:

- Focusing attention and filtering out distractions
- Controlling our impulses
- Making decisions
- Planning and revising plans as needed 'on the fly'
- Multitasking

The executive functions are the brain's 'air traffic control system'. They allow us to operate in our complex, busy world. As with brain architecture, the early years are especially critical for the formation of these brain capabilities. Early learning activities teach children these important brain skills.



Little House Montessori

Between the ages of three and six a lot of **rewiring** occurs in the brain. This is especially prominent in the areas involved with **organizing, planning, and focusing attention. These are three of the prominent features of Montessori activities.**

Montessori activities engage a child's **movements, attention, will, and sensory awareness.** This creates optimal conditions for the development of strong, efficient brain architecture. Combined with the

development of executive level brain functions, these are among the primary benefits of Montessori and other well-designed early learning activities. Children who have access to these experiences develop more efficient, capable brain architecture.

...“the quality of a child’s early environment and the availability of appropriate experiences at the right stages of development are crucial in determining the strength or weakness of the brain’s architecture.”

“The exceptionally strong influence of early experience on brain architecture makes the early years of life a period of both great opportunity and great vulnerability for brain development.”

The **Center on the Developing Child**, Harvard University

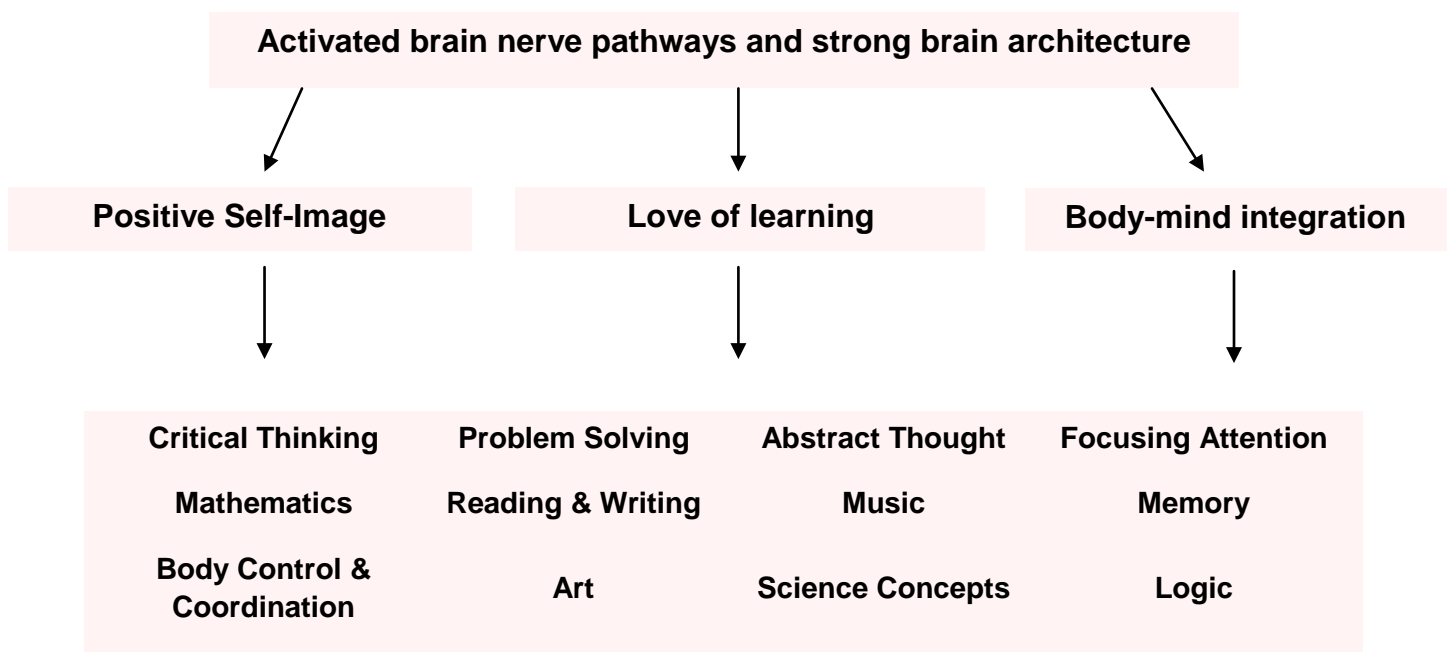
The Benefits of Early Childhood Education

The years from birth to six are the most formative period of a human being's life. At no other time are we more sensitive to our environment. The experiences young children have mold their brains and personalities. There are many things we can do to facilitate their development. Early learning is not primarily about reading, writing, math, or trying to create young geniuses. You never force a young child to learn, it does not work.

"It is true that we cannot make a genius. We can only give a child the chance to fulfill his potential possibilities."

Maria Montessori

The principal benefits of early learning activities happen **within the child**. Skills such as reading, writing, and using numbers are **byproducts** of strong brain development and a positive, confident self-image. They are the visible results of internal brain and personality development. Here is a graphic depiction of the process:



Let's look in more detail at some of the many benefits of early learning:

Positive Self-Image



A **positive self image** is just as critical as good brain development. Early learning activities provide challenges and a **series of successful experiences** as each one is mastered. Montessori activities are **sequential** in difficulty. The right material will be in your child's **Learning Sweet Spot** (page 72). The material will be initially challenging but continue to interest your child until the activity or skill is mastered. Each new success with subsequent materials adds to your child's self-confidence in approaching new challenges. An attitude of '***I can do this***' gradually becomes integrated into your child's personality. This is a wonderful gift for life.

A child with a great brain who does not believe in himself will not achieve his potential. A child with an average brain who has great confidence in her ability to master new tasks has a much better chance of success. A well developed brain, partnered with a positive self image, is a dynamic combination that allows a child to unlock their true potential.

[Blog post on developing a positive self image](#)

Young children do not acquire a positive self image because we pamper them or simply tell them they are smart and great. What makes young children confident is **mastering actual skills** and **learning useful information**. This makes them feel competent and in control of their environment. When a child has a series of successes with learning activities, a positive self-image becomes integrated into their personality. A strong brain, your unconditional love, and a positive self-image are among the greatest gifts you can give your child.

The benefits of helping a young child develop a confident, positive approach toward life and new experiences cannot be overstated. A child that becomes comfortable with reading, writing, math, and science in their early years will carry that confidence throughout their school years and beyond. Early learning is truly a gift for life. Our limitations are mostly in our minds. Early learning experiences help young children develop a self-confidence that stays with them. They become positive, confident adults who are open to life.

Muscle Control & Coordination



Young children first develop the large muscles of the legs, arms, and torso, which is called **Gross Motor** development. They then start working to control the smaller muscles of the arms, hands, and fingers - called **Fine Motor** development.

Gross motor activities include running, jumping, balancing, throwing, kicking, and hitting balls. Painting on a sheet of paper hanging on the wall is a gross motor exercise for the shoulders and arms; and a fine motor activity for the hands and fingers. Both types of activities are important. Children need lots of all of them.



Many of the activities here promote the development of fine motor skills by using the arms and hands to control objects. The culmination of these efforts comes when a child learns to use a **proper writing grasp**. All of the movements a child makes while using these materials are ultimately preparing the child for writing.

Photos: Shutterstock

Learning & Thinking



These are the skills we associate with school: **memorization, critical thinking, focusing attention, reading, writing, math, and science**. Many of the activities involve classification, sorting, and organizing. The movement and Practical Life skills activities develop coordination and an organized, efficient approach to tasks. Sensorial activities develop a child's ability to organize the environment using sense information. The Science activities introduce concepts of how the world works; and involve classification and organizing objects into groups based on common characteristics. The Math Sequence further promotes organizational skills as the child learns to work with numbers. The Reading Sequence helps the child master the decoding of written symbols, reading, and writing.

The ability to focus attention is critical for learning. Learning activities help your child focus her attention for periods of time on experiences that are interesting and educational. **Once concentration is a habit, learning soars.**

Watch the concentration of this 3 ½ yr. old.

Promoting Independence



Shutterstock

We love the feeling of being needed by our kids. Yet the great task of the young child is to create a fully functional, independent person. You can't fight Mother Nature. Every action of a child is a reaching out toward mastery of the environment and independence. Using learning materials will help your child to develop independence in constructive ways. Allow your child to do things independently as soon as he or she is able.

Independence flourishes when it is exercised. The ideas on pages 35-60 and in the Practical Life (page 111) section will help your child progress towards greater independence. Starting this process early will reap great rewards as your child gets older and can manage schoolwork and other responsibilities on his own.

Socialization



Before the age of about 2-3, children may watch other children play, but they typically focus on their own individual activities. Starting around three, children begin playing cooperatively at least part of the time. It is then that they begin to benefit from experiences that teach them how to get along with others while following their own interests.

Shutterstock

Critics of Montessori often cite what they perceive as a lack of socialization experiences. In fact, the opposite is true. In a Montessori school, socialization is natural and continuous, guided by simple rules that teach children how to get along with each other. Rather than depending on adults to constantly mediate issues, the children learn to take personal responsibility for their own actions. The prepared environment is an excellent preparation for how life actually works outside the classroom.

Parents using Montessori principles at home should look for opportunities to provide socialization experiences. Regular **play groups** are one good option. You can partner with other parents to get your children together and make learning activities available, do art projects, take trips to the museum, and let the kids play outside. As the children interact, look for opportunities to show them ways to cooperate and respect each other.

Socialization expands a young child's naturally egocentric viewpoint. This opens up many new aspects of life and improves a child's ability to learn. Young children who become comfortable pursuing their own interests while being responsible members of a larger society carry this awareness into adulthood.

Strengthen the Parent-Child Bond



Children need our attention, love, and time. Learning activities help create a strong, positive parent-child bond. They are an excellent alternative to the TV. Your discussions teach your child about your world view. Positive bonds of love and trust in the early years will carry on as your child grows.

Children need positive **serve and return interactions** to fully develop. By doing activities with your child, your serve and return interactions will evolve to a new level. The bond with your child will mature and grow into a sharing between two individuals. It is a wonderful process. Why should teachers have all the fun?

The Center on the Developing Child

The **Center on the Developing Child** at Harvard University is a wonderful resource for parents. Of special interest are their features on the **Core Concepts in the Science of Early Childhood Development**. Their full report on the **Science of Early Childhood Development** is also excellent. Many of their **Working Papers** are available for download and make wonderful reading for parents.

“Early experience has a unique advantage in shaping the architecture of developing brain circuits before they are fully mature and stabilized.”

“Early learning lays the foundation for later learning and is essential for the development of optimized brain architecture.”

Resources

Recommended Books by Maria Montessori

[The Secret of Childhood](#)

[The Discovery of the Child](#)

[The Absorbent Mind](#) Kindle edition [Free download](#)

[Dr. Montessori's Own Handbook](#)

[Spontaneous Activity in Education](#) Free download, choose pdf file type for easiest viewing

[The Montessori Method](#) The full text online

[The Montessori Method](#) Kindle Edition

More good books on Montessori

[How To Raise An Amazing Child the Montessori Way](#)

[Teach Me To Do It Myself](#)

[Teaching Montessori in the Home: the Preschool Years](#)

[Montessori: the Science Behind the Genius](#)

Information about Montessori

Video: [Montessori Madness](#)

[The American Montessori Society](#)

[The Association Montessori Internationale](#)

[Montessori Education on Wikipedia](#)

[Montessori FAQ's, Michael Olaf](#)

[Montessori: The Science Behind the Genius](#) By Angeline Stoll Lillard

[Best Practices of an Authentic Montessori School](#)

[About Montessori](#) Resources from [Montessori Print Shop](#), explore the site for more

[About Montessori](#) Information and links from [Living Montessori Now](#), a fabulous site

[An Introduction to Montessori Philosophy and Practice](#)

[Montessori Philosophy](#) Information from the Montessori Academy of Arlington

Video: [Montessori Three Year Cycle](#)

Video: [Montessori: Learning for Life](#)

Video: [Discovering Montessori with Tana Ramsay](#)

Video: [Montessori: Planting the Seeds of Learning](#)

Video: [Montessori Children's House](#)

Video: [Maria Montessori Children's School Foundation, Inc.](#)

Video: [Montessori education for the Early Childhood Years](#)

Videos: [You Tube – Montessori education](#)

Videos: [You Tube – Maria Montessori](#)

Early Childhood Development & Education

[Center on the Developing Child, Harvard University](#)

[Child Development – PBS.org](#)

[Brain Rules for Baby](#)

[An overview of Early Childhood Development](#)

Video: [The Science of Early Childhood Development](#)

Video: [Promoting Healthy Brain Development](#)

Video: [Early Learning Brain Development and Lifelong Outcomes](#)

Video: [The Importance of Early Childhood Development](#)

[The Scientist in the Crib: What Early Learning Tells Us About the Mind](#)

[Your Child's Growing Mind](#)

[What's Going On In There?](#)

[Einstein Never Used Flashcards](#)

[NAEYC For Families](#)

[Early Childhood Development – education.com](#)

[Theories of Childhood](#)

[Encyclopedia on Early Childhood Development](#)

[The ultimate early childhood Pinterest board list](#)

General Education topics

TED Talk: [Bring On The Learning Revolution](#)

TED Talk: [Ken Robinson Says Schools Kill Creativity](#)

Using Montessori Principles in Parenting



“The child’s parents are not his makers but his guardians.”
“No adult can bear a child’s burden or grow up in his stead.”
“Of all things love is the most potent.”

Maria Montessori

Photo: [MontessoriMOMents](#)

Montessori is first an **attitude of respect** for the young child as a person engaged in the most important task of life: creating a unique individual ready to take their place in the world. Starting with this understanding, you can do many things to help your child in that process. As a parent, it is important to first understand and implement the basics of Montessori before you make or buy learning materials. These concepts and practices are the real core of Montessori.

We want the best for our children but often don't know specifically how to help them. We buy as many toys as we can afford and hope for the best. We read a book or blog and try a few things. This is where the Montessori approach can be very helpful. Montessori gives you **specific actions you can take in an organized way every day** to help your child realize more of his true potential. This chapter will explore steps to get you started today using the Montessori approach at home.

Trust & respect your child's Inner Teacher

Photo: [1+1+1=1](#)

Using Montessori principles at home, we do not attempt to educate our child in the manner of a traditional school. A 2-6 yr. old is not an empty vessel for us to fill with knowledge. Instead, we acknowledge that our child has an **inner guide** that leads her, in only a few years, from the apparent helplessness of infancy to the child we see at six, ready to head out the door and go to school. In just six years, our child has learned our language and can probably read and write at least a bit, knows basic math, has developed muscle control and coordination, can do many things for himself, and

understands how the immediate world around him works. A child accomplishes all this even if adults do not help much. This is the power of the inner teacher all children possess

and that fascinated and guided Maria Montessori. Following her approach, we seek to **help** a child in his **self-achievement** of the tremendous accomplishments of the early years when he is creating a unique individual.

“And behold him after awhile; the child, talking, walking, and passing on from conquest to conquest until he has built up man in all his greatness, in all his intelligence. The child is not an empty being who owes whatever he knows to us who have filled him up with it. No, the child is the builder of the man. In order to form a man great powers are necessary and these powers are possessed only by the child.”

“The greatest development is achieved during the first years of life, and therefore it is then that the greatest care should be taken. If this is done....he will reveal himself as the greatest marvel of nature. His dignity will arise in its fullness in front of our eyes as he reveals himself as the constructor of our intelligence, as the being who, guided by the inner teacher, in joy and happiness works indefatigably, following a strict timetable, to the construction of that marvel of nature: Man.”

Maria Montessori, *The Absorbent Mind*

Following the child does not mean letting children run amok or indulge in negative behaviors. You always have the parental role of guiding and promoting positive behaviors in your child. Using Montessori inspired learning activities, however, you spend less time leading and teaching your child directly. Instead, like a Montessori teacher, you create the environment and act as a resource, an observer, a source of encouragement, and a person who respects your child's journey of growth and development. You encourage your child while letting her make mistakes and discoveries, and experience successes and challenges, on her own.

“Respect all the reasonable forms of activity in which the child engages and try to understand them.”

Maria Montessori

The more we provide **outer motivation** in the form of rewards and punishments, the more our children will become motivated by these outer prods. Our goal should be to encourage **self-motivation**. This is done by encouraging the naturally expressed activity and interests of the young child, by trusting the Inner Teacher.

Action Steps

- Read the remaining sections of this chapter and put the action steps into practice.
- **Let your child try doing new things.** Break up complex tasks into smaller tasks and let your child practice the ones she can **safely** handle. Let her make mistakes and practice without interruption. Encourage when needed and congratulate every success. **Maintain safety at all times.**

Examples:

Your child shows an interest in helping set the table for a meal. Show her where the napkins go and let her place them. Then, let her place the plates. Tell her how many people need plates and show her how to count as she places them.

Your child wants to help in the garden. You are using trimming shears, which your child cannot use safely. Get your child a small rake, a weed puller, and a small watering can and show him how to rake leaves, pull weeds, and water plants. Let him practice these things on his own. Talk about identifying weeds (leaves, flowers, stems, roots, etc) and count how many weeds he pulls. Let him help load trash bags with trimmings and help to drag them where they need to go. Thank him for his help.

- **Actively listen to and respond to your child.** Get down at **eye level** with your child. Look at your child when she speaks and **actively respond** by nodding your head, opening your eyes wide, and encouraging your child to speak by saying, “*Wow! Really? Then what happened?*”, etc. Give him time to speak. Encourage more conversation about the topic. It helps to reaffirm, without judgment or criticism, what your child is saying and feeling.

Reflective statements restate what your child has told you, or state what is happening at the time. “*You tried to unlock the gate.*” “*You are cutting the paper.*” “*We are eating dinner.*” “*You are cutting the banana.*”

Affirm that you understand what your child is saying and feeling. “*You got angry when the lock wouldn’t open.*” “*You want to play now.*”

Criticizing, dismissing your child’s feelings, or offering quick advice should be avoided. Your child needs to feel that her concerns and experiences are important, and needs time and support to make discoveries, work through her feelings, and make choices about what she needs to do.

- **Ask open ended questions.** Instead of asking questions that prompt yes or no answers, ask, “*What happened then? What did you think about that? How did that make you feel? Why do you think that happened?*”, etc. These questions encourage your child to think and put thoughts into words. If your child has trouble expressing a thought, encourage her with a word or two that might help, but don’t dominate the conversation.
- **Let your child make choices.** Creating simple choices between equal objects and actions lets your child learn to make decisions and take responsibility for them. Put up a color chart showing what colors of clothing go together and let your child choose his clothing. Let him decide which drawers to store clothes in. Give her choices of different kinds of fruits, drinks, and snacks. “*Would you like to sweep the floor or help load the dishwasher?*” “*Would you like to have pasta or a sandwich?*”
- **Let your child work independently without interruption.** Montessori noted that learning to focus attention and spontaneously repeat activities of great interest are essential for development. Allow time and space for quiet exploration and repetition.

“How often one of those marvelous moments when their attention is fixed, and that process of organization which is to develop them begins in their souls, is roughly interrupted.”

Maria Montessori

- **Use encouragement more than praise.** Is it better to **praise or encourage** a child? Both are positive; but they send different messages. Praise involves value judgments. “*Good job*” or, “*That was great!*”, means that in your opinion, your child did the right thing. This can lead a child to seek the reward of your approval as their goal. Praise has value and needs to be given. Praise is definitely better than criticism. Here is an interesting **article on praise vs. encouragement**.

Encouragement is **non-judgmental feedback** that focuses on **effort and persistence**, even in the face of mistakes. Your child will always make mistakes when using learning activities. Encouragement can make a positive out of this by pointing out that, “*You tried very hard and you didn’t give up – that’s great.*” Or, “*Don’t give up, try again.*” This reinforces the value of **self motivation and effort**. Positive encouragement and feedback makes young children eager to learn more and do more.

Create an orderly, attractive home environment



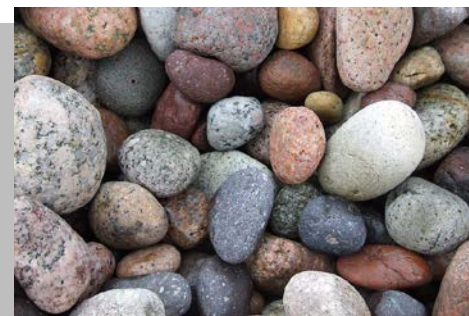
The Education of Ours

Children absorb their immediate environment. Montessori designed her Prepared Environment to be clean, orderly, and attractive. A disorderly, chaotic environment encourages these qualities in your child's brain. An attractive, orderly environment helps your child's brain develop more optimally. You don't have to make your home a showplace or spend a lot of money. Simple tips:

Keep it clean. As soon as your child is able, she can help you keep your home clean. Children can learn to sweep, dust, clean glass, polish silver, help with laundry, and many other home chores. Regular times set aside for cooperative cleaning encourages good habits and responsibility as well as maintaining a clean environment. See page 116.

Reduce clutter. Unattractive spaces can be transformed by eliminating clutter and focusing on a few pieces. Reducing the clutter on every wall, shelf, and surface in your home can dramatically improve the environment's aesthetic. Garage sales, Ebay, and Goodwill are your friends in fighting your inner pack rat. Consider adding shelves in your garage or basement for those items you just can't part with.

Use a variety of materials. Glass, wood, woven baskets, wool, pottery, fabrics, nuts, gourds, dry grasses, flowers, stones, and other materials add texture and interest. Your child needs exposure to more than synthetic fabrics and plastic. Let your child touch!





Make a child-sized work area. A child sized table and chair will get your child's personal work area started nicely. Later, you can add low shelves to hold your child's toys, learning materials, books, and decorative items. Consider a **good quality set** made of natural wood. Here are **DIY table plans**.

Photo: **Counting Coconuts**



RootsLiving.com

Take it outside. Montessori believed that nature talks to children. You don't need a landscaper to have an attractive, interesting outdoor environment. Get started with **simple steps**, then check out the internet, home improvement stores, and magazines for ideas and develop a plan. Kids need lawn areas to move freely. A play set with different movement and climbing opportunities is always welcome.

A simple **stone or brick patio** with a table, umbrella, and chairs is not hard to create, makes a great family project, and provides a place for eating and outdoor activities. Grow flowers and vegetables in pots if you don't have room for a garden.



Display works of art. High quality art prints add a wonderful aesthetic quality to your child's environment. Mix classic and modern works and a variety of styles, including art photographs. **AllPosters.com** is an example of a source of large art prints of famous works for as little as \$2.99. Check out sites like **Displays2GO** for cheap poster frames. Interesting sculptures and cultural items are also good.



Play music. Music, especially classical and other complex kinds of music, promotes **brain development**. Play music instead of having the TV on all the time. When your child feels like it, encourage him to dance. Dancing is a wonderful large motor activity that promotes coordination and balance.

Encourage Independence



Helping your child master the skills of daily life is one of the most important things you can do. Children have a strong drive to become independent. Learning to do things for themselves encourages responsibility and self-motivation. The value of encouraging independence in a young child cannot be overstated.

Photo: [Tree House Preschool Daycare](#)

The **Practical Life** activities starting on page 111 help children focus attention on and develop specific skills. As a parent [using Montessori principles at home](#), you have an advantage over a Montessori school! Your home is where your daily life happens, so it is the perfect place to let your child practice skills and participate actively in your family life. If you make your home a place that supports your child's development of daily life skills and encourage the process, you will see your child blossom.

"We must give the child an environment he can utilize by himself; a little washstand of his own, a bureau with drawers he can open, objects of common use that he can operate, a small bed in which he can sleep at night under an attractive blanket he can fold and spread by himself. We must give him an environment in which he can live and play; then we will see him work all day with his hands and wait impatiently to undress himself and lay himself down on his own bed."

Maria Montessori

Action Steps

Kitchen & dining areas



Place food and snacks on low shelves and in low drawers in your refrigerator and cabinets so your child can get her own healthy snacks.

Photos: [Counting Coconuts](#)



Use plastic food boxes your child can open. Jars with screw on lids can be used when your child learns how to use them. To help your child learn this skill, see page 138. Yogurt and fruit cups work well. Make snacks ahead of time and place them on the low shelf in the frig. Use pouch type juice containers or pre-poured in cups with lids until your child can pour her own juice. When your child learns to use a knife, he can make peanut butter and jelly sandwiches and cut cheese. Get your child **small kitchen tools** of his own. This will take **practice**, and there will be **mistakes** and **messes**. Let your **child help clean up**. Find a low shelf for utensils, napkins, cups, bowls, and plates so your child can get these items independently. Help your child be involved in mealtimes and do things for himself.

Videos:

[One Mom's home setup](#)

[A 23 month old child gets a snack](#)

[One Mom's kitchen setup](#)

[Kitchen and other ideas from Peaceful Parenting](#)



Photo: [Peaceful Parenting](#)

Your child's bedroom



Put everything possible at your **child's level**: bed, shelves for toys and learning materials, bulletin board, chalkboard, clothing storage, a small table and chair, art prints on the wall, and decorative artistic items. Try not to include a TV. A futon can make a nice floor bed. A comforter makes bed making easy.

Photo: [Mama Liberated](#)



Avoid toy boxes and catch-all drawers. They create disorganization and chaos in your child's room and mind. Parts get lost, and precious time is wasted gathering items to use. Consider setting up low shelves as in the photo. Every toy and learning material does not need to be out all the time. Rotate materials as needed.

Photo: [Family Go Simple](#)

Use bins, sturdy bags with handles, or attractive boxes to hold toys such as Legos and building blocks. These can be placed on the shelves along with other materials.

- Forget the TV. See **Digital Life** (p. 260) for ideas on using technology.
- Hang a **bulletin board** at your child's eye level to pin up your child's drawings, sight words, a calendar, family photos, and other items. A **dry erase board** can be used to post positive messages and reminders.
- Place **fine art prints** on the walls and include a **music player** in your child's room that she can use herself. An **iPod Touch** works well, and also allows the use of children's apps, many of which are recommended in this book. Include decorative sculpture, flowers, and live plants in pots that your child can care for.



Hang an **analog clock** at child's eye level. A clock like this reduces distractions, allows a child to focus on the important elements, and facilitates counting the second and minute marks and reading the numbers. See more about learning to tell time on page 381.



Hang **spice rack book racks** at your child's level. The racks pictured are around **\$4 at Ikea** and make cool book racks.

Photo: **Domestic Simplicity**



A coat rack, or coat hangers mounted to the wall at your child's height, makes a handy place to keep coats and hats organized.

- **Label things.** Cut paper into strips and write the names of things in your child's room: learning materials, toys, sock and underwear drawer, closet, mirror, clock, etc., in **block lower case letters** with a black magic marker. Stick them onto the wall, drawers, and other surfaces with **Blu-Tack reusable adhesive**. You could make strips on your computer and print them out. Use Century Gothic or a similar typestyle that matches the **Montessori Sandpaper Sounds**. Read these labels with your child frequently when your child is interested.
- Lower the **hanger rod** in your child's closet to his height.

The bathroom



Use a stool, like the **Ikea** stool at left, at the sink, and toilet if needed, for easy access. Make sure the stools are sturdy and that the sink stool really gives your child the ability to turn the water on and off and reach her toothbrush and other items.

Photo: *Ikea*

- Designate or hang a **towel holder** just for your child's hand towel at the sink.
- Set your hot water to about 120 degrees F. Make sure the water will not burn your child if he is in it for a period of time. Always teach your child to use soap when washing to be certain that bacteria are removed from the skin.

Around your home

- **Designate a place for everything you possibly can.** Having a place for things and keeping them there helps your child internalize a sense of order. It also makes it easier for your child to remember where things are and find them herself. Use designated (labeled when possible) boxes, bins, drawers, and wall hangers for coats and shoes, batteries, flashlights, tools, holiday decorations, kitchen tools, pantry food items, garden equipment, gloves, ropes and ties, etc.
- Place as many items your child can use safely as possible within her reach or at her level.
- Allow extra time for your child to put on her own clothing and coat, hat, and gloves. Demonstrate as needed and allow your child time to practice.
- **Maintain safety.** Put safety covers over electrical outlets. Install latch locks on cupboards with chemicals. Better yet, place chemicals totally out of reach. Observe your child closely when she is learning to use a new tool or potentially dangerous material. Point out potential dangers. See page 168.
- Get some **child-size cleaning tools**. These will make it easier for your child to participate in cleaning on a regular basis and after spills.

See page 116 for more ideas on teaching your child how to help out around the house. These are some of the most important activities your preschooler can do.

Encourage Movement



"We found individual activity is the one factor that stimulates and produces development."

"Watching a child makes it obvious that the development of his mind comes through his movements."

Maria Montessori

Our fascination with technology often results in more hours spent looking at video screens and pushing buttons, and less time moving our bodies. This is in direct opposition to the primary need of young children to MOVE. Without the freedom and opportunity to move their bodies, young children cannot develop normally.



As adults, we tend to picture mental effort as a passive, intellectual activity best accomplished by sitting quietly and thinking. We used to value people who worked hard; now we place a premium on 'working smarter', which means doing less physical work. Neither of these adult perceptions applies to young children. **Brain development in young children occurs via a very close body-mind connection.** Children determine their place in this world and their capabilities by moving their bodies. Developing muscle control and coordination builds brain nerve networks just as thinking does. Through movement and exploration, a child acquires a storehouse of experience and impressions. **Movement is essential for normal development in early childhood and beyond.**

"Movement, or physical activity, is thus an essential factor in intellectual growth, which depends upon the impressions received from outside. Through movement we come in contact with external reality, and it is through these contacts that we eventually acquire even abstract ideas."

Maria Montessori, *The Secret of Childhood*

[Movement ideas at Living Montessori Now](#)

Gross motor development



These activities help a child coordinate and control the **large muscles** of the torso, arms, and legs. Balancing, jumping, kicking, throwing, and catching are skills we take for granted, unless we never develop them. Muscle strength, balance, control, and coordination are important skills for a child's development. **Mastering these physical skills** builds brain nerve networks and helps a young child progress naturally into fine motor development. Get involved doing these activities with your child – you might develop a movement habit yourself and reduce your risk of a heart attack, stroke, and obesity. Here are typical childhood **gross motor development milestones**.

Throwing, catching, hitting, kicking



Photos: shutterstock

You don't need to try to make your child the next Olympic superstar. Just have fun. Start out with Nerf or soft rubber balls just large enough to fit in your child's outstretched arms. Start by **rolling** the balls back and forth. Then toss the balls and **stuffed animals**. Keep a short distance between you and your child at first, and toss softly.

Praise catches and encourage after drops. As your child's skills improve, throw greater distances. Gradually use smaller balls. Slowly progress from an underhand to an overhead throwing motion. This takes awhile, so be patient.

Kicking or throwing balls or bean bags at a **target or goal** like a bucket, a circle of rope, or a low basketball hoop, are great activities. Ring toss is a classic game. Once a child can throw, kick, and catch a bit, give them a **bat, tennis racket, or golf club**. Start with an oversize bat or golf club, and a small tennis racket. If your child enjoys it, you can get sports equipment later. For now the experience, your positive support, and playing without pressure are the ticket.



Mama Liberated

Balance activities

Balance activities develop **spatial awareness** and full body **coordination**. Some good ones include:

Time how long your child can stand on one leg. Record the times so your child can see improvement in numerical terms. Switch legs. Try it with a blindfold on. You try it!

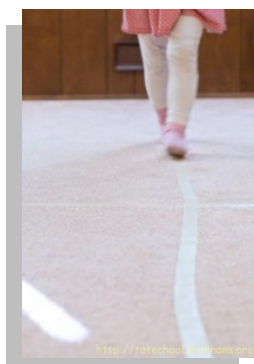
Hop up and down on one foot. Switch feet and try again. Record the number of hops.

Make a balance beam or board. An 8 foot 2X4 or fence post, laid wide side up on the lawn, makes a great balance beam. Let your child try turning around and bending down while on the beam. **Balance boards** are great when your child is ready. Use a small pipe first.

Circle jumps. Lay out circles made from string on the floor, 1-2 feet apart. Have your child try to jump from one to the next without falling out of the circles. Measure how far your child can jump and maintain balance so you'll have a target goal for next time.

Back to fronts. Have your child stand with feet apart and arms outstretched. Now, your child jumps and turns so she lands in the same pose facing the opposite direction. Repeat.

Bucket stilts. Get 2 small, strong plastic buckets at the home improvement store. Drill two holes directly across from each other on the sides near the bottom of each bucket. Thread each end of a length of rope into each hole from the outside, and tie a knot in each end to keep them from coming back out of the holes. Turn the buckets on their tops. Your child stands on the buckets and holds the ropes in his hands, then walks using the stilts. **Here are some you can buy.**



Set up a string or tape walk. Lay out a string or put down tape so it winds around furniture, through passageways made by moving two chairs close together, etc. The game is to **walk the string line** with your feet never coming off the string or tape. As your child turns her body to fit through passages and get around furniture and other objects, she will get excellent balance and large muscle coordination exercise.

Photo: **Tot School.** **Another obstacle course idea from Tot School**

Walking while balancing objects. Give your child a tray with objects on it. Let your child practice walking back and forth through the kitchen without spilling any water. Try this with paper towel cardboard tubes standing on end, balls on a dish with just slightly upturned edges, a cup 2/3 full of water, and other things.

Photo: *Walking a line holding a tray with a place setting*

Discovery Days & Montessori Moments



Yoga poses. Yoga poses are great stretching and balance exercises. Many imitate animal poses, which is fun. Yoga poses teach balance and whole body control. Here are some good yoga books & a site for kids:

[The Yoga Zoo Adventure: Animal Poses and Games for Little Kids](#)

[Yoga Games for Children: Fun and Fitness with Postures, Movements and Breath](#)

[Little Yoga: A Toddler's First Book of Yoga](#)

[The Kids' Yoga Deck: 50 Poses and Games](#)

[Parents.com](#)

Movement & Fitness



Get some Fit Decks! **Fit Decks** are absolutely wonderful, inexpensive exercise guides. Each set is a deck of cards with pictures of different exercises and other useful information. The **Junior, Bodyweight, Yoga, and Pilates** Fit Decks are especially good for young children. Use these decks regularly and you will find yourself getting in shape, too!

Put on great music and dance. Kids love music, and there are many great kids DVD's with really great dance music. Turn one on, move a bit yourself so your child knows that it's ok, and watch your child go! You can extend your music activities to include simple instruments such as a tambourine, maracas, a recorder, a xylophone, and a harmonica. Have these around so your child can grab them and play along with her favorite music.

Exercise together with exercise videos. Children love doing fitness moves to music.

Do playground equipment circuit runs for time.

Have your child run a circuit on a playground using a variety of equipment while you time her. Record her best time on the refrigerator and see if she can beat it on future visits. Now you try!

Get outside! The best large muscle activity for young children is just playing outside. Get together with other parents and get your kids to the playground or park as often as you can.

Shutterstock photo



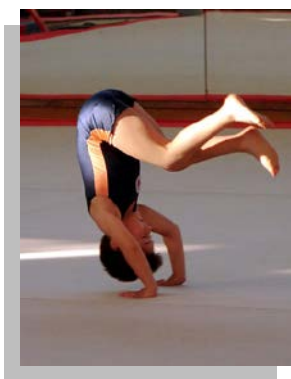
Ride a bike. Kids can start learning to ride pretty early on. Later you will be able to ride longer distances together. Be sure to teach your child the rules of the road from the start so they become second nature – and wear a helmet. Check out sheldonbrown.com.

Spider web string 'laser' crawl

Swimming, Gymnastics, & Soccer

These activities use the whole body, keep kids moving, increase strength and coordination, and help a child become confident and self assured.

Children should learn to **swim around age 4**, in a program designed for very young children. Join a group or find a good instructor. The YMCA and other organizations near you have programs. Swimming is fantastic exercise for anyone.



Gymnastics starts around age 5. There are programs for 3-4 yr. olds in many areas. Young children should focus on tumbling and floor movements, avoiding hard landings and repetitive stress movements. Standing in line should be kept to a minimum. A variety of movements and fun are the keys. Your child should be kept moving and always be learning new movements. In some areas there are businesses that specialize in these programs. Make sure the kids are having fun. Go to usa-gymnastics.

Recreational soccer for kids usually begins about age 5. There are 'pee wee' teams for kids under 5 in many areas. Soccer can be a blast for kids if they get into it. They get to run, develop large muscle skills that they will rarely learn in any other sport, and learn to be part of a team. Visit the US Youth Soccer site at: usyouthsoccer to find a team in your area, or contact the YMCA.

Resources

[Montessori Inspired Movement Activities](#)

[kidshealth](#)

[keepkidshealthy](#)

[pediatrics.about](#)

[backyard exercises for kids](#)

[Let the Children Play](#)

[Health.Kaboose.com](#)

[Great post on Cooperative Games](#)

80+ Large Muscle Activities

Fine Motor Development



“The human hand, so delicate and so complicated, not only allows the mind to reveal itself but it enables the whole being to enter into special relationships with its environment. We might even say that man takes possession of his environment with his hands.”

Maria Montessori, *The Secret of Childhood*

Fine motor development is mostly about the small muscles of the hands and fingers. The Montessori learning materials and activities you will learn to make in the coming chapters help children gradually refine and develop control and coordination of the movements of their hands. As these skills grow, your child will be able to do more and more things for himself, culminating in developing a **proper writing grasp**.

Photo: ***Family Go Simple***

Allow time for repetition and concentration



Maria Montessori observed that young children often repeat movements and activities many times with full attention and concentration over a period of time. See pages 14-15.

Montessori noted that when children finish these periods of uninterrupted concentration and activity they appear refreshed, happy, satisfied, and even joyous. She came to understand that while their attention is focused, children are developing and organizing their brains and structuring their perceptions of the world. Children have a strong inner need to do this and derive great satisfaction from it.

Photo: ***Chasing Cheerios***

“This phenomenon gradually became commonplace among the children....and each time that such a polarization of attention took place, the child began to be completely transformed, to become calmer, more intelligent, and more expansive...”

“Thus, when the phenomenon of the polarization of attention had taken place, all that was disorderly and fluctuating in the consciousness of the child seemed to be organizing itself into a spiritual creation, the surprising characteristics of which are reproduced in every individual.”

Maria Montessori, *Spontaneous Activity In Education*

Encouraging focused activity and attention is easy – when you see your child wrapped up in an activity and repeating it over and over, unless your child asks for help, stay out of the way. If the activity involves you, such as throwing a ball or another activity you are doing together, stay involved as long as you can.

We may think that a person who requires multiple repetitions to learn something is not as smart as someone who ‘gets it’ right away. **This does not apply to young children.** Children by nature want to repeat activities so that they will open efficient brain nerve pathways. **When a child repeats an activity, he is developing the brain architecture he will use for the rest of his life.** Allow uninterrupted repetition of favorite activities.

When you begin making learning materials, always observe for that **focused attention** that tells you a material has hit the mark. Your child’s interest in any material is always your best guide. Those she is into repeating and using the most are the ones that should be on her shelves at any given time. **Trust the Inner Teacher, follow the child.**



Too much television prevents young children from learning to focus attention. Television’s **rapid fire images and constantly changing visual images** hold children’s attention by conditioning them to expect something new to happen every few seconds. This is the **opposite** of true, focused attention. Watching television is a **passive** activity. Children need to be **actively** engaged most of the time. There are many good programs on TV, but too much television

imbalances a young child’s development. Children need to get most of their experience interacting with the real world in their early years. Photo: Shutterstock

Go places, do things, collect stuff, take pictures



In Montessori's time, travel options were limited. Today we can expose our children to much more of the world in their early years. You don't have to take lavish vacations to exotic locales. Take your child to natural areas near where you live. See page 282. Get out in nature, collect things, talk about trees and rocks and animals, watch the sunset, feel the wind. Slow down and let your child explore. Go hiking and

fishing. Go to museums, concerts, and festivals. Ride to the top of the highest skyscraper in your city and look around. Check the newspaper and online for free events. Visit sidewalk markets and art shows. Go to high school sporting events and plays. Talk to all kinds of people and try different foods. Always be on the lookout for new places you can take your child. These experiences add to the storehouse your child is building in his early years and open new brain nerve networks. You never know what experiences will 'stick' with a child and influence the course of her life.

Smart phones and digital cameras make it so easy to keep a record of your adventures. Print out photos and post them on your child's bulletin board. Make family albums, write stories of what happened, and read them with your child. Watch family movies regularly so your child gets a perspective on her life. Collect objects and display them in your child's room and in your home. Nice baskets and tin containers can hold your child's treasures.

Embrace mistakes

Mistakes happen. Things get spilled, scratched, or broken. Accept that mistakes will be part of your child's life. When accidents happen, avoid yelling or making a big deal out of it. Stop the activity and involve your child in cleaning up. Mistakes are how we learn.

"It is well to cultivate a friendly feeling towards error, to treat it as a companion inseparable from our lives, as something having a purpose, which it truly has."

Maria Montessori

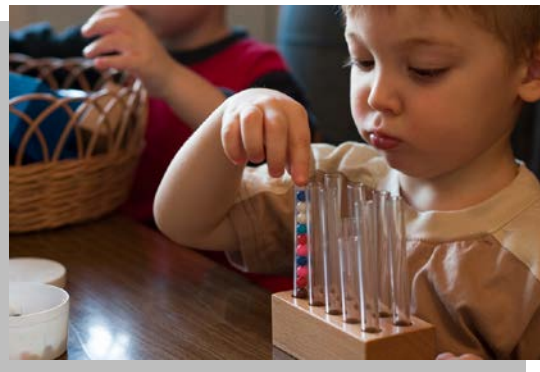
Use consistent, positive discipline



Montessori is a very **positive** philosophy of child development. Dr. Montessori believed every child is born with a special purpose to fulfill. She showed that if we allow children, from their earliest years, to exercise freedom in their movements and their choice of activities, in a specially prepared environment, they naturally develop self-control, confidence, and inner discipline.

Discipline is from the Latin *disciplina*, which means teaching, learning, and knowledge. This nicely describes Montessori's approach to helping a child learn what is expected of them. By helping a child pursue her *positive* instincts to learn about the world, experience life directly, and build her self-confidence and abilities, we encourage the development of a moral sense and responsibility. It is far more effective to be **positive with young children rather than negative**. The more a child is able to pursue his natural course of development, the happier and more self-disciplined he will be.

Video: [A Presentation on Discipline in Montessori](#)

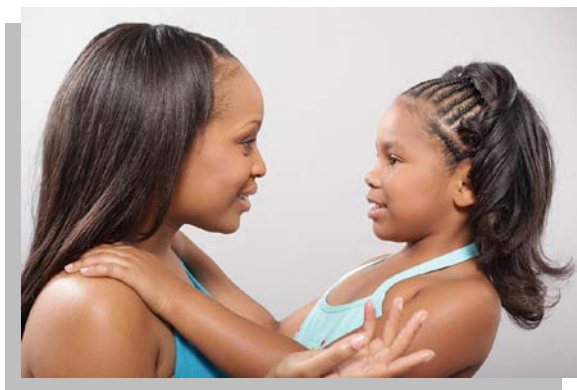


Using Montessori principles, we create an orderly, attractive, rich, varied environment. Then we observe our child for sparks of focused attention and interest in an object or activity. We foster that by allowing our child the freedom and time to repeat activities as much as she wishes. We provide other similar activities and **follow the child** as he moves from interest to interest. As our child learns to concentrate her attention for longer periods of time, we see her become happier, calmer, and less likely to develop behavioral issues. When a young child is able to organize his brain the way nature intends, he becomes a happier, better adjusted child.

“The more the capacity to concentrate is developed, the more often the profound tranquility in work is achieved, then the clearer will be the manifestation of discipline within the child.”

Maria Montessori

As Montessori teachers, we often observed this process. Sometimes a child would start out being disruptive and hyperactive. Then one day the magic happened: **a material caught his attention and held it.** From that day on, we knew he would become more constructively involved with the materials and that his behavioral issues would recede. Children become positively motivated when their brains get the 'food' they need to develop. If children do not get the experiences they need for brain development their behavior, and eventually their character, suffers. When they get the experiences their brains and bodies need, they grow up happier and with greater self discipline.



Using Montessori principles does not mean relinquishing your parental role of showing your child right from wrong; and **encouraging positive behaviors** while correcting negative ones. Your child needs to know that you set the expectations. A full discussion of this aspect of parenting is beyond the scope of this book, but these points can be offered:

Be consistent. Children are more secure if they know what to expect. Using Montessori principles does not mean letting children do whatever they please. Communicate clear expectations, establish reasonable consequences, and follow through every time, consistently.

Eight ways to deal with anger as a parent

Be calm. If your child is angry or upset, don't join in yourself. *Calm* enforcement of rules and consequences removes a child's ability to get you upset along with them. You will maintain your parental role more easily if you exhibit self control and a calm approach to situations and discipline. Go into your room and count to ten if you need to!

Focus on the positive. **Positive discipline** is far more effective than constantly punishing a child for something they did wrong. Montessori style learning materials provide activities that focus on **positive achievements and experiences.**

Use logical consequences more than rewards and punishments. Rewarding the behaviors we want to see and creating punishments for those we don't has a place, but it can easily be overdone.

Role Model the behaviors you want your child to learn. Those little eyes watch us really closely all the time.

*"Don't worry that your children never listen to you,
worry that they are always watching you."* Robert Fulghum

Provide learning materials



The media and toy industries depend on turning children into rabid consumers. Your child sees the newest movie and cannot live without the toys marketed with it. You don't want to deprive your child, and soon your home is a warehouse of discarded, broken, plastic toys. Think of these latest craze toys as sugary treats. They provide a jolt of fun but little real food for brain development. Soon your child wants that rush of excitement again, and the cycle continues. And we wonder why we are so oriented to consume!



Learning materials you buy or make as shown in this book provide **real food for brain development**. Children intuitively know this and find them fascinating. The trick is in how you present them, display them in your child's room, and how well you limit the number of disposable plastic toys there are on hand.

Photo: ***Binomial Cube***, page 202



Montessori schools have none of the typical toys children have at home, and the kids are super busy all the time, actively engaged in meaningful experiences with materials that build strong brain architecture. This can happen in your home, also. Photo: ***Tongs & Balls***, page 126

Diverting a portion of your toy budget to buying and making learning materials is a great investment in your child's future. **See the next chapter and pages 99 - 104 for**

Montessori and other learning materials for home use and how to incorporate them into your child's life. These materials will help your child refine and educate her senses, build strong and efficient brain architecture, develop muscular control and coordination, and adopt an attitude of, *"I can do this!"*

"The environment must be rich in motives which lend interest to activity and invite the child to conduct his own experiences."

Maria Montessori

Maria Montessori strongly believed in introducing children to the world by means of **real objects**. She felt that the fantasy toys of childhood had taken far too important a place in children's lives. Rather than occasional diversions, they become the primary objects children are given to hold and manipulate. Listen to Montessori's words from the 1940's:

"The toy has become so important that people think it is a help to the intelligence. It is certainly better than nothing, but if we watch the child, we see he always wants new ones, he breaks them, he develops nervous and moral complaints. People who study the child superficially say that as he breaks the toy, he seems to find delight in taking everything apart and destroying everything. This is an artificially developed characteristic due to the circumstances which deprive the child of the right things.

He is not quiet with his toys.... for more than a few minutes. The real trouble is that children have no real interest in these things, because there is no reality in them. It is the misunderstanding on the part of the adult that has led to this life of lack of attention on the part of children; this useless life, a mockery of life instead of real life. The child cannot exercise the energies that nature has given him to perfect his individuality, they are wasted and worse than wasted.

The result is that the child cannot develop normally; and the longer he lives in this environment full of toys, the less capable he becomes of adapting himself to the real environment, and gradually his personality is completely deformed.

In countries which have not developed such a toy-civilization, you find children greatly different. They are much more calm, healthy, and cheerful. They take inspiration from the activities they see around them. They are normal human beings."

Maria Montessori, *The Absorbent Mind*

Learning materials help children master real skills and learn how the world works. They build strong brain architecture. They help young children experience life directly rather than through the filter of video screens or abstract concepts.

"I hear and I forget. I see and I remember. I do and I understand." Confucius

Introduce math and reading

Today's children are commonly introduced to language and numbers at much earlier ages than in Montessori's time. By the time today's preschooler enters her natural sensitive period for language and mathematics, she often has a head start. You can encourage this by making counting and reading a natural part of your child's daily life. Here are some ideas:

Read with your child every day and teach your child to respect books.

This is the single most important thing you can do to help your child be successful in learning to read. Start out with traditional books. Teach your child to handle them carefully and treat them with respect. Show your child how to carefully and slowly turn pages rather than flipping through quickly and bending and tearing them. Make daily reading time a warm, fun, loving experience. Talk with your child about the book, point out words, and ask your child what he thinks will happen next. When your child is familiar with paper books, introduce eBooks on a tablet if you have one. There are many wonderful, highly interactive tablet books for children.

Point out words in your environment.

Signs, boxes, labels - take time to point out simple words to your child. You are not teaching him to read at this point; but just to understand that words are important and tell us things we need to know.

Look for opportunities to introduce careful counting.

Mathematics starts with counting. When your child counts, encourage her to slow down and **say each number just as her finger touches each object**. This will teach 1:1 correspondence, a critical early math concept. Try to count groups of 10 objects or less for awhile. After your child counts a group of objects, always state the total, as in, "*There are three apples.*"

When your child is ready you can count groups larger than ten. You can also work in simple addition, as in, "*If we add 2 apples to 3 apples, there are 5 apples.*" Similarly, "*If we have 5 apples and we take away 2, we have 3 left.*" This will introduce subtraction.

All these experiences will lead naturally into the math and reading activities when your child is ready.

Encourage socialization



Young children need to interact. Montessori schools promote this as the children share the space and materials following simple rules. They learn to communicate and accommodate a variety of personalities. Learning to get along with and respect others in positive ways breaks down a young child's naturally egocentric viewpoint and actually makes learning easier. Photo: Arrecife

It is ideal if children two years old and up can regularly play and socialize with other children from 2-6 years of age. Montessori showed that children benefit from being in mixed age groups.

"Our schools have shown that different ages help each other, the small one sees what the elder one does and asks about it, and the older one gives an explanation. There is a sort of harmony and interchange of ideas between them which is not possible between an adult and a child so small."

Maria Montessori, The Absorbent Mind

Play groups are a great way to do this. Get together with other parents and their preschoolers and meet at each other's homes. Set out a variety of learning materials and an art or crafts project. Let the kids interact independently as much as possible. Intervene only to direct behavior in positive ways when needed. Play a game, have a snack, and read the kids a book. You can take trips to the park museums, and other places of interest. A regular **play group** can give children the benefits of socialization experiences before they enter school.

More ideas:

[Starting a Playgroup: 5 Simple Steps](#)

[How to Start a Playgroup for Toddlers or Preschoolers](#)

[The Dating Game](#)

Using Montessori Principles in Parenting Summary

- **Trust and respect your child's Inner Teacher**
- **Create an orderly, attractive home environment**
- **Encourage Independence**
- **Encourage movement**
- **Allow time for repetition and concentration**
- **Read with your child every day**
- **Use counting and numerals whenever you can**
- **Go places, do things, collect stuff, take pictures, make movies**
- **Use consistent, positive discipline**
- **Provide learning materials instead of just toys**
- **Encourage socialization**

Resources

Using Montessori principles

[Top 10 Montessori Principles for natural Learning](#)
[How to Help Your Preschooler Help Himself](#)
[Building a Montessori lifestyle](#)
[Starting a Montessori Home](#)
[Being a Montessori parent](#)
[Montessori in Your Home](#)
[Montessori at home: 8 principles to know](#)
[Daily Montessori](#)
[Articles on parenting the Montessori way](#)
[Montessori and natural parenting](#)

Communicating with your child

[9 Things you shouldn't say to your child](#)
[Communicating with young children](#)
[Winning ways to talk with young children](#)
[Communication with young children](#)
[Education.com](#)

Your home environment

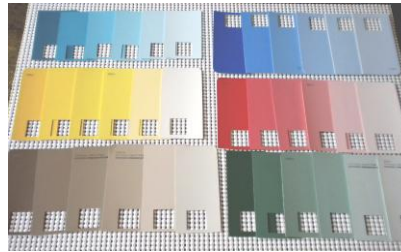
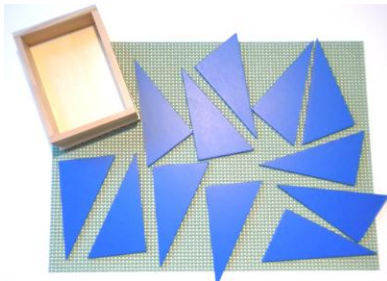
[Pinterest: Montessori-Friendly Home](#)
[Creating a Montessori prepared environment](#)
[Preparing a Montessori home environment](#)
[Preparing a Montessori toddler environment](#)
[A Montessori style home environment](#)
[Montessori at home: the prepared environment](#)
[How TV affects your child](#)
[Television and children](#)
[Limiting your child's screen time](#)
[How television images affect children](#)
[Ideas for setting up your home environment](#)

Blog Roll

Check out these fantastic blogs for information, ideas, inspiration, and sharing with other parents.

[Living Montessori Now](#)
[1+1+1=1](#)
[Montessori Print Shop](#)
[Chasing Cheerios](#)
[Counting Coconuts](#)
[Carrots Are Orange](#)
[Tot School](#)
[Discovery Days & Montessori Moments](#)
[Confessions of a Homeschooler](#)
[MyMontessoriMOMents](#)
[Montessori For Everyone](#)
[The Education of Ours](#)
[The Activity Mom](#)
[The Home Teacher](#)
[Mama Liberated](#)
[Peaceful Parenting](#)
[A Mom With A Lesson Plan](#)
[Pink and Green Mama](#)
[Montessori Materials Group](#)
[Chestnut Grove Academy](#)
[Homeschool Creations](#)
[Toddler Approved](#)
[How We Montessori](#)
[My Home Made Montessori](#)
[My Montessori Journey](#)
[Our Montessori Home](#)

A Parent's Guide to Using Learning Materials at Home



“That which moves the child to this manifestation of activity is a primitive internal impulse; and it is the impulse to satisfy this hunger which directs the consciousness of the child to the determined object and leads (the child) gradually to a complex and repeated exercise of the intelligence...”

Maria Montessori, *Spontaneous Activity In Education*



Montessori observed that children are self-directed by an Inner Teacher. She decided to **follow the child** and help the Inner Teacher accomplish its work. Rather than an educational method, she called her approach a **“Help to life.”**

Montessori saw that young children have a deep inner need to **hold objects and explore the world with their hands and through their senses.** She created an incredible variety of special materials to help them do this.

Some examples from **Montessori Outlet:**

Family Go Simple



Spindle Boxes



Color Box #3



Five Triangle boxes



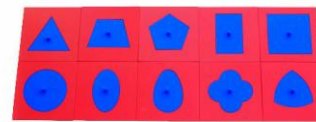
Tasting Bottles



Cylinder Block



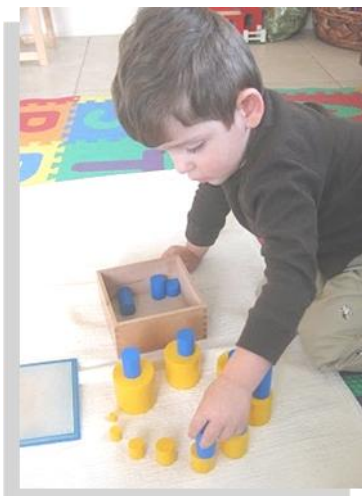
Sandpaper Sounds



Metal Insets



Pink Tower



Well designed learning materials teach children simply by being handled. As children explore and manipulate these objects, they absorb all kinds of sensory impressions and **make discoveries on their own through movement and free exploration.** This is the essence of early learning activities for 2-6 yr. old children.

Photo: Using Knobless Cylinders at **Counting Coconuts**

Your home learning materials should be a mix of those you make yourself, plus Montessori and other commercial materials. Montessori materials are beautiful and generally expensive. Prices have come down in recent years, however. A selection of

affordable **Montessori and other materials for home use** can be found on pages 99-102. Many of these are real bargains. If you divert some of the money you will otherwise spend on plastic toys to buying these materials, your child will benefit immensely.

Montessori materials are not the only game in town. On pages 103-104 you will find a selection of high quality materials from other sources. Combine some of these with Montessori materials and the ones you make at home and your child can have an absolutely wonderful home preschool. The commercial materials hold up to use in classrooms, so they will usually outlive your child's interest in them. You can sell them on Ebay or Craigslist for up to half their purchase price when your child is finished using them. This chapter includes information on:

- **Making and buying effective learning materials**
- **Determining what materials your child will be interested in**
- **Displaying materials for your child to choose and use**
- **Demonstrating materials for your child**
- **Including control of error**
- **Using the Activity Cycle**
- **The Three Step lesson**
- **Maintaining safety**
- **Repetition, extensions, and sequencing**
- **Helping your child make the transition into abstract thought**
- **Frequently asked questions from parents doing Montessori at home**

How much will learning materials cost?



Working with a 2 1/2 yr. old until she is six is a period of about 42 months. The Montessori materials recommended on pages 99-102 cost around \$400. A similar amount spent on the other learning materials on pages 103-104 , and \$300 on materials to make your own activities, brings your total expense to around \$1100. $\$1100 \div 42 \text{ months} = \text{\$26 per month, \$6 per week}$. Most parents will not buy or make every single material. For **about the price of a fancy Starbuck's coffee drink a week**, your child can develop better brain architecture, a positive self-image,

and early language, math, and science skills. Divert half of what you would spend on disposable plastic toys on birthdays and holidays and your budget won't even notice it.

Making Montessori-style learning materials



You can make a large variety of wonderful home materials that will work very well using common items you may already have or which can be easily and inexpensively obtained. I made many of the materials shown in this book from items purchased on a few trips to a discount store. This book will show you how to do the same thing.

Photo: *Materials purchased on one Walmart trip*

Throughout this book the directions will tell you what items you need for each activity. Involve your child whenever possible in obtaining the items and putting materials together. Following is a sample list of some of these items. Rather than go out and buy them all, wait until you see what you need for each activity.

Containers

Serving & cooking bowls
Small boxes & trays
Plastic food containers
Muffin tin
Cookie sheet
Measuring cups
Small drinking cups
Clear plastic mini-cups
Paper or styrofoam cups
Larger plastic storage containers
Plastic bucket, tub
Small baskets

Food Items

Raw popcorn
Grape Nuts cereal
Rice
Beans of different kinds
Pasta in different shapes
Empty egg carton
Empty food boxes
Spices: salt, ground thyme, ground cinnamon, minced garlic, vanilla bean, cumin seed, Mrs. Dash

Kitchen Utensils

Serving spoons
Whisk
Orange juice squeezer
Tongs
Eating utensils
Spice grinder
Turkey baster
Measuring spoon set
Soup or gravy ladle
Cheese slicer
Sifting tool

Other Items

Clothespins
Straws
Refrigerator magnets
Eyedroppers
Coins, .01, .05, .10, .25
Small floor rug or woven mat
Buttons, diff shapes, colors
Small hand mirror, comb
Illustration board, 14 ply
Golf tees
Funnels in different sizes
Index cards
Construction paper, diff colors
Markers, crayons
Plastic placemats (one color)
Wooden beads
Small plastic beads
Shoelaces
Science project display board
Flower arranging foam

Tools

Scissors, child's blunt end
Shears (heavy duty scissors)
Stapler
Computer & printer
Single hole punch
Glue sticks
Small screwdrivers, hammer

What makes a learning material 'Montessori'?

There are all kinds of ways to do activities with your child. You can work together in the kitchen as you prepare meals, outside in the garden, and whenever the opportunity presents itself. Montessori materials, like the ones below, have certain characteristics. These features make them special, different, and very interesting to young children.



Left and right: *Family Go Simple*

Montessori materials:

- Use a variety of materials in purposeful ways
- Are self-contained on a tray or in a box, basket, bowl, or other container
- Are organized, attractive, and have points of interest
- Isolate the skill or feature of the activity to focus the child's attention; and
- Include a control of error.



The material at left and above is a **color sorting** activity. It is **attractive**, **interesting**, and **self-contained** on its own nice tray. The buttons have their own container, which helps **organize** the activity. Circles of paper in the same colors as the buttons are laid in the bottom of four clear containers. The buttons are **identical in every way except their color**; and there is the **same number** of buttons (3) in each color. This **isolates** the essential feature of the activity - **color**. If the buttons were different sizes and shapes, or if there were different numbers of buttons of each color, the purpose of the activity would not be as clear. **Video:** [A child sorts buttons by color](#).

The **control of error** in this activity happens when the child puts a button into a container with a color different than the button's color. If the child is ready to focus on colors and match them, it will be obvious to the child when this happens. The control of error is **built into the activity**. If the child does not see the difference in the colors, he is

not quite ready for that and that is okay; at some point he will be. It will be much better if he **makes the discovery himself**, rather than simply showing him.



The activity at left and in the middle on the previous page is for **matching amounts and numerals from 0-10**. The cups are all **identical**. The tray keeps everything **organized**. The straws are the same size, but in different colors, so a child learns that a group can include dissimilar items. The stacked cups have identical round, red labels on them with the numerals 0-10 written on them. The small cup on the left holds pennies. The stacked cups are laid out 0-10, left to right (prepares for reading), and the child puts the correct number of either pennies or straws in each cup. The **control of error** is that there is exactly the number of both coins and pennies needed - 55 of each - to correctly fill the cups with from 0-10 objects. See this activity on page 361.



In this activity, the child spoons corn from one bowl to the other and back again. The material is **organized** and **attractive**. The tray has a lip to catch spilled kernels. The bowls and spoon are **sized for a small child**. **Points of interest** include how the white bowls highlight the color of the corn; how using ceramic or glass bowls creates a nice sound and bounce as the corn falls; and the different materials used: metal tray, ceramic bowls, wooden spoon, and corn. The **control of error** is seeing kernels fall outside the bowls. This material allows a child to use it and then replace it on the shelf all by herself.

Video: [A Montessori teacher demonstrates spooning.](#)

As you go through the activities you will find many examples of well designed home learning materials for you to pattern your materials after. **Don't hesitate to experiment and create**. Making new materials is half the fun.



Unlike typical toys, homemade **Montessori materials use real items from daily life** to teach real skills. Common objects look different and special on their own tray. They hold the promise of new, fun things to do and learn. Your child gets them from the shelf, uses them, and puts them back by himself. Montessori materials help a child **focus attention**. **Learning to concentrate is the key** that unlocks a child's ability to organize her brain architecture, develop self-discipline, and learn.

Photo: **Scooping beans** at [Peaceful Parenting](#)

In Dr. Montessori's Words

" Besides the various objects which the children are taught to use for their 'practical life', there are many others which lend themselves to the gradual development and refinement of a child's intellect. There are, for example, various materials for the education of the senses, for learning the alphabet, numbers, reading, writing, and arithmetic.....When we speak of 'environment' we include the sum total of objects which a child can freely choose and use as he pleases, that is to say, according to his needs and tendencies. A teacher simply assists him at the beginning to get his bearings among so many different things and teaches him the precise use of each of them, that is to say, she introduces him to the ordered and active life of the environment."

Maria Montessori, *The Discovery of the Child*

When a parent acts as a child's teacher, she does the same thing - create an environment rich in opportunities for meaningful, interesting activity and introduce the child to the materials it contains. She helps sparingly, only as needed, and introduces new materials when the child is ready and interested, always following the child and the Inner Teacher.

" The battle is finally won when the child finds something, some particular object, that spontaneously arouses his intense interest. Sometimes this enthusiasm comes suddenly and without warning. As soon as children find something that interests them they lose their instability and learn to concentrate....Children of a nervous temperament have become calm, the depressed have regained their spirits, and all have advanced together along the path of disciplined work, making progress through the outward manifestation of an inner energy which has found a means of expression. These fixed attainments have an explosive character that foretells a child's later development. They may be compared to the sprouting of a child's first tooth or his first steps."

Maria Montessori, *The Secret of Childhood*



Whether preschoolers should use tablets and apps is a hot topic in early childhood education, with true believers on each side of the argument. The **Digital Life** chapter starting on page 260 covers this in more detail, but a note about it here is appropriate before we further discuss using learning materials at home.

The dominant theme of Montessori for 3-6 year olds is the use of hands-on, three dimensional materials. In these years, children make sense of the world and develop their brain architecture through sensorial, neuromuscular activities. At the same time, they are doing other important things, such as developing their individual personalities and the ability to use **abstract thought** (p. 90).

A photo or drawing is more abstract than an object. A word is more abstract than a photo. A major developmental task for preschoolers is to gradually move from using only three dimensional objects to also using printed images and graphic materials, and finally to learning to read words. The **passage into abstract thought** is a major accomplishment.

Montessori designed many printed materials for her prepared environment. **Digital experiences with tablets and computers are a variation on printed photos and graphic images on paper.** They become appropriate once a child starts also using printed materials as well as three dimensional objects. Since they are more interactive, interesting, and fun than static images on paper, well designed digital apps are excellent learning tools once a young child is ready for them. Here are a few guidelines for introducing digital apps if you decide to:

- **Make sure your child has plenty of materials using three dimensional objects to use at all times. These should be used most of the time until at least age 5.**
- **Use printed materials as the *bridge* between hands-on materials and digital apps. Printed materials have a very important place in the passage into abstract thought.**
- **Control the *time* your child spends with digital apps and the *content* she experiences. Avoid allowing apps to dominate your child's time.**
- **Use high quality, well designed apps, such as those recommended in this book.**
- **Work with your child using apps regularly. Make it a shared experience, just like reading with your child. Let your child spend time working alone with apps she likes, also.**
- **After installing excellent parental controls, do internet searches of any topic your child has a current interest in. Look at the images, and especially the videos. Short educational videos are becoming a primary teaching tool for children of all ages.**

Finding the right materials for your child



Portioning nuts at *Tot School*

In Montessori, **we follow the child's interests**. We trust the **Inner Teacher**, present a variety of materials, and **let the child choose** what she is interested in every day. We watch for **any new spark of interest** in colors, numbers, shapes, words, science activities, or anything else; and we make materials and provide experiences that allow a child to explore that area more. It's a dynamic, fluid process.

Follow the child is the guiding principle of Montessori. But where do you start with *your* child? First, I'll give you suggestions for different ages. Then the **Ages & Activities Chart** on page 75 will show you a typical progression of activities. Use these tools to help you get started. Another way is to **look through the activity photos with your child** and let her choose which ones she'd like to do.

A note before we start

You will not have a complete Montessori preschool in your home with all the activities out all the time. You will need to experiment, try different activities, and use your child's interest as your guide. This will be an ongoing process. Not every material you make will be a hit, and that's okay. The materials your child loves will make up for it.

Start with a Practical Life or Sensorial Material

The Practical Life (p. 111) and **Sensorial** (p. 113) materials are the foundation of Montessori for 2 ½ - 6 year old children. These activities:

- Open millions of brain nerve pathways and build strong brain architecture
- Give children a series of successes that build a confident self-image
- Help children learn to focus their concentration
- Support and encourage a young child's strong drive toward independence
- Refine and educate a child's senses
- Develop muscle control and coordination
- Develop abstract thinking skills and prepare the child for reading and mathematics
- Help children become participants in life instead of spectators

Here are good starter **Practical Life** and **Sensorial** materials for different ages:

2 ½ - 3 ½ years



Rice Pouring, page 125



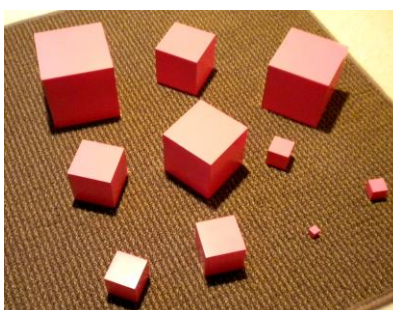
Play Doh, page 130



Rice Tub, page 121



Pasta Sorting, page 186



Pink Tower, page 197



Bead Threading, page 140

3 – 4 years



Shapes lacing, page 141



Binomial Cube, page 202



Tongs & Balls, page 126



Keys & Locks, page 160
Family Go Simple



Water Transfer, page 127



Sorting Coins, page 185

4-6 years

Children in these years can start with whatever Practical Life or Sensorial activities they see in the book that they'd like to do. See the next section about the **Learning Sweet Spot** to find out how to know if an activity is too easy, too difficult, or just about right.

Around 4 years of age, most children enter a natural **Sensitive Period** (page 16) for learning about reading, writing, and mathematics. When your child starts showing spontaneous interest in these areas, you can start the **Reading** (page 394) and **Mathematics** (page 349) **Sequences**.

Math and Reading progress from one skill to the next. Even though we many think of these as the 'real learning' part of early learning, remember: early learning is about **inner brain and personality development**. Reading, writing, and math skills are **byproducts** of inner development (page 28).

When starting with a 5-6 year old child, **it is a mistake to bypass the Practical Life and Sensorial activities and focus right away on reading and math**. Children have a wonderful way of filling in gaps in their development. 5-6 Year olds need to do a lot of Practical Life and Sensorial. They may master skills more quickly and use the materials for a shorter time than a younger child; but these experiences are still invaluable for their development.

The Learning Sweet Spot

An activity in the Learning Sweet Spot **holds your child's interest and attention, and she will want to repeat it, even if she makes mistakes**. These are always the activities you are looking for. Activities that are too easy cause **boredom** and a lack of interest. Activities that are too difficult cause **frustration**. These are extremes to avoid, particularly frustration. A frustrated child may be turned off to learning activities for awhile. Below is a graphic depiction of the Learning Sweet Spot.

Video: [A frustrated child](#).

Boredom —————→ **Sweet Spot** —————→ **Frustration**

See how the sweet spot is a little past midway, toward the frustration end? Your child will not immediately master new activities in his Learning Sweet Spot. **Mistakes and challenges, however, will not stop him from continuing**. Here is a guideline:

Find activities that excite interest, hold attention, and that your child repeats. When he masters an activity or skill, provide something a bit more challenging.

Repetition, Extensions, & Sequencing

Repetition

When a young child finds an activity in the Learning Sweet Spot, he typically repeats it at least a few times, and often many times, during a variable time period. This is when new brain nerve pathways are opened and strengthened. **Repetition is an extremely important part of development in early childhood.** The activities your child is really into should be out on your child's shelves. Allow **uninterrupted repetition** of favorite activities.

Extensions

Extensions refer to finding different ways to use a material or activity. For instance:



Spices ground in the activity at left can be sprinkled on a homemade pizza, at right.

Photos: [Chasing Cheerios](#)



An activity for mixing primary colors to make secondary colors turns into an art project.

Left: [Discovery Days & Montessori Moments](#)

Right: [The Education of Ours](#)



The dimensionally precise Montessori **Pink Tower** and **Brown Stair** can be graded as at left, used in a new construction (third from left), or combined to make an elephant!

Materials photos: [Montessori Outlet](#)

Children activity photos: [The Education of Ours](#)

More posts and photos of Montessori material extensions at [Living Montessori Now](#)

A classic extension with Montessori Sensorial materials is to **use them with printable 'Control Cards'** from **Montessori Print Shop**. This takes the material one step farther into the abstract (page 90). You will find recommendations throughout the book.

Sequencing

Children develop many skills in sequence. Each new skill, bit of information, or concept builds on what has come before and adds to the child's abilities and knowledge. Examples include **transfer** activities (p. 124), **mathematics** (page 349), and **reading** (page 394). You wouldn't expect a child to cut safely with a knife, write words, do addition problems, or read a book without developing the skills required. These come gradually, with practice.

Use the Record Keeping chart on pages 436-438 and note with each new activity when your child is **Introduced** to the material, **Practices** with it, and gradually achieves some degree of **Mastery**. Each step is important. Using the example of the Learning Sweet Spot, the trick is not to move your child along **too slowly or too swiftly**. Examples:

- A child has fully mastered matching amounts and numerals from 0-10 using three different materials. His Mom sees an impossibly cute variation of the material on a blog and just has to make it. After a shopping trip and creating the material, she proudly shows it to the child. He yawns, Mom feels deflated.
- Yesterday, a child built her very first word - *cat* - using phonetic word building. Today, she and her Dad sit down with a book about cats and Dad asks her to find the word *cat* every time it appears. She misses quite a few, and gets frustrated when Dad points them out.

In the first example, Mom made the material to satisfy her inner crafty person rather than move her child's skills along to larger amounts and numerals. In the second, Dad assumed his child's ability would progress much faster than it actually does. This happens to teachers also, so don't worry. One good solution:

Observe your child's activities to stay familiar with what and how she is doing. Use the Record Keeping sheets (p. 436-438), and make notes as needed. When your child has truly mastered a skill or concept, move to the next step. Each child is different and children vary with different activities. To really know where *your* child is at, observe and keep notes.

The chart on the next page can also help.

Ages & Activities Chart

These are only suggestions. **Your child may be ready earlier or later than the ages shown.**
Use your child's enthusiasm level and abilities as your guides.

Age	Practical Life	Sensorial	Language	Mathematics
3	Rice tub Transfers with plain cups, rice Threading beads Cleaning a table Fabric folding Banana cutting Lacing Transfers with handles, lips, tongs, tweezers	Play Doh Knobbed cylinders Knobless cylinders Pink Tower Red Rods Rough/smooth Sorting Color Cards Color Mixing Geo Board Mystery Bag Binomial Cube Fabric Matching Touch Matching Color Shades Geometric Solids Circles & Squares grading Sound Matching Trinomial Cube Smell & Taste matching	Reading to your child daily (continues as long as possible) ↓	Pre-Math activities: Sorting Threading beads Transfers Pink Tower Red Rods Shape Sets & Groups Geometric Shapes Sandpaper Numerals Amounts & Numerals 0-100 ↓
4	Pipe building Nuts & Bolts Clothing fasteners Cutting celery Helping clean the house Make a shopping list Use simple tools Painting a wall		Sandpaper Letters Letter writing Phonetic Word building, Phonetic Reading ↓	Addition, Subtraction, Multiplication, Fractions Decimal system Practical uses of numbers ↓
5			Sight Words & Reading ↓	
6				

Displaying Learning Materials



Carrots Are Orange

A Montessori environment, whether in a preschool or the home, is **organized** and **attractive**. The materials are displayed as **special items deserving respect**. Children see that the important objects in your home are displayed with pride. The same should be true for their learning materials. This elevates their place in the home.

Each material has a special place on a shelf or cabinet, and is returned there after each use. This is all part of the process of drawing in a child's

attention. A nice material sits on the shelf, waiting expectantly. Your child cannot resist having a look, and then brings it to a work area and tries it out. When she is finished, she shows the material respect by putting it back together and returning it to its spot on the shelf. This is the **Activity Cycle** (page 84). It encourages responsibility and helps your child focus his attention.



Chasing Cheerios

One set of low shelves will get you started very well. If you have the space and funds and want to set up more you certainly can. **The important thing is that your child's learning materials are seen as being different than her toys.**

Avoid the toy box

The old reliable toy box may work for stuffed animals and toy trucks; but throwing learning materials into one will bring your home early learning activities to an end pretty quickly. There is no order or

organization, parts are misplaced or lost, and most of your child's time is spent getting all the parts together rather than using a material. **Catch-all toy boxes should not be used for learning materials.** Learning materials won't survive in a toy box; and they will have virtually no chance of accomplishing their purpose of helping your child build better brain architecture. Children have no respect for toys thrown in a box – would you?

Here are photos of how different parents have displayed their child's learning materials, books, etc. to give you ideas. Many ways can work.



Photos: [Counting Coconuts](#)

Mari-Ann at [Counting Coconuts](#) has space to work with, nice shelves, and a good mix of homemade, original Montessori, and other materials. Everything is nicely arranged. The calendar and alphabet materials on top of the shelves work well. There is a plant, an aquarium, a wastebasket, a world globe, a clock, cultural items, and the small table and chair are close by. This is an attractive, functional space.



Boxes, trays, printed materials in file folders, and two small hardware parts cabinets to hold moveable alphabets and other reading aids.

[Montessori Print Shop](#)



A table top is put into service to hold an interesting, inviting arrangement of materials.

[Julie Josey](#)



This versatile shelving unit nicely handles double duty holding learning materials and Mom's sewing supplies and books.

Mama Liberated



Clean, simple shelves with nice materials, well displayed. This display helps a child **internalize a sense of beauty and order.**

Family Go Simple



Even a drawer can be used to store materials nicely. Consider using under bed boxes or drawers for clothing and nightstands and dresser drawers for materials.

Photo: ***Holly Estefan-Gomez***



A cozy reading corner invites a child to extended reading, or just looking, sessions.

Carrots Are Orange

More Great Ideas

Montessori Friendly Home Pinterest page

A Montessori Home Tour



At *Discovery Days and Montessori Moments*, the children enjoy this functional, organized, multipurpose room. At left: the view into the room. The middle photo shows the shelf unit pictured on the right wall in the first photo. At right: a child size work table. The regular size table at left in the first photo works for the oldest child, and allows adults to do some work, too. [See more ideas from Discovery Days.](#)



The main unit beautifully organizes materials. The upper levels of shelves are out of a child's reach, but those materials can be brought out 'on demand'. The cabinets organize Sensorial, Language, and Math activities. *Discovery Days & Montessori Moments*





This nice shelving unit for a toddler keeps a few special materials always available on trays. Materials can be changed out as your child's interests change.

Photo: **1+1+1=1**

Check out Tot Trays at 1+1+1=1

This child's room is ready to expand to accommodate more materials and activities.

Photo: **Peaceful Parenting**



With the right shelving unit, small wall spaces can be used effectively for displaying materials. Make the most of what you have. Check garage sales for pieces you can refinish.

Photo: **The Education of Ours**



A cool book sling made from curtain rods and fabric. This would be nice next to the bed for bedtime stories. Is that a squirrel I see in there?

Photo: **Mama Liberated**



Organizing with boxes - another approach

Make your own kids table

You can start out very well with a **small table and chair** and **one set of low shelves**. If you repurpose a few drawers to hold materials and use the tops of other furniture, this may be all you need. Here are [plans for making your own kids work table](#).



Left: Kidcraft Aspen Table & Chair Set. Middle: Tot Tutors Table & Chair Set.
Right: Folding Table & Chairs Set.



L to R from Ikea: Galant Shelf Unit, Besta Shelf Unit,
Trofast Storage Unit, Trofast Wall Storage.



Left: Artisan of Whimsy. Middle: The Learning Ark. Right: Mummy's Reviews.

Demonstrating Learning Materials For your child



Photo from: *How to present a Montessori material.*
[montessoriMOMents](#)

Demonstrating materials may seem odd, but it makes perfect sense. We often have someone show us how to do something new before we try it. Montessori teachers demonstrate materials **slowly, with quiet emphasis on the points of interest** of the material. A Montessori demonstration is a drama acted out with objects and the teacher's hands. The teacher presents and the child is the audience.

Video: [A Montessori teacher demonstrates pouring](#)

“Sometimes I use a word so easily misunderstood; the teacher must be seductive, she must entice the children.”

Maria Montessori, The Absorbent Mind

The purpose of a Montessori material demonstration is not to give a child only one option for how they should use a material. The primary goal is to **attract and capture the child's attention**. We move slowly. Silently, or with just a word, we point out **interesting things about the material**. We show the child that the material is worthy of **careful handling and respect**. We show how to clean up a spill – the **control of error** - as appropriate with various activities. Finally, we demonstrate the **Activity Cycle** (page 84) by going all the way from taking the material from the shelf, using it, returning it to its proper condition, and putting it back again. Now the child has a clear idea of how to get started.

After the demonstration the material is placed in its special spot on a shelf and the child is free to use it. As long as the child does not damage the material, uses it safely, cleans up any spills, and returns it to the shelf ready to be used again, she is free to explore with it.

Demonstration points to remember

- **Demonstrate the entire Activity Cycle.** Go all the way from creating a work area to putting the material away and putting the rug or mat away. Your child can then do the same when she takes over. This reinforces the Activity Cycle (page 84).

- **Slow down.** Exaggerate your hand movements. Look at things closely.
- **Stay silent.** As much as possible, don't speak when demonstrating. If you do speak, try to say just **one or two words** to point something out. For example, when a glass you are pouring from is empty, look into it, point at it and just say, "*Empty*". Point to the other glass and say, "*Full*". This helps your child focus in on the primary language and points of interest of the activity.
- **Demonstrate an error.** In Montessori, we view mistakes as opportunities to learn. When you demonstrate pouring, for example, spill a bit and then **stop right away and carefully clean it up**. This shows your child what to do in case she spills.

Control of error

Control of error in Montessori does not mean preventing the child from making a mistake! Quite the opposite, **mistakes are normal and expected**. They are opportunities to see that something needs to be fixed, and to make discoveries.



In the **baster transfer** at left, water out of the bowls is the control of error. At right, a child explores with the **Pink Tower**. When she is ready and has enough experience with the material, she will **discover** how to put the cubes in order by size to make a tower. This will be a much



more meaningful event if she is allowed to **figure this out for herself**. In Montessori, we show children how to clean up after themselves - using the cloth and sponge in the baster activity - and we hold back from simply showing them everything, as with the Tower. We **allow time for discoveries to happen**. This creates **enthusiastic, self-directed children**. Right: *Discovery Days & Montessori Moments*

"It is well to cultivate a friendly feeling towards error, to treat it as a companion inseparable from our lives, as something having a purpose, which it truly has."

Maria Montessori

When demonstrating activities like wet or dry pouring, always spill a little. Immediately stop and clean up the spill. Otherwise, a young child may see no difference between water in the bowl or on the table. With materials like the Pink Tower, one good method is to demonstrate how to bring all the cubes carefully to the rug, stack a couple, and then leave the child to explore with them. The activity descriptions will guide you further on this aspect of Montessori for individual materials.

The Activity Cycle

For your purposes at home, here is the Activity Cycle. Your child:

1. **Creates a work space with a floor rug or table mat.**
2. **Brings the material to the work space and uses it.**
3. **Cleans up and reorganizes the material ready for the next use and puts it back in the same spot on the shelf.**
4. **Puts the rug or mat away.**

This is the sequence children follow in Montessori preschools. It may seem a bit formal for doing activities at home; but I encourage you to use it right from the start. Making the Activity Cycle a habit:

- **Helps children develop an organized, thoughtful approach to projects and tasks;**
- **Helps focus attention right from the start of an activity;**
- **Teaches children to always finish what they start; and**
- **Ties in with how materials are displayed and demonstrated to make using learning materials special and important.**



Maria Montessori strived to make children feel that their efforts to learn and grow are special. She created the Prepared Environment, many beautiful materials, and little extras like the Activity Cycle. The more of these elements you can use, the better.

Video: [Demonstrating how to roll a mat](#)

Blog Post: [Using a Mat](#)

A simple **plastic table mat** in a single light color serves well for activities using water. For other table activities, you can use [Duck Non-Adhesive](#)

Shelf Liner or a similar material, or just cut **felt** into rectangles about 12" X 18". These can all be rolled and stored in a nice container, as in the photo at left.

For floor activities, a **short nap, rollup area rug** about 2' X 3' in a single light color works well. You can sometimes get throwaway carpet samples at home improvement stores; and these also work well.

The Three Step Lesson

We teach our children so many **names** for things! Colors, shapes, numbers, letters, names of plants and animals – the list seems endless. Dr. Montessori came up with a way to help young children learn names. She called it the **Three Period Lesson**. You can use this technique at home, too. I call it the Three Step Lesson for simplicity.

We have **short term** and **long term memory**. New terms go into short term memory. Young children often remember words after hearing them only once. Short term memory is fickle, however, and words can be forgotten. Children often need a little help moving words from short term to long term memory.

The Three Steps:

Identify

We show the child (identify) three objects, one at a time, and tell the child each object's name.

Recognize

We set all three objects in front of the child and ask the child to point out (recognize) each object when we say its name.

Remember

We ask the child to tell us (remember) the name of each object, again one at a time.

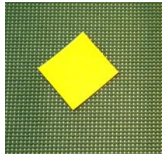
Video: [Three Step Lesson with 3 colors](#). The only thing I recommend differently is to show just **one color** in the first and last steps. This focuses attention on the object.

Video: [A Three Step Lesson explained by a Mom](#). A nice explanation. Again, I would show just **one object** in the first and last steps.

[The Three Period Lesson described at InfoMontessori.com](#)

Here is an example. We will teach a child the **Primary Colors: red, yellow, and blue:**

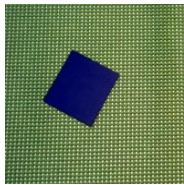
Step 1: Identify



"This is yellow."
Child holds, looks
at, & says "Yellow"



"This is red."
Child holds, looks
at, and says, "Red".



"This is blue."
Child holds, looks
at, and says, "Blue".

Step 2: Recognize



"Show me the (yellow
red, blue)." Switch
positions



"Which one is (red
yellow, blue)?" Switch
positions

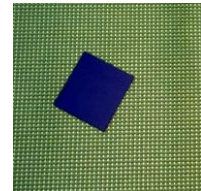


"Where is the (blue
yellow, red)?"

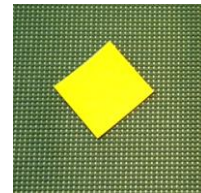
Step 3: Remember



"What color is this?"



"What color is this?"



"What color is this?"

It helps to practice doing a Three Step Lesson before you do one with your child. Soon it will be second nature. Here is a big tip:

More time spent in step two helps the most.

Step two is when the name moves from short term to long term memory.

Play different games in step two:

- Have your child close her eyes and while you rearrange the objects a few times.
- Reverse roles. Close your eyes and have your child rearrange the objects and ask you to point them out.
- Put the objects at a distance somewhere and ask your child to go get the correct one.

Three Step Lessons work with almost any object, colors, shapes, animals, clothing, letters, numbers, all kinds of things.

Three Step Lesson FAQ's

How old should my child be before I do Three Step Lessons?

Your child's **interest and enthusiasm** should always be your guide. Most four year olds, and some three year olds, will participate in a Three Step Lesson. If you ask your child if she wants to learn the names of some objects and she agrees, go for it. If not, don't push it – find something she is interested in.

What if my child does not remember the names?

This is common, no worries. If you get to step three and your child cannot remember the names, your child is either not ready for the activity, not interested on that day, or you didn't spend enough time in step two. I'll leave it to you to decide which. If your child is not ready or interested, remember: **nothing is ever gained by pressuring a young child to learn**. Follow your child's lead and interests.

Sometimes it helps to do Step One and Step Two one day, and save Step Three for another time. Always use your child's interest and enthusiasm as your guide.

If you get to step three and your child cannot remember the names, stay positive, congratulate your child for what she has done right, and start over in step one. **More time in step two** will help get the information into your child's long term memory.

If your child does not remember the names days later, another three step lesson or two will get the job done. The important thing is to:

Be **patient**, be **positive**, and **encourage** your child's efforts.

Why use three objects, wouldn't more be faster?

More than three objects can be cumbersome and a bit confusing for a young child, although sometimes it can work with four or even five objects. One or two objects can work if a child is having trouble with more. Three works well most of the time.

Should we review names we have learned in past lessons?

Absolutely. Before you show your child more colors, amounts, letters, etc., get out the ones you did before and see if your child still remembers them. This gives you a check on your child's progress and insures you don't move ahead before your child has really mastered what came earlier.

With practice, your child will soon learn how the Three Step Lesson works and get comfortable with it. So will you. You will find it a very helpful tool for teaching your child the name of anything.

My child is too hyper to sit through an entire Three Step Lesson. What do I do?

The first goal of Montessori activities is to find materials that attract your child's interest so that he focuses his attention on them. **Concentration** and **focusing attention** are skills a child learns like any other skill. Once a child begins to spend time concentrating his attention on materials he is really interested in, he will calm down enough to start learning through Three Step Lessons. He will also become more able to learn advanced skills like math and reading. Children who learn to concentrate usually become calmer and more satisfied with life in general. Maria Montessori called this '**Normalization**'.

Keep trying materials and activities until your child latches onto one & go from there.

Staying safe

Maintaining safety is your first priority. In a Montessori preschool, children freely choose their activities. They are carefully monitored; and not allowed to work carelessly or create dangerous situations. This is also essential in the home.

Choking and ingestion hazards

Many materials use small objects which a child can swallow and cause choking. If your child explores the world orally, hold off on these activities until she is a bit older. Every parent should take a **Basic Life Support (BLS) course**. Know how to **clear an airway**.

Sharp points and edges



Montessori materials, in particular, are precisely made and have sharper edges and corner points than typical plastic toys. Do not allow your child to handle them carelessly or throw them about.

Photo: **Montessori Constructive Triangles**

Blog post: **Fire safety becomes a mapping exercise**

Chemical hazards

There are many good **toxin-free cleaning products** your child can use in Practical Life activities and around your home. Switching to these types of products is good for everyone. Make learning to use a spray bottle an activity in itself. Be sure your child can safely use one before he tries spraying cleaning solution.

Electrical hazards

About 2400 children are electrocuted every year. There are many **good options for child-proofing electrical outlets**. The old standby outlet hole plug can be removed pretty easily, and you may forget to replace them after you use an outlet. Take a look at **various types of covers** that work better. Remember to safety proof surge protector outlets, also.

Burn hazards

Adjust your water heater so your child cannot scald his skin if the water is on maximum hot. 120 degrees F is the generally recommended safe maximum for hot water in a home. Obviously, if a science experiment uses heat, such as a candle, extra care is required.

Independence has risks and responsibilities. Give your child time to practice skills under close supervision. Always keep a watchful eye on her activities. Allow him to use materials independently only when he has shown the clear ability to do so safely.

See page 168 for more safety ideas.

Record Keeping

On pages 436-438 in the printouts section you will find sheets you can print out to keep a record of your child's activities. You may or may not need these at home; but they are a handy tool for keeping track of your child's skills development.

Record keeping about various activities will help you remember whether your child has been **I - introduced** to the activity; is **P – practicing with it**, or has **M – mastered it**. Write in dates and make any comments you need to. This makes a nice record of your child's progress.

Take **pictures and movies**. Put photos and samples of her art work up on the refrigerator and family bulletin board. This gives children an added sense of who they are and that their activities are important.

Photo: [Chasing Cheerios](#)

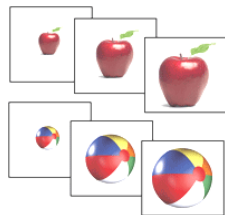
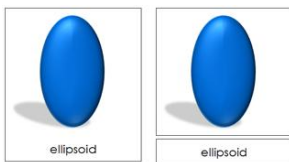
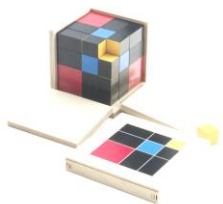


Helping your child make the passage into abstract thought

From 2-6 we build the brain architecture we use for the rest of our lives. These are also the years when we transition from a **sensory, neuromuscular** approach to the world to the ability to use **thought** to organize our perceptions of the world and ourselves. Moving from the predominantly hands-on activities of a 2-4 year old to a 5-6 year olds ability to use abstract thought to understand math, reading, and science concepts, and to use critical thinking, is the **passage into abstract thought**. This is a vital developmental task of the years 2-6. Montessori activities encourage and promote this transition.

A decade ago we only had **three dimensional materials** and **printed materials** to work with. Now, **tablets and computers** have been added to the mix. These devices will be the primary learning tools for our children, so it is necessary to introduce them in the early years, but how and when? Here is a suggested sequence to use as a guide:

Hands-on Materials → **Printed Materials** → **Tablets and Computers**



Hands-on materials should provide 75% or more of a 2-4 year olds learning experiences. Sensory and muscular inputs are the most important and valuable activities for this age group.

When a child is ready & shows interest, add flat shapes and printed materials, photos, and paper books to extend early learning one step into abstraction. Many can be paired with hands-on materials.

By around 3-4, digital apps and books can be *slowly* blended into the mix of the above materials, while **still primarily using hands on materials**. Time and content should be restricted. By 5-6, a child can work with apps more when doing learning activities. See page 92.

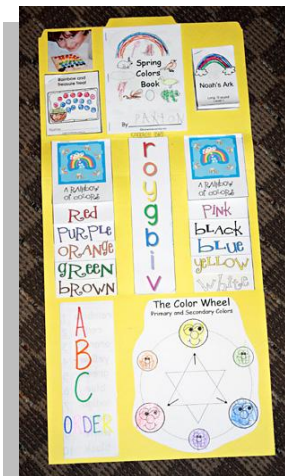
Harness the power of lapbooks



**A big human body lapbook
at 1+1+1=1**

With early learning, building on a young child's spontaneously expressed interests is the most effective approach. **Homemade lapbooks** are a wonderful way to extend and reinforce hands-on activities. They also help a child gradually make the transition into abstract thought. Anyone can **make lapbooks**. For pictures, use family photos, images from internet searches, magazine photos,

and your child's artwork. Text can be handwritten, typed on paper for cutting and pasting, printed from the web, or cut from magazines, which adds cutting practice to the activity.



Lapbooks are usually made from card stock or file folders, folded to make something like a brochure or presentation folder. Drawings and artwork, pockets holding little cards, snippets of text, and photos are glued to the inside to make a multi-featured book focused on one topic or experience.

Photo: **Download materials to start a rainbow lapbook at 1+1+1=1**

Any activity or experience that your child finds special or really interesting can be the topic for a lapbook. The lapbook then becomes a way to relive the experience and absorb information over time.

You can start by using ready-made, free lapbooks from the links below. Add your own content whenever you like. Lapbooks are great learning tools, personalized to your child's specific interests. They promote creativity, teach, encourage exploration of experiences of interest, promote language skills, and don't cost much to make. Perfect!

Video: Making a Lapbook

How to make a lapbook

How do I make a lapbook?

All kinds of free lapbook templates!

Animal lapbooks

Lapbooks for 2-4 year olds

Lapbooks for 4-6 year olds

Grocery store lapbook

Lapbooks to accompany popular children's books

Free preschool lapbooks

Materials for making a dinosaur lapbook

Flowers & Plants lapbook

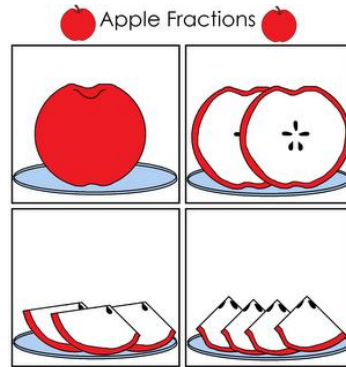
Make materials with OIL

I don't mean that you should sprinkle cooking oil on your child's learning materials. In this case, **OIL** stands for:

Object - Image - Language



Object



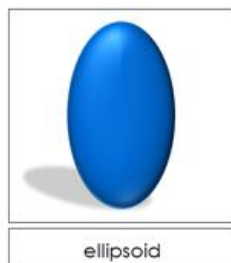
Image

one fourth

1/4

Language

Left: A child's first experiences with fractions often involve cutting **Objects** like fruit.
Middle: An apple fractions **Image** from [A Child's Place](#). **Right:** **Language** and **numerical symbols** that identify and describe the objects and the graphic image.



Far left: **Montessori Geometric Solids** are the objects. The **Geometric Solids Three Part Cards** from **Montessori Print Shop** provide the graphic images and language in one material.

If your child is 2-3 years old, she may not show as much interest in the images and words, and that's fine. Just exposing him to them will be enough. As your child gets older and uses learning materials more, you will see her start working with the images and words more and more. Soon, he will be in his sensitive period for reading, writing, and math. **Including these elements in your learning materials will make them even more effective tools for helping your child build the best brain architecture possible.**

Try organizing by units & themes



Materials for a Ponds unit are all gathered in one place for easy access at [Counting Coconuts](#)

Some of your child's activities will naturally organize themselves around certain topics of special interest. The photo shows a selection of materials relating to ponds that Mari-Ann at [Counting Coconuts](#) put together. Organizing by theme or unit makes all of the related materials easily accessible when your child wants to use them. There are hands-on objects, books, souvenirs of your travels - anything related to that topic. Organizing by unit can be very effective at home or in schools. It may also help you make the best use of limited space by allowing you to stack storage boxes.

[Discovery Days & Montessori Moments](#) is one of the best sites for Moms wanting ideas on working with their children at home. Search Stephanie's archives to find more activities than you will ever have time to do. They often do theme-based activities:

[Princess](#) [Snow & cold](#) [Farms](#) [Animals](#) [Leaves](#) [Space](#)

[Living Montessori Now](#) should be on the favorites list of every Mom doing early learning at home. Check out Deb's archives for [Montessori Monday](#) to find a wealth of ideas and inspiration built around various themes. Follow this series of posts for more.

[Counting Coconuts](#) is another wonderful site with extensive archives to give you ideas for expanding your activities and materials. Check out Mari-Ann's [Mickey Mouse](#), [Halloween](#), [Space](#), [Angry Birds](#), and [Candy](#) mini-units to get you started.

Encourage free play

The essential goal of Montessori is to help young children learn to **concentrate and focus their attention**. Interesting materials are focal points that harness the power of a child's mind toward one experience. Children who learn to concentrate early in life are happier and far more able to learn anything that is presented to them. Free play is often thought of as unstructured play. Actually, **a child's play is almost always a directed effort** at

understanding the world and mastering skills. Montessori called children's play their important work of growing up. Free play and learning materials are both essential.

Make **objects from nature** available for free play regularly to your child. Natural objects like branches, pine cones, leaves, rocks, flowers, gravel, dirt, water, etc. are especially attractive to children. A young child will create numerous play scenarios with a few natural objects. Mix in some small human figures, vehicles, and other props, and a child will act out many situations he is thinking about and experiencing. This self-guided activity of working out feelings and ideas is called **Play Therapy**.

Art materials are another wonderful opportunity for free play and expression. Put less emphasis on telling your child how absolutely beautiful all her creations are and more on **encouraging the process of creating them**. Include magazines with photos of people, cities, houses, etc. as **graphic props** to encourage creativity.

Play games

Apps aren't the only games in town. Kids love games, so follow the child and play them often. Games are great focal points for **shared family activities, experiences a child does not get playing games solo on a tablet**. Family game time can go on for years and be the source of many precious memories. Games teach children how to take turns, respect others choices, use strategy and critical thinking, and engage in friendly competition. Start simple, and introduce more challenging games when your child is ready. Classic indoor games include **checkers, ring toss, shuffle caps, and tic tac toe**. Board games are always fun. Here are a few tried and true board games most preschoolers love:



Top: Monopoly Junior, Don't Wake Daddy!, Candyland, Hi-Ho Cherry-O, Chutes & Ladders.

Bottom: Trouble, Snail's Pace Race, Boggle Jr., Lotto Game

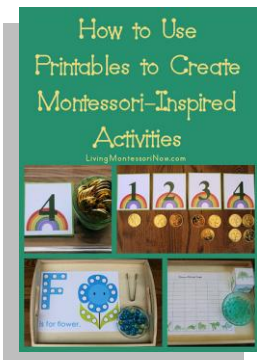
Using printable materials

From birth to at least four or five, children need most of their experiences to be with three dimensional objects. They now also need digital interactive experiences to be prepared for the world they are entering, and especially for what they will encounter in school. With that said, **printed material has a major role in early learning**. Handling paper with a photo, shape, or printed word on it is an important step in the development of **abstract thought** (page 90).



Throughout this book I recommend the high quality, very affordable Montessori printable materials from **Montessori Print Shop**. Click on a material and you will go right to their site where you can **Click, Print, Teach**. So easy!

Many Montessori Print Shop materials are free. Others cost very little and save you huge amounts of time. They are all beautiful. Rather than spend hours searching the internet, then saving and formatting your own materials, which won't look as good as these, you can download perfect items and get started right away. These materials are an awesome addition to your child's home early learning.



Check out the wonderful post, **How To Use Printables to Create Montessori-Inspired Activities** (left) at **Living Montessori Now**, It has a section with over a year's worth of freebies and Montessori Inspired activities.

More free printables

Montessori For Everyone

Education.com

Enchanted Learning

Kidsparkz.com

1+1+1=1

First-school

Using Printouts

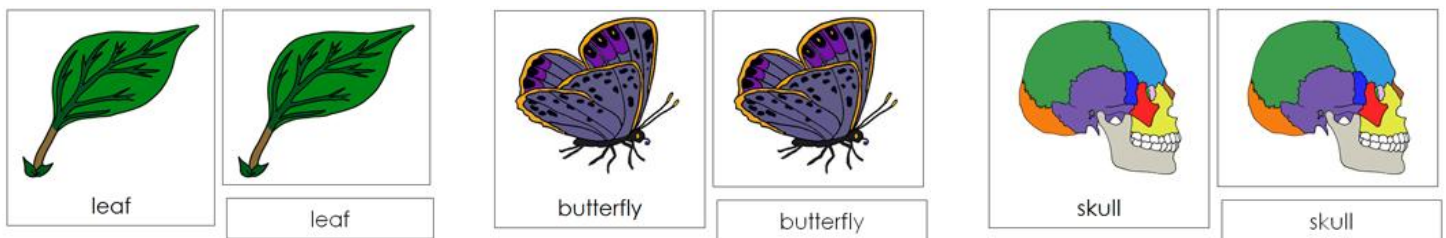
You will need:

- Computer color printer (required), regular white paper
- 67 lb. & 110 lb. Index card stock in white, blue, and yellow

- 65 lb. Astrobright (or similar) card stock in bright, mixed colors
- Poster board in white and colors
- Glue sticks, heavy duty (& sharp) scissors, paper trimmer
- Cold laminating pockets (if you want to preserve a material awhile)
- Single hole punch, colorful yarn

Download and save the PDF file to a folder, then print it out. Print materials right onto heavy card stock, trim them to size, and they are ready to use. Laminate them if you like using simple laminating sheet pockets from an office supply store. One printable type you can use with great success at home are [Montessori Three Part Cards](#).

Here are examples of Three Part Cards from [Montessori Print Shop](#):



Using Three Part Cards

Three Part Cards, or **Nomenclature Cards**, help your child learn new language and experience all kinds of things isolated as clear photographs and graphic illustrations. Read about Three Part Cards at [Shannons Tot School](#).

Video: [Using Three Part Cards](#)

Here is a great description of ways to use Three Part Cards from [Montessori Print Shop](#):

1) The **picture cards without labels** are used with **2-3 year olds**- to enrich their language. Show them a picture and, using clear speech, say the name of the picture. Ask them to repeat the word. Read [How to Use Montessori Nomenclature](#) for specifics.

2) The **picture cards with labels** are used for **3-4 year olds who are getting into words**. You can use these cards to play games like "I Spy". This helps children to **make connections between letters and sounds**. For instance, using pictures of woodland animals - *"I spy with my little eye an animal that starts with the sound 'buh' can you show me an animal that starts with the sound 'buh'?"* (bear)



*Using Three Part Cards at
[Discovery Days and
Montessori Moments](#)*

3) The **picture cards without the labels and the labels themselves** are used for children who are reading, usually **4-5 years** of age. The point now is to read the labels and match them to the objects that they are already familiar with - **it's a reading lesson**. They read the labels, match them to the pictures, and use the labeled picture cards to check their work.

4) Classified Cards can be used for **printing practice, vocabulary cards, and spelling practice**. Often at the age of 5-6 years a child will start making mini projects. They learn how to pull together all of the information they have been absorbing and inquiring about, and present it on a project board, in lap books, or note-booking.

Three Part Cards can be used to teach a child about anything!

Free Three Part Cards



Early Learning Tips

Make it FUN!

Teachers are usually able to maintain objectivity toward their students because they are not their own kids. It can be harder with your own child. We see ourselves in our children; we want them to succeed. We can feel offended and defensive if our child seems to struggle. It is natural to compare our children with others. Is our child ahead, behind, or about in the middle? We want to be sure our child is keeping up, developing as she should. These are all normal feelings. Communicating them to your child, however, is something to avoid.

It is essential that early learning be a process of **fun, exploration, encouragement, and discovery**. Early learning should be done in a very **positive environment**. Young children are extremely sensitive to their parent's words, body language, and facial expressions. They hear and understand more than we think. Your child wants to please you, and can become very anxious if he doesn't. **Pressure and stress have no place in early learning**.

The twin goals of your early learning activities should be:

- **Find activities that excite your child's interest and hold his attention**
- **Make early learning a series of small successes and positive achievements.**

Make sure your little one knows you respect, encourage, and applaud her efforts. **Avoid any pressure or negativity.** The rewards are improved brain architecture, a positive self-image; and a closer parent-child bond born of many wonderful shared experiences.

Explosions

I don't mean a science activity gone wrong. These explosions happen in your child's development. Parents are sometimes unsure if their activities with their child are having an impact. You may not see what you perceive as 'big positive results' from your home learning activities. Let me assure every parent who reads this book: ***everything you do with a young child has a big impact.***

Young children develop according to an **inner timetable**, not an outward program. Their development does not progress upward in a straight line. Things are more 'organic' than that inside a child's brain. There are surges and dips, ups and downs, and calm and active times. The children I observed often followed a pattern I came to call:

Assimilation – Integration – Explosion.

Assimilation

In this phase, a child **gathers information** and **opens brain nerve pathways**. By **concentrating** on activities of interest, a child stores up millions of sense impressions, muscle memories, and experiences. She may not seem really excited about things and does not display striking new skills. She is getting 'raw materials' on board in her brain, though, to do just that. During this phase a child will often **repeat an activity many times**. Every repetition builds and strengthens brain nerve pathways.

Integration

Now, the child's brain '**digests**' all that raw material. Nerve pathways are organized into brain architecture. Connections are made between memory, muscle movements, thoughts, sense impressions, and your child's growing sense of self. The brain does its organizing thing. This process happens automatically, usually with no outward sign that anything is happening. There is no timeline or deadline.

Explosion

When the time is right the child starts **using** the new skills and information he has been gathering and processing. This often happens **suddenly – like an explosion**. You won't see fireworks, though. Often, you won't even realize the explosion has happened. One day you notice your child pouring water from a pitcher without spilling; correctly identifying how

many objects are in a group; pointing out new aspects of her environment; and reading. What happened? Your child had an explosion of development.

Montessori observed this process in children learning to read. She noticed that children often went along for weeks slowly learning their sounds and participating in other language activities; but without great outward enthusiasm, just kind of plodding along. Then one day, without warning, they started reading everything in sight. She called it the '*explosion into reading*'. The process works similarly for many aspects of children's development.

You can be sure that the learning activities you do at home will have a strong positive impact on your child's development.

Montessori materials for home use

Montessori classroom materials used to be so expensive even schools could not afford some of them. Prices have come down, and many materials are now affordable for the home. These are high quality learning materials, made to Dr. Montessori's specifications. They have been fascinating children for over a hundred years. Adding even a few of them to your child's home early learning collection is a great idea. If you divert a portion of what you will spend on disposable plastic toys, your budget won't notice it and your child's early learning will benefit.

The materials shown here are those I recommend for home use. You could certainly get others if you like. When your child is through with them, you can recoup up to half their cost selling them on Ebay or Craigslist. Here are suppliers I recommend as of Fall, 2012:

[Montessori Outlet](#) [Kid Advance Montessori](#) [A Plus Montessori](#) [Adena Montessori](#)

Always check prices, as suppliers often differ on the same items. I am not associated with any of these companies and receive no payment for listing them here. I mostly use and link to photos from Montessori Outlet, as that is where I have purchased materials the most and have always been happy. They have their own closely supervised manufacturing facility in China, so quality control is good. The other companies can also provide you with high quality materials. An online search will find more suppliers.



Knobbed Cylinder Block #1

There are 4 sets of Knobbed Cylinders. This and the #3 set are plenty for home use.

Children 2-3 love these.

Mini Knobbed Cylinders



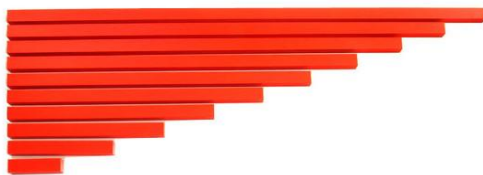
Knobbed Cylinder Block #3

Some of the suppliers do not sell the cylinder blocks separately, so check. Montessori Outlet did at the time of this writing.



The Knobless Cylinders

These have the same cylinders as in all four Cylinder Blocks, but painted and without the knobs, in nice wooden boxes. Versatile, fun materials for 3-4 year olds.



The Red Rods

10 Rods from 10cm to 1 meter in length. These can be a bit big for home use. I give ideas for making smaller sets.



The Pink Tower

An iconic Montessori symbol and a big hit with most 2-4 year olds. 10 Cubes from 1cm to 10 cm. You can keep it stacked as shown on the floor or in a box or on a tray.

Don't lose the little one!



The Blue Constructive Triangles

At under \$15, these are a real bargain. Your child can learn all kinds of plane geometry with these just by exploring.



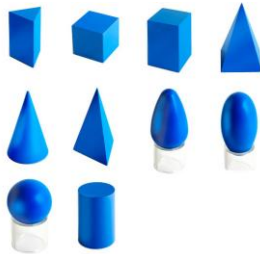
The Brown Stair

The third of the dimensional trio, the others being the Pink Tower and the Red Rods. These are a bit pricey for home use; but paired with the Pink Tower they provide all kinds of building possibilities.



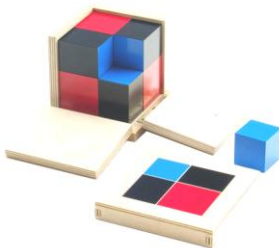
Mystery Bag with Geometric Shapes

Another material under \$15 that can provide hours of exploration and learning. Usually comes with two nice bags. A versatile, very cool material.



Geometric Solids

Beautiful painted hardwood geometric solid shapes. Children absorb all kinds of information just from handling these.



Binomial Cube

A big hit with most 3-4 year olds. At around \$20, a great value.



Trinomial Cube

Just as big a hit with most 4-6 year olds. The Trinomial Theorem in three dimensions. How did Montessori come up with all this stuff?



Sandpaper Letters

An indispensable tool for teaching phonics - the first step in the Reading Sequence. Around \$25. There are DIY projects for these; but you will spend as much in time and materials and not end up with a set close to this quality.



Sandpaper Numerals

The tool for teaching written numerals.



Teen Bead Bar Box

Only around \$8 and very handy for teaching amounts greater than 10.



Box of 45 Gold Bead Ten Bars

For teaching amounts 10-100.



100 Golden Bead Chain

Another tool for introducing amounts up to 100 and the decimal system.



The Hundred Board

Around \$25 at the time of this writing and a wonderful material for reinforcing amounts and numerals up to 100 and seeing relationships between numbers.

One essential item is a **blindfold**. Many Sensorial activities use a blindfold to help a child focus in on their other senses. You can use a scarf tied around the head or a costume mask with the eye holes taped over.

Montessori materials really make your child's shelves come alive. I highly recommend getting some instead of the next few disposable plastic 'latest craze' toys you would otherwise buy. On the next pages are great learning materials from other sources. These also make wonderful additions to your child's home collection and will see a lot of use by most preschoolers.

More great early childhood materials

There are many great materials out there. Here are just a few good suppliers:

Melissa & Doug

Edushape

Guidecraft

Growing Tree Toys

Montessori Services

Brio

Learning Resources

Lego

Lakeshore

The materials shown here are just a sample to give you ideas and examples of quality early learning materials. Most can be found on Amazon.



Bruin Stacking Cups



Guidecraft Texture Dominos



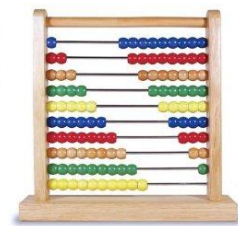
Inchimals



Colorful Caterpillars Game



Melissa & Doug Pattern Blocks



Classic Wooden Abacus



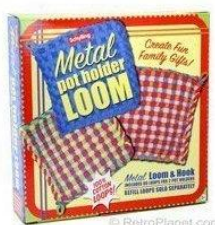
Edushape Tricky Fingers



Geometric Stacker



Melissa & Doug Wooden Pound-a-Peg



Pot Holder Loom Set



Mindware Pattern Play



Fisher-Price Drillin' Action Tool Set



**eeBooLife On Earth
Memory Matching Game**



**Melissa & Doug Deluxe
Magnetic Calendar**



**Melissa & Doug Wooden
Shape Sorting Clock**



Leapfrog Scribble and Write



**Lauri Toys Shape
& Color Sorter**



Eeboo Tell Me a Story Cards



**Channel Craft
Toy Tin Marbles Game**



**Whammo Soft Catch
Frisbee Disk**



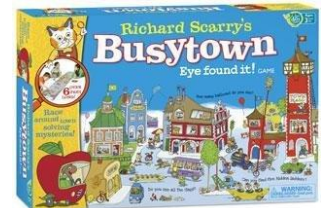
Lego Ultimate Building Set



Brio Ultimate Building Set



Tomy Gearation Gear Magnets



Richard Scarry Busytown



Gears, gears, gears!



Alex Toys String A Farm



12" Inflatable Globe



Pretend & Play Cash Register



Magnifying glasses



Bug viewers

Summary

Your enjoyment and success doing Montessori at home will both increase if you follow a few simple suggestions:

Make it fun. Early learning should always be a series of fun experiences and discoveries.

Follow your child. Let your child's interests be your guide. Make materials available on low shelves so your child can use them independently. Observe your child, see what she is interested in, and do activities around that. Suggest things to do and bring out new things when your child is open but has not chosen anything to do that day.

Mix homemade and commercial materials. A nice mix gives your child many options for focusing her attention. Your child can help make your home materials, which will increase interest and pride. Use Montessori principles when making your materials. Substitute good learning materials for disposable plastic toys.

Display materials rather than use a toy box. Montessori is almost impossible to do if your child has to rummage in a toy box to put materials together. Regularly help your child tidy up her shelves and keep materials ready for use - like a teacher does each day.

Encourage the Activity Cycle. Creating work spaces and finishing activities by putting them away has numerous benefits.

Aim for the Learning Sweet Spot. An activity that is just challenging enough to take some practice to master; and that your child eagerly uses until she masters it, is in her Learning Sweet Spot. Boredom and frustration are the two extremes to avoid.

Demonstrate new activities and materials. Your demonstration shows your child how to handle materials carefully, with respect. You can show points of interest and how to clean up spills. Demonstrations show that you respect the materials.

Encourage independent work and repetition. You should not be leading your child's activities most of the time. Cooperative work like cooking and reading together is great; but your child also needs to develop a self-directed, self-motivated approach to his activities. Repetition is essential for skills mastery and brain development.

Help your child follow a gradual path to abstract thought. Always start with hands-on materials. Introduce printed materials and tablet and computer experiences when your child is ready. Include printed words and numerals as appropriate.

Frequently asked questions

I have a toddler and a preschooler. How can I keep the younger child from disrupting the older child's work?

A great many parents deal with this issue. Suggestions:

- Work with the toddler to teach her that she is not allowed to touch the older child's work. With most toddlers, this will involve anger and frustration at first. You should be calmly consistent in not allowing the toddler to touch or disrupt the older child's work. He will accept it eventually. This will be good practice for similar situations later!
- If the children have separate rooms, great. The older child's things can be displayed and primarily used, in his room. This solves most of the issues; but is not possible for many parents.
- Encourage your older child to use her materials when the younger child naps.
- Display the older child's materials out of reach of the younger child. This is important, as the younger child will not be ready to care for materials properly and will create disorganization. This will prevent the older child from seeing her materials as special.
- Always provide something for the younger child to do when the older child is using a material. Your toddler can have his own shelves and baskets for things, which will help him become familiar with this way of displaying materials and putting them back.
- Do cooperative projects. Art projects and cooking in the kitchen are two classic areas for this. Choose a cooking project that both children can contribute to. Find things the toddler can do - mixing by hand in a bowl, scooping out food, handing you plates - while the older child is doing things requiring more skill and motor control. Congratulate and thank both children when the project is done. Your daily reading time is another good option for cooperative activity.
- When the toddler is ready to use one of the older child's early materials, have the older child show him how. Children often learn best from other children,

We don't have enough space to have a lot of materials out at one time. What can we do?

Do the best you can, few situations are ideal. Try to find a place for one small set of shelves to display the activities your child is most keen on at any given time. Look for other places you may not have considered to display materials, such as the top of a dresser, a drawer in a chest or nightstand, a cabinet, or a table top. Stacked plastic storage drawers on wheels in a closet

can hold quite a few materials. One Mom uses the new jug style plastic coffee containers and puts a material, or a couple of materials, in each, with a photo of the activity glued to the outside. She stacks and lines these up, making great use of a small space. Use drawers under the bed for clothes, and a couple of dresser drawers for materials. If you get creative, you'll find a way. Even if you have to store materials in a closet and get them out when you can your child will still benefit. **This parent used boxes to organize everything.**

My child does not treat the learning materials we make and those I have purchased with respect. He throws them and knocks them around, then goes back to his other toys. What can I do?

The activities shown here are learning experiences, not toys. If these types of materials are new to your child, and your child is used to treating toys roughly, transitioning to learning materials can take awhile. Be patient. Demonstrate each material so your child gets an idea that this is a special activity. Display materials differently than your child's toys, on their own shelves. You will need to remove materials that your child handles roughly and abuses. Tell him he can use them when he is able to take care of them. You might have to take all your child's toys away until he shows the ability to take care of them. That may seem extreme, but it can be required with some children.

Teachers in Montessori schools have it a bit easier than parents. They don't have the interpersonal relationship a parent builds up with their child. They are starting fresh with new rules in a new environment. There is also the peer aspect. They see other children working and tend to realize and accept that this is how it's done here. Parents who observe the class in session are often amazed that that is their child out there!

The result you are ultimately working towards is a moment **when your child's attention is captured by a material and he repeats using it with focused concentration.** That is the real goal in Montessori. The more of that focused concentration you see, the more your child will develop self-discipline and an inner focus that will start to positively impact her outer behavior. Keep trying materials until you see that spontaneous, focused attention. That is when you have hit the mark. The rest will follow. Rotate new materials onto the shelves when your child has mastered the current materials or shows little interest in them anymore.

In some home situations, it may be best to bring out materials slowly, one at a time, so your child can focus on using each one. Putting too many new materials out too quickly can backfire. It is usually best to start slowly and demonstrate no more than one new material every few days or every week in a home setting.

My child is really hyperactive and won't sit still for me to demonstrate a material. He grabs at it and gets angry when he cannot do it right away. What can I do?

This happens to many parents. Teachers usually have an easier time because the children don't know them yet so they often tread more lightly. Even teachers face this issue, though. You may find that using materials that immediately allow a child to get busy with them work better to start. Legos, sorting materials, a sensory bin, and hammering are examples. You can also do activities like washing a table or cooking cooperatively, by teaming up. Working along with you sometimes makes a child slow down and pay attention to what is happening.

Children we call hyperactive today are the same children who ran around outside playing for hours many years ago. We sometimes forget how much large muscle movement young children need. If your child is hyperactive, try providing more opportunities to **play and move outside**. Hyperactivity is not necessarily a problem or the beginning of ADHD. Your child may just need more large muscle movement free play before he will calm down enough to concentrate on learning materials. Get him out from in front of the TV and let him play outside.

Don't these activities require trained teachers? What if I mess something up?

Take a deep breath, this is preschool we're talking here, you can handle it! As long as your heart is in the right place and you stay patient, positive, and encourage your child's efforts, you will be fine. The world won't end if an activity does not go as planned. Make something positive out of it and move on. If today does not bring a big success, tomorrow will, relax and enjoy your child. Most of these activities are pretty fail safe. Many are designed to allow a child to pursue them independently. All experiences are food for brain development in early childhood. Follow your child's lead and the activity descriptions. Have fun!

I just want to teach my child math and reading. Is the other stuff really important?

Yes. The Practical Life and Sensorial activities are the all-important foundation of Montessori for 2-6 year old children. They set the stage for math and reading. They develop visual acuity and discrimination, left-to-right visual patterning, the ability to concentrate, small muscle control and coordination, strong brain architecture, the ability to use abstract thought, and a positive self-image. Children who do these activities regularly find learning math, reading, and everything else that comes later much easier.

If your child is around 2-3 when you start doing activities that is perfect. You can do Practical Life and Sensorial activities until he shows signs of entering his sensitive period for math and reading. If your child is 4-6 when you start doing activities, let him explore the Practical Life and Sensorial activities at the same time you try the math and reading activities. Children have

a built-in tendency to fill in gaps in their own development. She may not do the earlier activities for as long as a younger child; but they will still be very valuable.

What signs should I look for to tell me my child's learning activities are having a positive impact on her development?

Excellent question. In general terms, Montessori activities help children learn to concentrate, which helps them be calmer and better able to focus on tasks, even if they sometimes get frustrated. A more even disposition, the ability to focus attention for significant periods of time, and positive demonstrations of independence are some of the benefits of Montessori and other early learning activities. This takes time.

As your child does more and more **Practical Life** activities, you should see her ability to control objects with her hands increase. She should, by using progressively more challenging tools, be working ultimately toward using a proper writing grasp. This takes time and practice, so resist the urge or expectation for her to master this quickly. He should also become able to pour his own drinks without spilling, and know how to clean up if he does. She should start getting her own snacks, and learn to dress herself. Practical Life skills are an area where you see pretty definite results in a child's development, as long as he has the chance to work with them regularly. You should see your child gradually become more independent and confident.

The **Sensorial** materials likewise promote focused concentration. Your child should start to be able to differentiate colors, sizes, and shapes. When you get started with the **Math and Reading Sequences**, you will be able to follow your child's progress more easily and clearly.

Always remember that the true goals of early learning are to create strong brain architecture and teach your child to concentrate, not to be reading novels or doing algebra by 5. Outer accomplishments are great; but the true value of early learning is not always evident until a child grows up into a person who can multi-task, loves learning new things, has self-confidence, and can get along with others. These are the true benefits. Early learning is an all-important investment in your child's future.

My child is only three and she already knows her numbers up to twenty and her alphabet. Why does she need to learn more than that?

Many parents believe that when their child can verbally repeat the sequence of numbers and the letters of the alphabet, he has achieved an understanding of numbers and language. Actually, these are simply exercises in memorization. Memorization is an important skill, but the child could just as well have memorized a sequence of color names, a long song, or the parts of a car. It's all just words; the child has little or no true understanding.

From the first Practical life and Sensorial materials, right through science, math, and language, Montessori materials give a child a very intimate, hands-on, real understanding of

each area. Math work starts with identifying groups of actual objects. It then progresses through learning the numerals, and then matching the amounts to the numerals. Reading begins with one sound for each letter; and progresses through simple word building and on into sight words, sentences, and actual reading. In each case, real understanding is achieved by progressing through a logical sequence of activities that teach real skills through practice over a significant period of time.

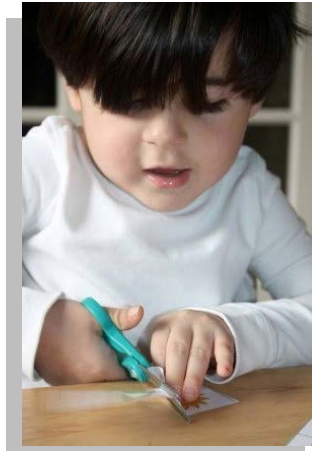
In first grade, a child who has simply memorized numeral and letter sequences will be almost as bewildered by actual math and reading work as a child who knows nothing of math and reading. A child who has progressed even partly through the Montessori math and reading sequences, however, will have a firm foundation of actual skills to build on. Don't be fooled into thinking that memorization equals understanding.

I need to have an organized plan for my child's early learning. How can I put one together in a Montessori way?

You can't. Read the first two chapters. Montessori is not about adult-designed lesson plans and learning sequences. Montessori is not about what *you* need to be comfortable or feel that you are accomplishing something. Montessori is about trusting that every child has an Inner Teacher; and that there is already an intelligent design for the unfolding of their development. Young children are not aimless, empty vessels who must rely on us to fill them up with knowledge and wisdom. They arrive on earth fully equipped to absorb their environment and learn how to function in it. Whether adults help children much or not, they all learn to walk, talk, think, control their bodies, and begin learning at least the rudiments of math and language in their early years. They are programmed by nature to accomplish this great feat of development.

What Maria Montessori asked was, “*Can we **help life** as it naturally unfolds in the child before us?*” She didn't assume we had to direct the process. Instead, she created a beautiful, rich environment where each child could achieve more of their potential via their own efforts, choices, work, and achievements. She gave them the freedom, space, and tools to develop in an optimal way. The child provides the motivation. Rather than create children who learn to be dependent on adults to tell them what comes next, a Montessori Prepared Environment teaches children to trust themselves, move through life on their own initiative, and earn their own learning rewards. When you give children this opportunity, their development hits its stride and takes off. That is one reason children in Montessori schools learn math, reading, and science so much earlier than is ‘typical’ for young children. Their natural development is given freedom, encouragement, and help in the form of well designed learning materials, and marvelous things happen.

Practical Life Activities



*“Little children, from the moment they are weaned,
are making their way toward independence.”*

Maria Montessori

Clockwise from top left: [Chasing Cheerios](#), [Shutterstock](#), [The Education of Ours](#),
[MontessoriMOMents](#), [Counting Coconuts](#)



Montessori Practical Life activities give young children real things to use to accomplish real tasks. For parents accustomed to only buying their children toys, this can seem odd. As in Montessori's time, though, children today are fascinated by having the chance to work with these materials and learn real skills. **Practical Life and Sensorial activities are the foundation of Montessori for 2-6 year old children.**

Photo: [Mama Liberated](#)

"Any child who is self-sufficient, who can tie his shoes, dress or undress himself, reflects in his joy and sense of achievement the image of human dignity, which is derived from a sense of independence."

"The child's first instinct is to carry out his actions by himself, without anyone helping him, and his first conscious bid for independence is made when he defends himself against those who try to do the action for him."

"These words reveal the child's inner needs: 'Help me to do it alone'."

"Never help a child with a task at which he feels he can succeed."

Maria Montessori

Young children have a strong drive to be **independent**. A child once asked Montessori to "Help me do it myself". This expresses a child's inner drive to create a functional person. Montessori created the **Practical Life activities** to help children do just that.

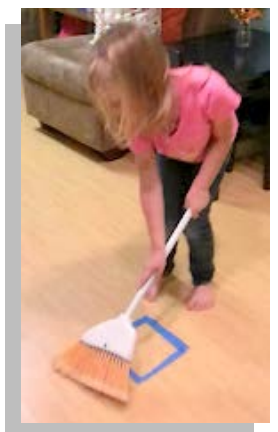
Children are very interested in learning to do what we do. They pattern their actions after ours. The normal things we do every day - dressing, preparing food, cleaning up, using tools, shopping, talking with others - are fascinating to young children. They watch and imitate us. These activities let a child put imitation into meaningful action.

Photo: [Discovery Days & Montessori Moments](#)

"Imitation is the first instinct of the awakening mind."

Maria Montessori

Video: [Practical Life at Trillium Montessori](#)





Encouraging independence is a core Montessori principle. On pages 38-39 and 42-45 are ideas for doing this in your daily home life. Home is perfect for **Practical Life Activities**. This is where you dress, bathe, prepare food and eat, fix things, and take care of yourself and your family. By taking the time to demonstrate and teach your child how to do things herself as she is able, you can do **Practical Life activities** all the time in a natural way. You can help your child become a confident, capable person. This section also takes things the next step with **self-contained materials** that, in good Montessori fashion, **isolate** skills and experiences to encourage **focused concentration** and allow a child to **practice** skills.

Practical Life activities combine movement, concentration, purposeful action, sense experiences, succeeding at challenging tasks, & fun. They build strong brain architecture and a positive self-image.

These activities are meant to give young children the wonderful feeling of **success**. An ideal activity will be slightly challenging for the child at first, but not so much that the child becomes frustrated (see page 72). Through practice and repetition, the child masters the activity and experiences the thrill of success. A series of successful experiences helps a child develop a **positive, confident self-image**.

Video: [A confident child makes breakfast.](#)

Developing **muscle control and coordination** is an integral part of practical life activities. Starting on page 46 are ideas for helping your child develop the large muscles of the arms, legs, and torso, called **gross motor** development. The activities in this section also help your child develop **fine motor** skills involving the hands and fingers. Both are important. In young children, muscle movement opens new brain nerve channels, especially movements involving touching and holding objects with the hands.



Practical Life activities encourage young children to **focus their attention and concentrate**. As described on pages 14-15, concentration is the essential skill needed for learning and developing self-discipline. Children who learn to focus their attention at an early age have a more highly developed sense of self and a greater ability to learn anything.

Photo: Working with a Montessori silver polishing activity, [Chasing Cheerios](#)

[A post on developing concentration from *Living Montessori Now*](#)

Starting with a 5-6 year old

Practical Life activities are the typical first step in Montessori for 2 1/2 - 4 year olds. They begin with these and the first Sensorial materials and progress from there. If you begin doing Montessori activities at home when your child is 5-6 years old, it is important not to skip these experiences and focus only on math, writing, reading, and other more advanced activities. **Practical Life and Sensorial are the foundation of Montessori for the early years.** A 5-6 year old may not do all the activities or for as long, but these experiences will still be very valuable for their development.

Demonstrations

As described on pages 82-83, give your child at least one demonstration of how to work with each material when it is first introduced. A careful demonstration lets your child clearly see how to do something. Your movements give your child a **'template'** to pattern her movements after. The demonstration gives you a chance to handle the material very **carefully**, with **respect**. This will eventually rub off on your child. If you handle materials roughly or carelessly, your child will, too.

Videos: Demonstrations of a [lacing frame](#) and a [spooning](#) activity.



Practical Life activities using fluids always include a sponge and cloth for cleaning up spills. For materials using beans, rice, or other solid objects, have a little hand broom and dustpan available. When you demonstrate, spill a little. Immediately stop, look at what has happened, and show your child how to clean it up as part of the demonstration.

Photo: Cleaning her work table, [Discovery Days & Montessori Moments](#)

Combining activities

As shown on the **Ages and Activities Chart** on page 75 , the Practical Life and Sensorial activities are used during the same time period. Practical life activities have many sensory points of interest, so all the materials complement each other. A nice selection from each group on your child's shelves will provide many choices.



In Dr. Montessori's Words

*"Even the littlest children are anxious to do something.... A good teacher will look for some way in which even the tiniest child can be of help. A little fellow of two-and-a-half may be able to carry bread, while a child of four-and-a-half can manage to carry the kettle of hot soup. **The importance of the works does not bother children**, they are satisfied when they have done as much as they can and see that they are not excluded from an opportunity to exert themselves in their surroundings."*

*"Anyone who spends some time with these children notices that there is a special secret which enables the children to carry out their practical activities with success. It is the **precision**, the **exactness**, with which the acts must be performed. They are much less interested in filling a glass with water than in pouring it out without touching the edge of the glass and without spilling....**Of itself movement is something unrefined, but its value increases when one attempts to perfect it....**When children experience pleasure not only from an activity leading towards a special goal but also in **carrying it out exactly in all its details**, they open up a whole new area of education for themselves.....practical activities are simply an external incentive to the educational process, they provide a motive and urge the child on to **organize his movements**."*

Maria Montessori, *The Discovery of the Child*

This quote illustrates why Montessori activity demonstrations are **little rituals**. A slow, careful approach to what your hands are doing when you demonstrate communicates to your child that this is a special activity. Your calm concentration encourages the child to gradually, through repetition, work towards that same precision and control of movement. This is why demonstrations are important. **By 'organizing his movements' a child organizes his mind.**

"Everything must be taught....but this does not mean that the actions which children have learned to perform....should be suppressed or directed by us in every detail....He is thus freed from the greatest of all dangers, that of making an adult responsible for his actions, of condemning his own conscience to a kind of idle slumber."

Maria Montessori,

Doing Practical Life Every Day



The simplest way to do Practical Life activities is to **involve your child in daily activities at home**. Find things your child can learn to do safely, show her how, and let her practice. There are many things young children can learn to do if given a chance. Children love to be **participants** instead of just **spectators**.

Shutterstock

If a task is beyond your child's current skill level or ability to do safely, you can often find a way to break the task up into **smaller steps** and let your child do one of the steps she is capable of. Increase her involvement as her skills grow. Here are some activities to give you ideas:

Opening and closing doors, cupboards

Opening and closing lids, boxes, trunks, and windows safely

Folding clothing

Operating curtains and blinds

Sorting silverware

Polishing furniture, metal

Making the bed

Putting on a pillowcase

Answering the phone

Location of fire extinguishers, family fire plan

Straightening a picture on the wall

Organizing a drawer

Hanging clothes on a hanger & with a clothespin

Using an egg whisk & an egg beater

Hanging a towel on a rack neatly

Adjusting bath water temperature

Washing body and hair

Learning location of neighbor safe houses

Vacuuming

Checking items to make a shopping list

Finding weeds in the lawn and digging them out

Raking leaves

Turning on the computer, starting a program

Opening & using favorite activity internet sites

Wet mopping the floor

Watering plants

Watching for dangers in traffic

Stop & look both ways before crossing the street

Offer a visitor a seat, something to drink

Making an apology

Braiding yarn, ribbon, hair

Brushing, feeding, bathing the dog

Playing a DVD

Sticking on a stamp or sticker

Lifting, carrying, and putting down a chair

Handing someone scissors or a knife safely

Tightening loose drawer knobs

Putting on a seatbelt, locking the car doors

Learning address and phone number

Fastening & unfastening jewelry clasps

How to call 911

Drying and stacking dishes

Locking and unlocking doors

Using a cell phone

Making a sandwich

Polishing furniture

Any daily life activity your child can safely learn to do is a Practical Life activity. The home is a great place to learn these things. They are a natural part of daily life, always available, and your child can experience the pride of using new skills in real life right away.

Video: [A 17 month old pours a drink](#)



Polishing appliances can be fun! The expression says it all. See this at [Tot School](#)

Young children can start **helping around the house** as soon as they are able. This forms good habits of contributing to the household. They are excellent for developing **muscle strength and coordination, visual and spatial awareness, independence, and responsibility.**

Young children love doing these activities right alongside you. By involving your child in these home activities, you can help your child become a competent, confident person.

Slow down, have fun

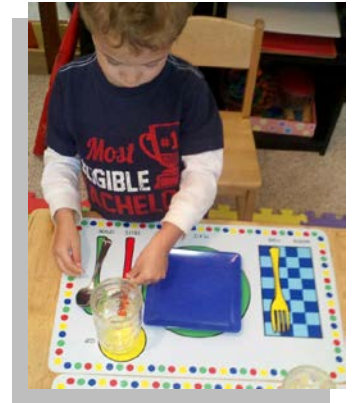
Involving your child means your efficient way of finishing chores will have to change. This is all part of taking time to help your child during his critical early years. Demonstrating, cleaning up after accidents, and giving your child time to practice will require you to slow down and make the journey the destination. You are doing more than cleaning the house or making breakfast. When you involve your child, you are preparing her for life. That's more important than a perfectly clean house. Here are more ideas for doing Practical Life every day:

Shopping. A fantastic opportunity. The shopping list, product names, and store signs are great language experiences. Giving your child written names and letting her find them

on the shelf is a language and visual discrimination exercise. Talking about prices introduces money and math. Talking to other shoppers and store employees helps a child learn social language and overcome shyness. Shopping is an education.

Setting the table. Your child can set out placemats, silverware, drinking cups, and napkins. If you store these items on **low shelves** where your child can easily reach them, he can do this independently.

Photo: Place setting work at [Peaceful Parenting](#)



Making breakfast. Your child can learn to pour her cereal, milk, and juice. If the food, bowls, utensils, milk, juice, and napkins are on low shelves, she will be able to do this on her own a lot sooner.

Food preparation. Spreading, stirring in a bowl, squeezing, and spooning food onto plates are activities suitable for a young child. Your child can stir and whisk, peel bananas, wash fruit, and pour ingredients. These are some of the best Practical life activities for young children. This is also one of the best sensory experiences imaginable. Your child can pour, spoon, knead, roll, poke, and wash things. There are all kinds of textures, smells, and tastes. Every ingredient is a learning experience – where does it come from, how does it taste and smell, what color is it?

Washing dishes. Hand washing dishes is back! Provide a stepstool at the sink. Kids love the soapy suds, water, scrubbing, and rinsing. Getting every bit of food cleaned off a dish, then stacking the washed dishes in the drying rack or dishwasher are excellent visual and spatial activities. Play some of your child's favorite music.

Photo: Washing dishes is fun! [Tot School](#)



Video: [A child concentrates on dishwashing.](#)

Sweeping the floor, driveway, or sidewalk. Get your child his own cleaning tools. You can find child size brooms, dustpans, and other cleaning supplies at [For Small Hands](#), which has great cleaning tools for kids, or just search 'cleaning supplies for kids'.

Photo: Sweeping work, [mymontessorijourney](#)



Video: [Sweeping in India.](#)

Get a child size broom and dustpan. Make a square on the floor with tape. Put cereal or beans on the floor and demonstrate how to hold the broom and sweep it into the square, then into the dustpan (photo above). Help only if needed. Show the child how

to dump the cereal into the trash, and then let him do it. Your child can also learn to use a carpet sweeper or vacuum.

Taking out the trash. If you have small bags or recycling bins, your child can probably carry or drag them out to the curb. This is a great time to discuss recycling – why we do it, how it helps the planet, how we all need to do our part to protect Mother Earth.

Polishing silver, brass, shoes. Under supervision, children 4 yrs. and older can polish metal & shoes. See page 161.

Photo: Shoe polishing work at [Tot School](#)

Helping with laundry. Sorting laundry is an excellent Sensorial sorting activity involving visual and tactile discrimination. Children can help load and unload the washer and dryer, pour in detergent, and throw in fabric softener sheets. Putting clothes on hangers is a great activity. Folding sheets and towels and sorting socks are more things your child can do. This could become a habit!



Dusting. Spray a little dusting spray on a cloth and let your child help with the dusting under close supervision. Moving and replacing objects on furniture and tables is a good visual recognition exercise. Where does all that dust come from anyway?

Cleaning windows. Children love to see the difference when a window is clean. If you spray on the cleaner on the window, your child can wipe it around with a paper towel then help you finish the job with a clean one. A squeegee creates a whole new activity.



Replacing toilet paper. Even simple tasks are great opportunities for gaining independence.

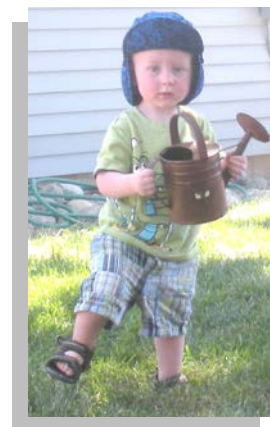
[pinkandgreenmama](#)

Moving furniture. When moving a small piece of furniture, let your child help or, if possible, move it herself. Learning to carry larger objects is a good large muscle and spatial perception activity. Try using friction reducing sliders under the legs of larger pieces.

Watering plants. Young children can learn to feel the soil and observe a plant's leaves to see when it needs watering. Filling a pitcher, pouring in just the right amount of water, seeing a plant grow, and knowing he had a part in it will make your child feel great and teach responsibility.

[Simple DIY watering jug](#)

Photo: [Jen Iarossi](#)



Digging up weeds. A simple weeding tool and a yard with weeds (yours?) will keep your child busy. Show her how to get all the roots out (a science lesson) and carefully bag up the weeds so they don't spread. Talk about the parts of plants.

Raking leaves. Kids love making piles of leaves and, of course, jumping into them.

Turning the water on & off outside. Stretch out the hose and let your child turn the water on and off. This reinforces the '*left is on, right is off*' concept.

Caring for pets. Filling water and food dishes, cleaning cages, sweeping up crumbs, bathing and brushing, holding the leash – your child can learn to participate in all of these activities. This reinforces the responsibility we have for our pets.

Washing, waxing, and vacuuming the car. Your kids ride in the car, they need to help take care of it. Who wouldn't have fun in those suds and watching a shiny care emerge when wax is rubbed off? Strategically place a few coins on the floor and let your kids find them when they vacuum. Play some music to keep things loose and fun. Photo: [Training Happy Hearts](#)

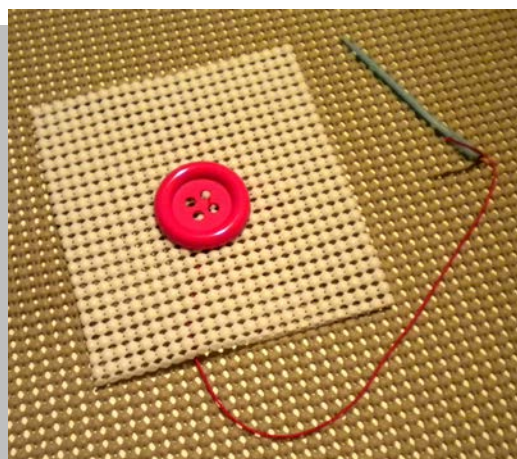


Large Muscle Activities

See pages 47 - 50 for movement activities to help your child develop large muscle control and coordination. Large muscle - **gross motor** - development precedes the development of small muscle control of the lower arms, hands, and fingers, termed **fine motor** development. Most materials that follow, like those below, promote fine motor skills.



[Chasing Cheerios](#)



[Sewing](#)



[The Education of Ours](#)

The Montessori Jar



This idea and photo are from [The Home Teacher](#), a wonderful Mom blog. On pages 439-440 you will find two sheets of things for your child to do. Cut these out and put them in a jar. Add your own new activities regularly. When you need an idea for an activity, let your child reach in and grab one. A very handy item that is also a 'stealth' language activity.

Free Play Tubs

This is a great introduction for 2-4 year olds to self-contained, Montessori-style Practical Life materials.

You will need

- Plastic storage tub with a secure lid
- Multi-colored rice, beans, gravel, small beads
- Set of graduated measuring spoons
- Plain and lipped cups and a measuring cup
- Plastic paint palette from a crafts store
- Funnels
- Tiny spoons and larger scoops
- Small jars with screw on lids & small boxes with lids
- Favorite small items - toy animals, marbles, special rocks, colored beads, jingle bells, etc.
- Small dustpan and hand broom for cleaning spills



Starter Rice Tub

Presentation & Use

Have your child set up a work area, bring the tub to it, and let your child explore. Demonstrate cleaning up spills with the hand broom and dustpan. Try different base materials (beans, beads, coffee, gravel) and objects for variety over time. Add in some lemon and orange rind, or spices, for more sensory experiences.

Points of Interest

- Make **name cards**, like Rice Box, for the lid and one side of the container and tape them on. Tell your child what the tub's name is and help her read it. Use a print style like Century Gothic. Keep the box in one spot on a shelf.
- The **colors** of the base material.
- The **sounds** the material makes when poured into containers made of different materials - glass, plastic, ceramic.
- **Counting** scoops and spoonfuls, and the depressions in the paint palette.
- **Grading** the measuring spoons from **largest to smallest**. Lay them out **left-to-right** as a preparation for reading. Count the spoons.
- Marks and values on the measuring cups. Your child won't understand these yet, but still point out the one half, one quarter, ounce, cups, and other markings.
- The **smells** of the rinds and spices you add to the box.
- Take photos and movies of your child using the tubs (quietly so your child doesn't see) and show them to your child later.

Extensions

- Use **water colored with food coloring** instead of a solid material. Add a few drops of liquid soap, an eggbeater, a baster, an eyedropper or two, etc.
- Use **shaving cream** as the base material. Make three mounds and add blue food coloring to one, yellow to another, and red to the last (the primary colors). Let your child mix the colors to make **secondary colors** (see page 189).
- **Math**: when your child gets interested in numbers, write a number on an index card and hide that many of one small item, like identical bottle caps, in the material. As your child finds them, count them with your child until you reach the written number. Do different numbers. You could also tape circles with numerals on them to the caps and line them up 1-10 as your child finds them.
- **Language**: hide the letters of your child's name in the material and let your child find them and spell her name. Repeat using other words of interest to your child.
- **Science**: hide different small plastic animals, dinosaurs, etc., in the material. Write their names on cards and match the animal to the card for each.

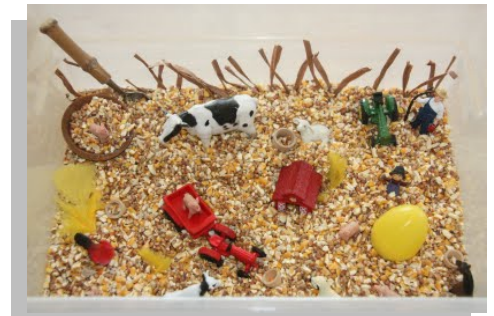


Photo above: **Farm animal tub at Counting Coconuts**

Rolling a Mat



Creating a work space is the first step for almost all Montessori materials and activities. Setting out a table mat or floor rug starts focusing a child's attention on the activity, and makes it important by giving it its own special space. Your child will be better prepared to manage this if he has practice rolling up a mat and rug as an activity in itself.

Video: [Rolling a mat](#)

Photo: Challenging, fun mat work at [Nursery Rhymes and Fun Times](#)

Amanda at [Nursery Rhymes and Fun Times](#) describes doing this activity at home:

"This past week we tried a new practical life activity: rolling place mats. I put four colored Ikea placemats on a tray, and the goal of this exercise was that Jonathan would learn to gently unroll the placemats and then roll them back up.

Unrolling the mat was fairly easy, but rolling took a bit more concentration. Jonathan would get overly excited and try to hurry through the exercise, just to find it didn't look correct. So, not only did this help him develop more fine motor control, it also helped us learn a little bit more about being patient as well. Jonathan really enjoyed this activity and returned to it several times during the week."

Great activity! Amanda's description illustrates a number of excellent points for parents doing Montessori at home:

- Young children learn to **focus their attention** gradually over the course of months by using many Practical Life and Sensorial activities.
- Jonathan found the activity challenging, but did not get so frustrated with it that he rejected it. **He was self-motivated to keep trying until he mastered it.** This activity was squarely in his **Learning Sweet Spot** (p. 72).
- Making materials available for **independent use** allows a child to repeat favorite activities. In Montessori, we **follow the child's interests** and make the activities she wants to repeat easily available on low shelves. **Repetition is vital to mastering skills and building brain architecture.**

Get the most from every material

Doing Montessori at home, it helps to **maximize the use of every material**. Using Free Play Tubs as an example, look at how many ways this material can be extended to include new skills and concepts in math, language, and science. You can do the same thing with many other materials. **When your child's attention is focused, all the information you provide goes right into his brain.** Look for ways to extend materials to add more experiences. Many activities include ideas for extensions. **Always be on the lookout for ways to introduce more information, words, and concepts.**

Transfers



If you have searched online for Montessori activities, you have probably seen children moving solid objects or water between different types of containers by pouring or using tools like tongs, tweezers, a sponge, or a turkey baster. You will find similar materials in every Montessori preschool. These are **Transfers**. Young children love these materials. Transfers are among the very best activities for developing control and coordination of the arm, hand, and finger muscles - called **fine motor** control.

Photo: Pouring wood chips at [Peaceful Parenting](#)



Transfers prepare your child to be able to accomplish all kinds of activities, such as pouring drinks. High on the list is developing a **proper writing grasp**, shown in the photo at left. Until a child has practiced all the different hand grasps using Transfers or similar activities, he will find it hard to execute a proper writing grasp.

You will need

Trays: plastic, wood, cookie sheet, bread baking pan

Containers: plain glass cups, bowls, coffee cups, measuring cups with handles and lips, pitchers

Pouring material: rice, beans, coins, small beads, salt, coffee, Grape Nuts cereal

Grasping materials: marbles, pom poms, plastic golf balls, beans, peas, plastic eggs (see photos)

Tools: tongs, large & small spoons, turkey baster, tweezers, eyedroppers (see photos)

Clean up: plastic table mat, small sponge, small cloth, dustpan, hand broom

Presentation & Use

All the Transfers follow a similar pattern:

Your child sets out a work space mat - plastic if using water - and brings the tray to it.

You demonstrate the transfer and how to clean up spills.

Turn the activity over to your child, always observing in the background.

When finished, your child organizes the material for the next use and puts it back in its place on the shelf.

Resist urges to jump in and help. Figuring things out, making mistakes, and cleaning up are essential parts of the process.

This will be excellent practice for you for all the activities that follow. **Let your child practice, experiment, fail, and succeed.** If she spills and forgets to clean up, offer a gentle reminder and hand her the sponge. Cleaning up before continuing is very important. The idea is for your child to learn, not for you to direct the process or show how well *you* can do things. Provide regular opportunities for, and encourage, practice. This is where having materials always out on shelves works really well.

Video: [Concentrating on pouring and cleaning up](#)

A sequence of transfers and hand grasps

A child's hand grasps, and the materials you provide, follow a sequence in these activities. Here they are, roughly in order from the **most primitive grasp** to the **most complex**:



The **whole hand** grasp, the most primitive grasp, can be practiced by moving water back and forth between bowls with a sponge. Try this first with a 2-3 year old.



The **'C' shaped** grasp is next. Small, plain cups with rice or beans are used here. For more challenge, use salt. Measuring cups add a point of interest.



Now the thumb is opposed to all four fingers by using tongs to move plastic golf balls back and forth in a plastic or cardboard egg container. This is a **Pincer** grip.



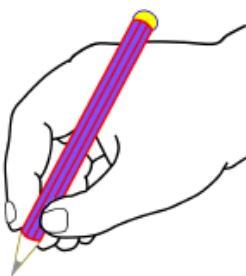
Tweezers oppose the thumb to just two or three fingers to move things like small beads or soft pom poms back and forth. The child gains more control and coordination of the opposed thumb grasp.



An eyedropper refines the grasp, requiring varying pressure to draw the water up and force it out. The other fingers bend below.



A very small spoon moves the fingers into a proper writing grasp. The thumb opposes just one finger as the other fingers bend underneath for support. Small beans or peas are moved between small containers.



Using many activities over a period of time, with **plenty of practice**, your child will develop a proper writing grasp, shown at left. This is a tremendous achievement! In addition, your child has acquired concepts such as **empty / full, positive and negative space, counting, colors, 1:1 correspondence**, and lots of new **language**.

Videos!

[Improving a child's grip](#)

[Simple, easy Practical Life activities](#)

[Spooning rocks](#)

[A tweezer transfer](#)

[Water transfer with a baster](#)

[Rice pouring variation with a cool cleanup technique](#)

[Beans with tongs is not easy](#)

[A variety of transfer activities](#)



An important grasp is the one used to hold cups and pitchers with handles. Pitchers with pouring lips make things a bit easier. Water colored with food coloring can be used once rice is mastered.



Transferring water between bowls with a turkey baster is a favorite with most kids. The grasp can vary from a whole hand to a 'C' grasp to using the opposed thumb. Learning to control drawing up and pushing out the water adds another element of challenge. Cleanup equipment is essential!



Discovery Days & Montessori Moments

Peaceful Parenting

Chasing Cheerios



More nice transfer materials from *Discovery Days & Montessori Moments*. Pouring rice or beans with plain cups or sponging comes first. Then you can move to tongs, cups and pitchers with handles and pouring lips, and finally to tweezers and eyedroppers.

Videos: [A tray is the control of error](#) [A two yr. old pours rice](#) [Spoonng beans](#)



This material provides practice with sweeping rainbow rice into a small dustpan. The material is spooned onto the tray rather than simply poured on, adding another transfer element. The material is then swept into a small dustpan and returned to the bowl. Everything is **child sized**.

Counting Coconuts

DIY scoops and dustpans



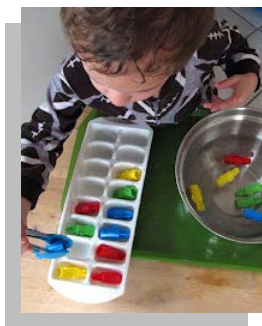
This transfer activity gives the child options: two sizes of tongs, tweezers, and two sizes of spoons to move and also sort a variety of materials into sections of the tray. Search Mari-Ann's wonderful blog for all kinds of activity ideas.

Counting Coconuts

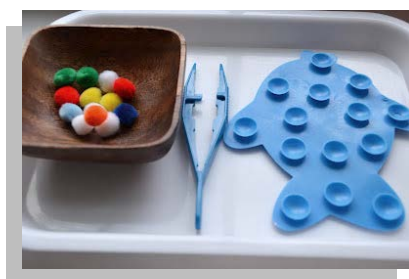


In this activity, the child transfers three colors of pom poms into three long rows of the plastic container. This adds **sorting** and **1 : 1 correspondence** - a critical math concept - to the transfer activity.

Counting Coconuts



Peaceful Parenting



Education of Ours



Chasing Cheerios



Counting Coconuts

The activities above reinforce the math concept of **one to one correspondence**. Matching one object with one space, or one lid for each jar at far right, creates opportunities to introduce **careful counting**. Early activities prepare children for later sensitive periods to mathematics, reading, and writing.

Videos: *A cool marble transfer* *Pouring using a funnel* *Pouring from a pitcher*



With this neat material, the child uses a jar with a lid with holes in it to sprinkle just enough water on the tray to soak up with the sponge. The water can then be squeezed back onto the tray and soaked up into the sponge again, or squeezed back into the jar with the lid removed. Nice!

Chasing Cheerios



Left: Child sized materials help your child experience success.

Photo: *Training Happy Hearts*

Right: Clothespins are great fine motor materials for transfer activities.

Photo: *Peaceful Parenting*

A clothespin clipping activity



Extensions

There are so many transfer extensions it is hard to know where to start! A few ideas:

- Write the numerals 0-10 on plastic golf balls and in the depressions of an egg carton. Your child matches the numerals when transferring the golf balls. You can do the same thing with colors and shapes.
- When she is ready, your child can spoon and tong food onto everyone's plates at dinner.
- Put a covered pitcher of juice on a low shelf in the refrigerator, and cups on a low cabinet shelf so your child can pour himself a drink independently.
- Float ping pong balls in a bowl of water and let your child try using tongs and spoons to get them out. Use grapes or other small floating items for more challenge.
- Get large rigatoni pasta tubes and let your child hold one over a cup while he drops dry peas from tweezers from above the tube so they fall through the pasta into a shot glass.
- Take photos of colored plastic Easter eggs sitting in various combinations or colors and configurations in an egg carton. Show your child one photo at a time and let her create a matching pattern in the carton by transferring eggs into it with tongs.

Play-Doh™



Play Doh is a Montessori activity? Sure! I believe that if it had been available, Maria Montessori would have made it a standard part of her Prepared Environment. This versatile, fun material should be a part of every preschoolers life. There are many recipes online for making your own Play Doh, experiment and let your child help.

Here are a few:

[Ocean play dough from Chasing Cheerios](#)

[Scented play dough from the Activity Mom](#)

[Homemade playdough recipes & notes from Counting Coconuts](#)

[Non-cook playdough recipes - one with peanut butter](#)



Original Play Doh is inexpensive, works well, and comes in sets with great tools. Get a set with scissors, cookie cutters, the extruding tool, and other items. Put it all on a cookie sheet, and your child can get started. Play Doh can be used in an almost infinite number of ways. Here are just a few ideas, moving from simple activities to more complex skills:



Free Play. Pull, pound, roll, press, squeeze and poke. It's all great fun and wonderful muscle activity. Who knows what your child will create? Let her use her imagination. Roll snakes and balls, make pancakes and poke holes in them, the possibilities are endless.

Shutterstock



Counting and colors. Roll balls of one color and use for counting. Roll one each of the different colors and learn the names of the colors. Line the balls up and work from **left to right** to help your child develop **eye tracking skills** for reading.



Use cutout tools. Your child can cut out all kinds of animals and shapes. Picking them up is a challenging fine motor activity. Talk about their names. Make up stories about them. Draw land and ocean pictures on paper and put the animals on them.



Cut with scissors. Let your child roll out a pancake or snake and cut it with Play Doh scissors or child safety scissors. **Play Doh is easier to cut than paper** and makes a perfect first experience with cutting. Encourage cutting with the **thumb up, like shaking hands**.



Cut graded lengths. Introduce a ruler to measure off lengths of play dough snakes from 1" - 10". The pieces can be graded into a shortest to longest configuration for a Sensorial experience.

[See this activity at Tot School.](#)



Introduce shapes and fractions. Use round, square, and rectangular container lids to cut out shapes, then cut them in half, thirds, and fourths.

[Play Doh & Crafts Stick Number Line](#)

[Download free letter playdough mats](#)

Find more ideas here:

[Hasbro Play Doh](#)

[PreKinders Play Doh ideas](#)

[Play Doh ideas on Pinterest](#)

[Another Pinterest Play Doh page](#)

[Play Doh ideas with 4 colors](#)

[Montessori Inspired Playdough Activities](#)

[The Artful Parent](#)

[Yet another great Pinterest page](#)

[Video: 20+ activities for playdough](#)

[5 Activities for toddlers using playdough](#)

Early Learning in the Kitchen



One of your **best early learning resources** is right under your nose. **Your kitchen is a complete early learning center.** Practical Life, Sensorial, Math, Language, Science, Culture, fun family times, great memories - it's all in your kitchen for you to help your child explore. If your lifestyle is more takeout than self-serve, consider changing that. Your child will get more out of baking one apple pie with you than you can imagine. Kitchens build strong brain architecture, motor skills, family bonds, independence, wonderful memories, and a positive self image.

Shutterstock

As your child develops skills with pouring and using simple tools in activities like the Transfers (page 124), he can have his own **low shelves** in the kitchen and refrigerator for cups, plates, bowls, utensils, snacks, cereal, drinks, etc. This is a great aid to independence, a core principle of Montessori. See pages 42-45.

Videos: [One Mom's kitchen setup](#) [Cooking with Children](#)

A few guidelines for working with your child in the kitchen:

Be safe. Always supervise. No sharp knives until your child has really mastered cutting. Make sure your kitchen has **GFI electrical outlets**. Limit activities to those your child can do safely. If your child uses any tool carelessly, take it away. Be extra careful around the oven. Watch for fingers in cabinet and refrigerator door cracks. Some tasks will have to wait until your child is older. Using appliances can wait. Here are **More safety tips**.

Adjust activities to your child's size and abilities. Check out **For Small Hands**. Get a small rolling pin and cookie cutters, small kitchen tools like spoons, whisk, ladle, tongs, and a child sized dustpan and hand broom. These are also used for Transfer activities (page 124). Break tasks up into smaller parts your child can do.

Shutterstock



[A great post on Montessori food-oriented activities](#)

Videos: [Washing a grape](#) [Baking in a Montessori school](#)

Teach healthy habits. Show your child how to wash vegetables and fruit, and discuss why. Make **hand washing** a habit. It is never too early to learn about healthy eating habits. If your child prepares fruits and veggies, he may be more likely to eat them!

Shutterstock



Videos: [Healthy eating tips](#) [Making a healthy meal](#)

Find points of interest. This is where kitchens shine for early learning:

- **Sensorial** experiences are endless. Tastes, smells, textures, sounds of tools and appliances, slimy eggs and oil, clouds of flour - cooking is a sensory disneyland! Find all the ways possible to help your child touch, smell, taste, see, and hear new things every time you cook.

Shutterstock



- Introduce new **language**. Talk about colors, names of ingredients, where they come from (find on Google Earth), names of kitchen tools, cooking terms, anything you can think of. Do internet searches of food items. Make **name cards and labels** for drawers, food containers, ingredients, tools.
- Bring in **mathematics** by counting scoops, food items, pieces of pasta, cookies on the cookie sheet, anything you can. Talk about fractions as fruit and vegetables are cut (page 379). Point out measurements on measuring cups and let your child fill to the correct line. Point out numerals in printed recipes.
- **Science** concepts are everywhere in the kitchen. Find seeds in tomatoes, talk about how salt and sugar dissolve in water, watch water boil and talk about temperatures. [Try a few kitchen science experiments.](#)



Get everyone involved. Parents with an older and younger child often struggle to find appropriate activities each can do at the same time. Cooking projects are perfect for this. Each child can handle the tasks they are capable of; and the results bring a cooperative sense of accomplishment. Positive shared experiences help balance out the sibling issues many families experience.

Videos: [Helping Mom at the sink](#) [Making Nut Milk \(cool!\)](#)



More ideas for things your child can do and experience in the kitchen:

Practical life

pouring	spooning	whisking
cutting & slicing	cracking eggs	grinding spices, nuts
rolling & kneading flour	cookie cutting	Pitting cherries
juicing	tossing salad	spreading with a knife
coring	using tongs	using a spatula
making toast	microwaving	washing dishes by hand
loading the dishwasher	shelling nuts	dropping in a pinch of salt

Sensorial

spice smell matching	feeling vegetables	tasting
sounds of food preparation	slimy eggs	food & juice colors
heat of the stove	cold of the freezer	adjusting water temperature
feel of wood, ceramic, metal	smelling food cooking	weight of vegetables
light bending in water	feeling seeds	crushing a grape

Science

yeast rising	ice to water to gas	dissolving in water
boiling point	water expands when frozen	taste buds
where veggies come from	sprouting beans	plant vascular bundles

Math

measuring cup, spoons	counting everything	groups of objects
addition & subtraction	weighing	executing a recipe
shapes of veggies, containers	cutting geometric shapes	planning a table setting

Reading

recipes	food labels	boxes
cooking terms	starting & ending sounds	food word labels
discussions about food	shopping signs & labels	names of foods

Resources

[A child's place is in the kitchen](#)

[Letting your children help in the kitchen](#)

[Play with your food](#)

[Kids in the kitchen](#)

[Easy recipes that kids can cook](#)

[Recipes kids can help make](#)

[The Cooking To Learn eBook](#)

[Cooking with kids recipes](#)

Montessori Practical Life activities from the kitchen



A silverware sorter and a cup of utensils on a tray makes a fun **silverware sorting** activity.

Chasing Cheerios



Grinding with a mortar and pestle. Your child can grind spices, egg shells, nuts, and cereal for recipes and toppings.

Tot School



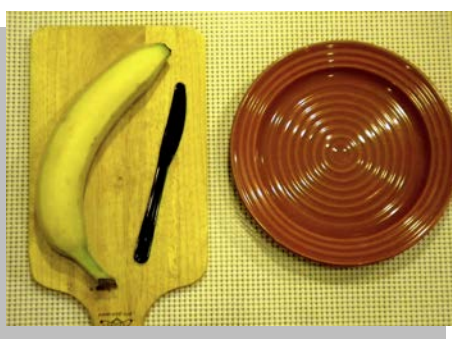
Cherry Pitting. A nice tray setup. After pitting a cherry the child puts it on a toothpick and in the bowl to offer to others.

Counting Coconuts



Scooping watermelon balls and placing toothpicks in them for offering to others.

Counting Coconuts



A small cutting board, banana, plastic knife, and plate on a tray makes a great **banana cutting** activity.

See page 146.



Another activity easy to put on a tray - **spreading** peanut butter on mini crackers. The size of the crackers increases the challenge.



Your child can do food activities using self-contained materials like those in a Montessori school, as on the tray at top right; or simply set up in an organized way at a table. The tray format has the advantage of increasing your child's independence by setting up the activity at the table, cleaning it up, and putting it all back together himself. Self-contained activities really help increase **focus and concentration** in preschoolers - a core Montessori principle. They are easy to keep ready on the shelf.

Photo: *Counting Coconuts*

Making Snacks

Preparing snacks is a wonderful Practical Life and Sensorial experience. Who doesn't like cookies and peanut butter boats? Here are a few quick ideas:



Ants on a Log. If she is ready, your child can cut celery into sticks. Then he can spread on peanut butter and put on the raisin 'ants'.

Photo: [Peanut butter & Confetti Club](#)

Banana Pops. Your child can peel and cut bananas in 3-4" lengths, and stick a popsicle stick into each piece. Now she can spread peanut butter on them and roll in a mixture of favorite nuts and seeds. Wrap in waxed paper and freeze for 2-3 hrs.

Photo: [Taste of Home](#)



Traffic Lights. Your child breaks graham crackers in half and frosts them with chocolate, nutella, or another favorite spread. Place M&M's to make the lights. You can talk about rectangles, circles, and what the lights stand for. Ask your child to help you keep an eye on the lights when you are driving.

Photo: [Rhyme Time](#)

Frozen fruit juice & yogurt pops. Put different flavors of fruit juice or yogurt into plastic cups or popsicle molds. Insert pretzel sticks for handles. Freeze and enjoy.

Apple fondue. Heat up creamy or chunky peanut butter in the microwave (not too hot), then let your kids add Rice Krispies cereal and raisins. Cut apples into wedges and dip in the mixture.



Cheese and Fruit Kabobs. Your child can cut cheese into pretty thick slices. Now he can use cookie cutters to cut shapes. Skewer these, alternating with fresh fruit, on kabob sticks.

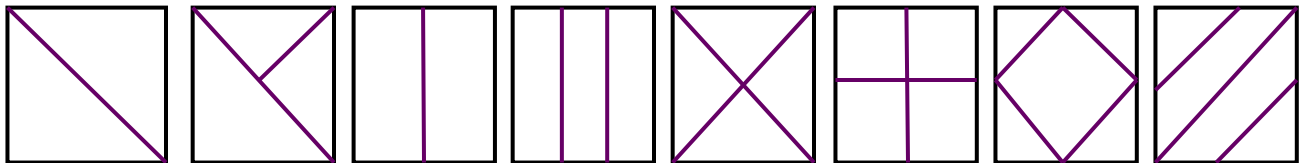
Photo: [Parents.com](#)

Fabric Folding



Get 8 square washcloths in a light color. Draw lines on them as shown with a marker. Put them in a nice basket. Demonstrate how to fold a couple for your child, pointing out the lines as you fold. Your child can fold with the lines up or down. The natural extension is to show your child how to **fold clothes**, shown at [Counting Coconuts](#).

Photo: Busy hands doing careful work at [Tot School](#)



Cleaning a Table



Very few of us clean a table this way, but that's not the point. The **process** is what is important. Following the steps, brushing on and wiping off the water and suds, and cleaning everything up for next time, makes a classic Montessori activity. Your child gets large muscle exercise, fun with soapy water, and a great feeling of, "*I can do it myself*". Store everything in the bucket.

Photo: [The Little House](#)

You will need

- Small bucket or pail
- Hand brush with soft bristles
- Child sized sponge
- Cloth or dish towel
- Liquid soap

Right: Cleaning their own table and chairs at [Discovery Days & Montessori Moments](#)



Presentation and use

- Your child brings everything to a small table then gets water in the bucket.
- **Demonstrate:** wet the sponge, add a drop of soap, and get the table wet. Brush the table slowly in circles. Wipe off with the sponge, squeezing water into the bucket as needed. Finish by wiping with the cloth. Clean and organize everything.
- Now, it's your child's turn!

Be very patient and let your child take his time. The goal is not to get the table cleaned as quickly as possible. Concentration, muscle control and coordination, following a series of steps, pride in a job well done, and fostering independence are the goals here.

Video: [Table washing](#)

Open & Close



Children love opening and closing containers. At left is a Montessori activity for that. The jars are all clear glass, varying only in size. The lids in the pouch all screw on. This **isolates size** matching and the skill of threading on the lids as the focal points of the material.

You can mix and match containers, as in the next photo. Putting an item in each container adds interest. Use containers with snap and screw on lids, hinged tops, little cardboard boxes, a pouch with a snap closure, any different containers you can find.



There are many extension possibilities with Open / Close to help you make the most of this fun material. See the next page for ideas.

Photos: Beautiful materials at [Counting Coconuts](#)

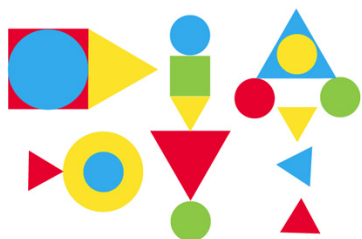
Video: [A 13 month old using an open - close activity](#)

[Open - Close on Montessori Monday at Living Montessori Now](#)

Language

Examples of new words to introduce: *close, open, empty, full, twist, lid, jar, pouch, snap*

Open-Close Matching Extensions



Colors. Print out the [free color matching cards at Montessori Print Shop](#), or these [free color flash cards at Mr. Printables](#). Find one small item in your house in each of the colors and put one in each container. Your child opens each container and matches the item to its color on the printed sheet.

Shapes. Download and print out two sheets of the [free shapes cutouts from Mr. Printables](#). Put one shape in each container. As your child opens the containers she can match their shapes to a sheet with all the shapes on it. Talk about the shape names and make name cards for a language activity.

You can do the same thing as above with **animals** - match animal photos printed from the internet to pictures of the type of environment they live in; **words** - put slips with single words in the containers and your child can match them to the words on a sheet while saying the words; many things can be adapted. This is another example of getting the most from each activity and material you make.

Marbles & Golf Tees



This wonderful material incorporates many elements into a challenging, fun activity. There is a lot of fine motor work here, as well as the visual-spatial exercise of lining up and spacing out the tees, then making sure they are straight up to hold the marbles without falling off. Big time fine motor work.

Photo & activity from: [Pink and Green Mama](#)

You will need:

Golf tees, a single color is nice

Floral foam block for holding flowers

Marbles

A tray and bowls to hold it all

This activity requires very little demonstration. Let your child set up at the table. Show him how to press a couple of tees into the foam and put a marble on top of each. Let him explore and discover. It may take a few false starts to figure out how to get the marbles to stay on; that's how Montessori activities work. **Careful Counting** comes naturally with this activity. Help your child count carefully, **saying each number just as her finger touches each tee or marble**. This will be excellent preparation for later math activities.



[Pink and Green Mama](#)

[Pink and Green Mama](#) has an incredible collection of arts and crafts projects.

Threading, Lacing, Weaving & Sewing

Threading



Threading is a fun fine motor skill activity that can start with easy to handle large wooden shapes (far left), and progress to threading smaller beads on a shoelace, threading cheerios on pipe cleaners, and threading very small beads to make decorative items. These are easy to set up on trays or in boxes as **self-contained materials** on your child's shelf.

Any crafts store will have a wide variety of types, sizes, and shapes of beads for threading. Here are more good sources for beads:

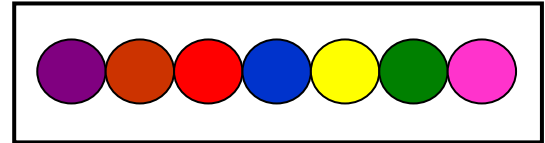
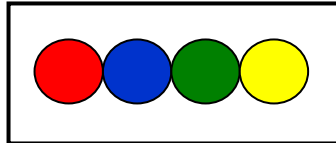
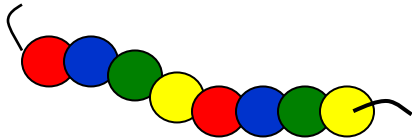
[Creative Wholesale animal and dinosaur beads](#)

[Melissa & Doug's Lacing Beads in a Box](#)

[Big bag of wooden beads](#)

Video: [Bead Stringing](#)

Extensions: Matching Patterns, Counting, Sorting



Draw a series of colored circles in colors matching your child's beads on a slip of paper. You could also photograph patterns you make and print the photos. Now your child can thread beads on in a matching pattern. Start with three circles then move to four and beyond as your child is ready. This activity naturally leads to **naming** the colors and **counting** and **sorting** the beads and other objects used for threading. Help your child count carefully; and encourage sorting by **color**, **size**, and **shape**.

Lacing



Children love the back and forth action of threading yarn, a shoelace, or string in and out in a lacing pattern. Using cards in various geometric shapes makes this a Sensorial and pre-math activity.

On pages 441-442 you will find sheets of **Lacing Shapes Cutouts**. Print and cut these out and, using a single hole punch, let your child punch holes equal distances apart around the edges - an activity in itself. Tie a knot in one end of a shoelace and show your child how to go up and down through the holes to lace her way around each shape.

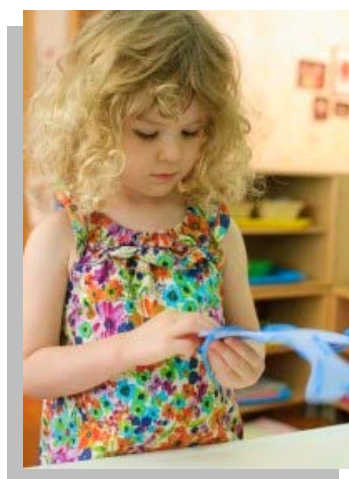
The shapes can be laced and tied together to make a **mobile** to hang in your child's room or in your living room for all to see and appreciate. Make more shapes on your own.





The project shown at top left comes from the great blog [Tot School](#). Animal templates are used to cut thin foam crafts sheets. Holes are punched around the edges.

L & R top Photos: [Tot School](#)



The fun lacing material in the next photo is at [Counting Coconuts](#). Images of the sun and clouds from Google (search sun graphics, cloud graphics, moon graphics, etc) were printed onto paper and laminated, then punched for lacing. You could also glue the sheets onto cardboard and cut them out.



Your child will want to learn to **lace his own shoes**. Turn a pair into an activity simply by putting them in a basket, as shown. Give your child a demonstration and let her practice whenever she likes. It may take a few tries before she masters the crossing pattern - that's all part of the work and achievement. **Video:** [Lacing shoes is fun!](#)

Photo and activity at [Chasing Cheerios](#)

[Another lacing project](#)

Learning to **tie shoelaces** (page 159) is a bit more complex. If your child is young or has not had much practice with materials like the **Transfers** on page 124, and kitchen activities on pages 132-136, he will need to do these kinds of activities awhile to develop the necessary fine motor skills required to tie shoelaces. Otherwise, it will probably be an exercise in frustration rather than success.

A note to crafty Moms

Many Mom's love crafting, and that's great. With early learning activities, keep something in mind: **Helping your child master a skill and move on is the goal**. A succession of cool materials that all teach the same thing is usually not necessary. Repeating a skill once your child has truly mastered it can actually slow your child down. Montessori schools have increasingly complex materials for children to use as soon as they are ready. Along with other features of a Montessori environment, that is one reason they learn things so quickly. A few simple materials, each well practiced and mastered, will accomplish the same at home.

Weaving



Weaving is another back and forth, in and out fine motor activity that kids love. It can be done many different ways and kids can create neat crafts projects pretty easily. You can use twigs, a piece of cardboard, a plastic weaving frame, plastic trays, or a dishwashing rack as a weaving loom. Your child can make potholders, dream catchers, even a Mother's Day basket. Fun!

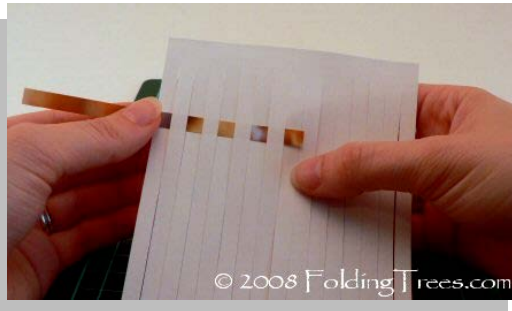
Photo: Concentration and fine motor work, **Julie Josey**



A dish drying rack makes a perfect first loom.
Counting Coconuts

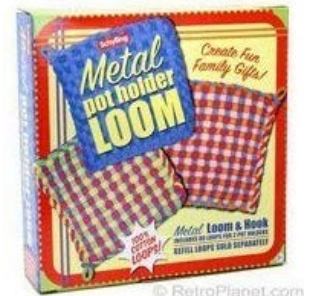


A laundry basket works, too.



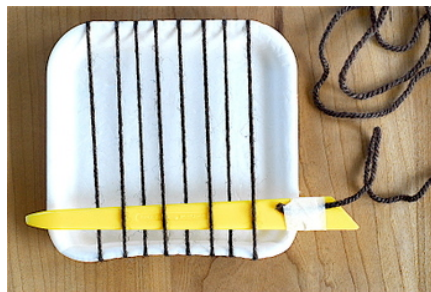
Paper weaving. Cut wide spaces at first to make it easier. Work towards narrow spaces as your child's skill improves. Use colors of paper ribbons for cool effects. Check out the links here & below.

Folding Trees



Potholder kits are under \$10 at most discount stores.

Kids, like the girl pictured above, can make something useful with these.



This simple weaving project from the **Our House** blog requires just a styrofoam tray, scissors, a piece of cardboard, and yarn. Make little slits in the tray so the **warp** threads stay put. Make a little **shuttle** from cardboard and attach the **woof** yarn to it with tape. Change colors by tying on different yarn as you go along. Display your child's creations.

Paper weaving at Tot School

Weaving a paper basket



Twig weaving is a super art project with unlimited possibilities. Use a Y-shaped branch and whatever you find outdoors in your area, all kinds of string, yarn, and ribbons, dry flowers from the crafts store, almost anything your child can weave into these creations will work. Display prominently in your home.

Activity & photo: [Let The Children Play](#)

Sewing

This activity requires careful supervision. This is not a good choice for an early activity. Your child needs to have mastered lacing, have good fine motor skills, and probably be at least 4 yrs. old to do this activity. [Toddler / preschool embroidery project](#)

You will need:

Rubber shelf liner - the kind with a grid of holes

Children's plastic sewing needles

Colored string or yarn

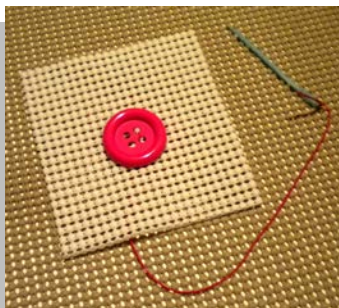
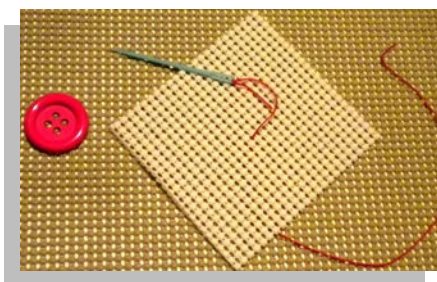
Big, colorful buttons with good size holes

A bowl, basket, or box to hold the above

Child safe scissors



Let your child help cut the shelf liner into 4-5" squares. Make a big knot on one end of a piece of yarn and Let your child thread it through the needle. Show your child how to sew the button on. Now let your child start from scratch, assisting only as needed.



If your 5-6 yr. old child really enjoys this you can progress to felt, smaller buttons, sewing thread, and a real sewing needle - always under close supervision, of course.

Cutting & Slicing

Cutting with scissors

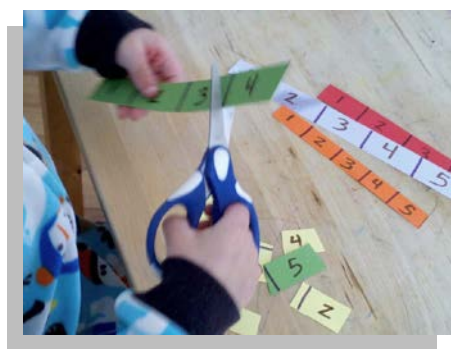


Learning to cut with scissors is a challenge. This child is starting out right, with **safety scissors** and a sheet of **Playdoh**. Playdoh is easier to cut than paper; and much more forgiving for a child using scissors for the first time. With enough practice, this child will move into free cutting card stock strips, sheets of paper, and finally along lines drawn on paper. The sequence is given below. See pages 444-446 for **Line & Shape Cutting Sheets**.

Learning to cut with scissors

Photo: Challenging cutting work at [montessoriMOMents](#)

Always encourage your child to use scissors **thumb up** - like **shaking hands**. Once a child has practiced with PlayDoh and is getting the hang of it, she can, in order:



Free cut 1" wide strips of card stock

Free cut small sheets of card stock [Watch video](#)

Cut strips along lines (photo at left)

↓ Cut progressively harder line patterns and shapes

[Download free line patterns for cutting](#)

Photo: [Peaceful Parenting](#)

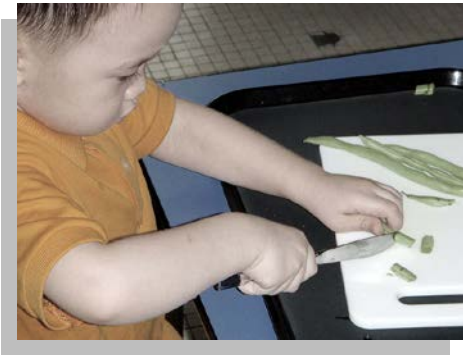


Two cutting trays from [Counting Coconuts](#). At left, free cutting straws. In the middle, cutting strips with Halloween stickers.



Cutting hearts for a Valentine's Day project at [The Activity Mom](#)

Cutting with a knife



As a Montessori teacher, I often saw fear in parent's eyes when we showed them the celery cutting material, which included a sharp paring knife. More than one parent reconsidered sending their child to Montessori school! Not to worry, cutting is like other skills. A child's skill level builds slowly, with **plenty of practice**, until the child is ready for each new step. Photo: [The Little House Montessori](#)

Like scissors, cutting with a knife is a complex skill. The fingers of one hand stabilize the object and have to move out of the way as the other hand cuts. The knife has to be held perpendicular or it may slide off and cut you. The right amount of pressure and sawing motion must be exerted on the blade to make it cut properly. There is a lot going on and it takes practice. All of the activities we have covered so far build the necessary **fine motor control** for complex skills like cutting.



With a banana and a dull dinner knife, a toddler can practice. For a 2-3 year old, try using a self-contained activity, as at right.

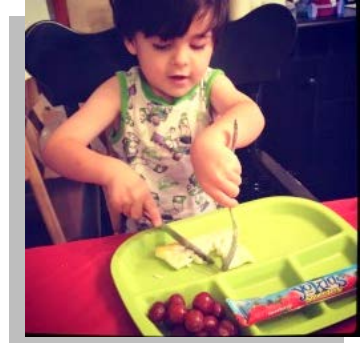
L Photo: [Chasing Cheerios](#)

R photo: [Montessori Album](#)



Try banana cutting with a plastic knife first, as at left. Next, your child can cut cheese, which is a bit firmer, with a dull dinner knife. A pickle, at right, is wet and has at least one curved surface, increasing the challenge. You will have to decide when your child is ready to use a sharper knife to cut vegetables like celery. Provide plenty of practice at each step.

Videos: [Cutting & serving a banana](#) [Peeling carrots](#)



At left, a carrot peeling material from [Counting Coconuts](#). It has a [small peeling tool](#) and a [hand wave slicer](#), adding new tools. In the middle, another great [Counting Coconuts](#) activity - egg slicing. This uses a [hinge type egg slicer](#). At right: learning to cut with a knife and fork at [montessoriMOMents](#). Mastering these skills builds a positive self-image and an "I can do it!" attitude that stays with children as they get older.

Video: [Egg slicing](#)



Even buttering bread can be made into a Montessori activity. This material **organizes** and **isolates** the essential elements and the task in an aesthetic way that helps a child focus attention and internalize a sense of beauty and order.

Photo: Montessori bread buttering material at [Counting Coconuts](#)

Flower Arranging



With fresh or artificial flowers, assorted foliage, a jar with lid, small vases, scissors, and a tray you can make a nice flower arranging activity. Stephanie at [Discovery Days & Montessori Moments](#) made these trays for her older and younger daughters. The lid in the top photo has holes to help her younger child arrange the flowers. The bottom tray has a greater selection of flowers and foliage and allows the older child to do free form arrangements. This is an excellent example of modifying materials to meet the needs of different children and allow each to experience success. Great job!

[Another blog post on flower arranging](#)

Stapling & Book Making



A **Swingline Tot Stapler** only costs about \$2 and is a great tool. Help your child fold a few sheets of paper in half, add a folded piece of construction paper for a cover, and let your child staple along the edge to **make a book**. With family, magazine, or internet photos and your child's artwork, plus words your child says and that you write in the book as captions, your child can read her own books.



For a **math activity**, write numbers on the pockets and your child can count out and put in that many straws or other objects that stick out. Include a zero to start introducing the concept. Start with 0-5 and progress to 10 when your child is ready. See the Math section.

Building a Flashlight



You can turn something we do without thinking into a self-contained activity that provides muscle control and coordination practice, sequencing, and a safe experience with electricity. On page 443 you will find the '**Right is tight**' and '**Left is loose**' printouts. Print and cut these out, demonstrate slowly, and let your child try. Getting things to screw on straight is the main challenge here.

Nuts & Bolts



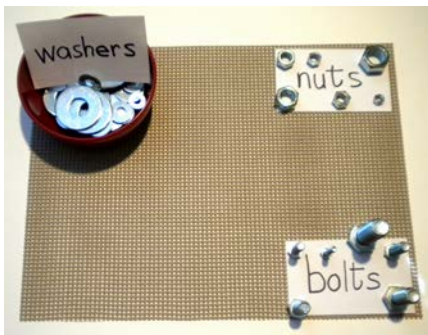
Nuts and bolts make great Practical Life materials that can be extended as your child grows. At left and right above: simple first nuts and bolts materials from [Counting Coconuts](#). Get a few sizes of bolts and matching nuts and put them in a storage container or on a tray. Print out the '**Right is tight**' and '**Left is loose**' sheets from page 443. Show your child how to make a nut go on straight and turn it as shown on the sheets. Let your child explore. You'll know soon enough if she will need more help or if this new material is in her 'Learning Sweet Spot' (page 72). The middle photo is [Melissa & Doug's Wooden Take Along Tool Kit](#). At under \$15 at the time of this writing, this material is a steal. It has wooden screws, nuts, bolts, wood pieces with holes to fasten together, and comes in its own cool toolbox.



At left is a new nuts and bolts challenge: fastening two pieces of wood together. In the photo, two wooden letter C's from a crafts store were clamped together and drilled with holes, sanded, and placed on a tray along with three identical sets of bolts, nuts, and washers. Add a [small adjustable wrench](#) when your child is ready and he can learn to use a new tool.



Crafts stores have fun wood shapes to bolt together. It may take a few shapes to create the thickness required to use bolts about 1 1/2" long. With wide enough shapes, you can drill 2-3 holes to fit different diameter bolts. [Clamp the shapes together](#) to drill the holes to be safe and accurate.

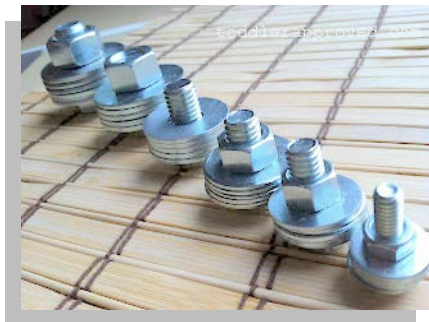


A nice extension is to make name cards that say 'bolts', 'nuts', and 'washers' and sort a bowl of mixed pieces. If you get used to printing in the Century Gothic style the words are shown in here, your child will be ready to use the **Sandpaper Letters** when the time comes for Phonics activities. Always look for ways to introduce new language into activities.



At left is a fun extension from the second edition of this book, shown at [Toddler Approved](#). Get one each **galvanized hex bolts** in sizes: 1/4", 3/8", 7/16", 1/2", and 5/8". Get 5 washers each in the same sizes and a nut for each.

The screws should be long enough that they just stick out of the top of the nut when all 5 washers are placed on the screw and the nut is tightened down finger tight. This will result in the screws getting **gradually shorter** as they get smaller in diameter.

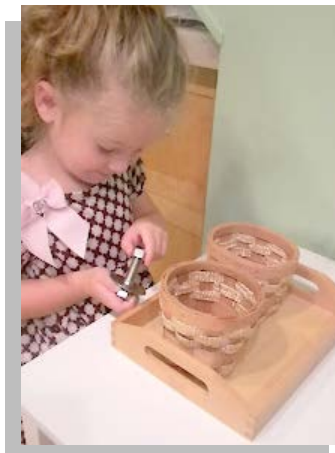


Your child can put the 5 washers and the nut on each screw, then line them up tallest to shortest as shown. Start lining up on the left and work right to emphasize the **left-to-right visual tracking** your child will use to read later.



[Ryan's Room Creative Big Nuts and Bolts](#) is another good material. 32 colored plastic nuts and bolts in a nice

Photo: [Discovery Days and Montessori Moments](#)



Screw & Nut Driver Boards



Once your child has used nuts and bolts awhile, she can move into using a screwdriver or a nut driver tool. There are ready made materials like the [Guidecraft Screw Block Manipulative](#), at left above, that comes with child friendly wooden screws and bolts that can be hand operated and also have screwdriver slots in the end. With a [stubby flat blade screwdriver](#), your child can learn to use this tool.

You can also make a nice **Nut Driver Board** like the child in the photo is using at [Tree House Preschool Daycare](#). You'll need a piece of 3/4" plywood, sandpaper, a drill, and [T-nuts](#) like the one shown in the next photo. This one is upside down. You drill a hole, sand the edges, insert the T-nut, then hammer it into the wood so those little teeth go all the way in. They come in different sizes for adding a matching element to the material. Now, your child can screw in matching size hex head bolts with a **nut driver** like the one in the next photo down. Any home improvement store has these, along with sets of various sizes of **nut drivers** to fit in them, as shown in the bottom photo.



Using a nut driver is easier than a screwdriver because the end fits snugly down over the head of the hex cap screw. A flat or phillips screwdriver can be used once your child has mastered the nut driver.

Woodworking tips

Whenever you work with wood, always sand **all** the edges and faces well. Use 80 grit sandpaper first. Sand every sharp edge and all the faces (with the grain) to prevent splinters. Finish with 200 grit sandpaper to get a nice safe, smooth finish. **Always wear safety glasses!**



When your child is ready for a new challenge, you can make a **screwdriver board** with a sanded piece of wood.



Get a pack of phillips head wood screws and a stubby phillips head screwdriver. Drill a line of starter holes a little smaller than the diameter of the screws. Show

your child how to start a screw by hand, and then use the screwdriver. This takes practice. The screwdriver must be held straight while being pushed down a little and turned. It gets harder as the screw gets farther into the wood. This is pretty sophisticated fine motor work. If your child strips out the head of a screw, it can be twisted out with pliers. A longer screwdriver, then one with a flat blade, can be used when your child masters the stubby. It is a good idea to use a mat to protect your table.



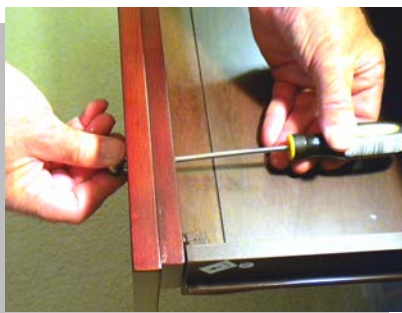
Top two Photos: [Discovery Days and Montessori Moments](#)



At left: an activity using a toy with a battery compartment held down with a screw, and a screwdriver, on a tray. Demonstrate how to remove the screw, open the compartment, and remove and replace the batteries. Let your child take over. For added challenge, use a screwdriver that can remove all those tiny screws holding the back of the toy together. Photo: [elainengfriis.blogspot.com](#)



At left: the [Fisher-Price Drillin' Action Tool Set](#). It has a battery operated drill with interchangeable bits, and a plastic hammer, screwdriver, bolts, screws, and 'nails', all in a cool tool box. I wish I'd had one of these sets! A great buy at around \$15, probably most suited to 2-3 yr. olds.



When your child is pretty handy with a screwdriver, show him how to tighten drawer knobs, bottom left. She can hold the screw in position and tighten the knob, or vice versa. Look for opportunities for your child to use skills gained doing activities to accomplish real tasks around your home. This makes Practical Life come alive. Soon, your child can have all kinds of responsibilities!

Hammering

What young child doesn't like to use a hammer? Just pounding something is a good stress reliever. With a few simple hammering activities, you can guide your child in a Montessori way to develop fine motor, eye-hand coordination, and shape recognition skills.



styrofoam or floral foam, golf tee 'nails', and a small wood or rubber mallet on a tray make a great first hammering experience.

Chasing Cheerios



A tenderizing mallet can be used to hammer golf tees into a box. Make starter holes at first.

Fresh Idea Mama



In this variation the golf tees are hammered into a baking dish filled with compacted playdough.

Little Schoolhouse in the Suburbs



The [Hammering Shapes](#) at **For Small Hands** are a big hit with most kids. Geometric shapes are hammered into a cork board with brads and a small mallet. Look for these on Amazon, also. \$ **Saving Tip:** at For Small Hands, buy the [replacement pack of shapes](#). Get this [7" lobster mallet](#). Get an unframed cork bulletin board at a crafts store.

Photo: *Mama Liberated*

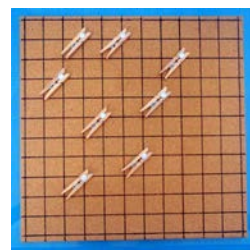
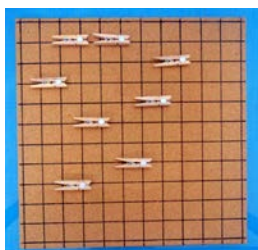
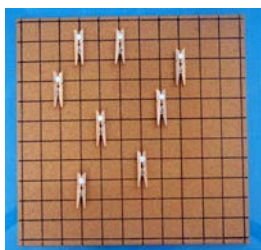


Once your child has the hang of it, create different shapes like those shown at left. There are almost limitless possibilities. Make patterns yourself and take photos of them for your child to recreate on the board. Let your child explore and create.

Photo: *Putti's World*



When your child is ready, the [TS Build A Birdhouse](#) or a similar kit makes a great project you can do together. Have fun assembling and painting, then hang it up outside and watch to see who moves in. Feeding and watching birds mate and hatch is a wonderful science experience. Identify the birds and observe their behaviors.



With a bulletin board (the one above has a line grid drawn to make it a **Geo Board**), a pack of **mini-clothespins** from a crafts store, and some **pushpins**, a younger child can press in the pins and attach the clothespins to them randomly, as at far left. Teach your child how to turn them so they face **away** or **forward in front of her** (second photo), **toward her**, to the **right and left** (next photo), or at an **angle** (fourth photo). She can also link them to make snakes as in the last photo. Good fine motor work and your child is also learning **directions** related to her **body's position in space**.

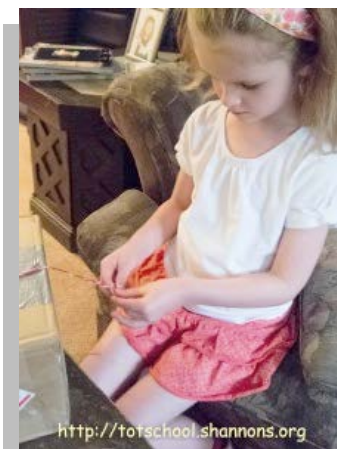
Braiding



Braiding is a fun activity involving sequencing and fine muscle control. Check out this good [video on how to braid](#). Start with thick cords of contrasting colors. Your child can progress to yarn and ribbons, as at right.

Right photo: [Tot School](#)

Left Photo: [Kids Crafts @ suite 101](#)



<http://totschool.shannons.org>

Pipe Building



Children 3-6 have fun with this. They get hand and finger muscle control practice, fun building free form pipes, and experience angles in a hands on way.

You will need

3/4" diameter male and female pipe fittings from the home improvement store. Get different lengths of pipe, curved and right angle elbows, end caps, and T shaped pieces. Get 2-3 of each kind.

The 'Right is tight', 'Left is loose' sheets printed from page 443, and a bowl or tray to hold it all.

Presentation & use

Your child can lay out a floor rug and bring the activity. Lay out the sheets and demonstrate how to connect and disconnect pieces of pipe. Let your child explore and discover, helping only if needed.

Safety note: Larger pipes can get heavy - watch fingers and toes. This could be a learning experience!



Read about the children in the photo above at [Buttercup's Babies](#) in a blog post titled: **Plumbing, who knew it was fun and educational?** They made it easier to attach the pieces by **rubbing soap on the threads**. They talked into one end of the pipe and listened at the other. Then, they did a fun extension by **rolling a wood bead, small stones, and a glass bead down the pipe**, listening to track where it was and playing with twisting the pipe to make the objects keep traveling down by gravity. Fun! You could also take the pipe outside and **run water down it**. If there are three openings, the water may come out of two of them. That should give you something to talk about. This nicely illustrates how activities can be extended to involve numerous interesting elements. This parent did a great job of helping her kids get the most from an activity while their interest was high.

Dressing



Learning to dress your self is a big deal. You can learn all the other skills; but if Mom or Dad still has to help with your clothes, you know you aren't quite where you want to be yet. Sometimes a child sees getting help with dressing as a good way to get some time with you. Most children just want to dress and undress themselves. Learning to get different kinds of clothes on and off and to use zippers, buttons, snaps, and other fasteners takes practice.

Photo: Zippering at [Peaceful Parenting](#)

"If teaching is to be effective with young children, it must assist them to advance on the way to independence. we must help them learn to walk without assistance, to run, to go up and down stairs, to pick up fallen objects, to dress and undress, to wash themselves, to express their needs in a way that is clearly understood, and to attempt to satisfy their desires through their own efforts. All this is part of an education for independence."

Maria Montessori, The Discovery of the Child

Getting clothes on and off

Along with operating all those fancy fasteners, a child must learn to get her clothes on and off. Here are some ways to make the process less frustrating and more successful:

Avoid the rush



Busy, rushed mornings are not the best times for dressing practice. Set aside **quiet time**. Have fun with it. Be patient. Work on one item, like **socks**. Socks are pretty easy, which gets things off to a good start. **Pants** can come next. **Shirts**, **coats**, and **dresses** are probably the most challenging. A **basket of clothes** (photo) turns dressing into a special activity your child can do anytime.

Photo: [Counting Coconuts](#)

Start with **loose, simple clothing**, like elastic waist pants, shorts, and skirts; t-shirts one size too big, socks with heels so it is easy to orient them. Let your child **work on fastener skills as activities in themselves** (keep reading) before she tries to button suspenders or shirts, pants with zippers, or tie her shoes.

Arrange easy access

Putting things within your child's reach fosters independence. Hang a curtain rod from cords at either end in your child's closet to bring clothes on hangers down to your child's level. Put folded clothes, socks, underwear, etc., in low drawers.

Encourage choice, limit options

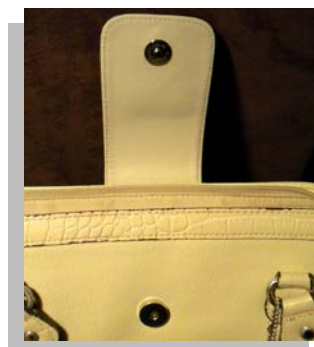
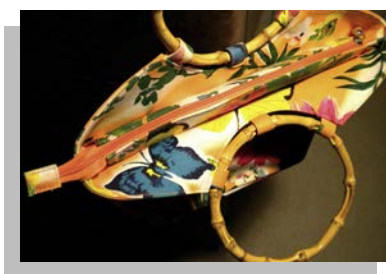
Kids love bright colors; and their fashion sense is limited. Yet, you want your child to take responsibility and learn to make her own choices. One solution: **lay out clothing items that all mix and match and let your child choose**. This should help make you both happy. as your child gains insight into what colors complement and what works and doesn't, he can branch out more on his own.

Of course, you can take the other track and just let your child wear whatever she likes. After all, you're only young once! Good advice to keep in mind:

Be patient, be positive, and encourage your child's efforts.

Using clothing fasteners

Velcro
Zippers (on pants)
Snaps
Buttons
Buckles
Zippers (on coats)
Shoelaces



Old purses are great for fasteners practice

Above is a fasteners sequence in rough order of difficulty for most children. There are different ways to help your child practice. You have to decide what works best.

Practice while dressing

Just let your child practice putting on his own clothes and opening and closing their fasteners. Show her how and let her work at it. Start with velcro and pants zippers and move on from there. Encourage and be patient. Make a big deal out of every success.

Drape clothes on chair backs



Drape a sweater, shirt, or coat over the back of a chair and your child can practice buttoning and zippering. She can either sit facing the back of the chair or stand behind the chair. Demonstrate slowly and carefully as many times as your child needs. Zippering is tricky, especially getting the ends to line up and inserting one end into the zipper pull properly to get started. Then you have to hold the zipper away from what's behind it to avoid snagging.

Remember how tricky these tasks are and be very patient. Encourage every success.

Dressing Frames



Montessori schools use dressing frames like those above. These are \$12 each from [Montessori Outlet](#) at the time of this writing. If your child needs some focused practice with any of these fasteners, a dressing frame is an option. Many parents find, however, that their cost vs how much they get used does not justify purchasing them.



Photo: [Toddler Approved](#)

At [Toddler Approved](#), there is a nice post on making your own dressing frames very inexpensively. This looks like a cool project that will work just as well as the more expensive Montessori frames. You'll find another great post about independent dressing, with more on DIY dressing frames, at [Child Central Station](#).

To see how Montessori teachers demonstrate dressing frames slowly and carefully, watch these videos: [Buckle frame](#) [Lacing frame](#) [Zipper frame](#)

These will give you an idea of how slowly and deliberately to demonstrate for your child.

Tying Shoelaces

Lacing and making a bow with shoelaces is a rite of passage. As seductively easy as velcro shoe fasteners are, help your child learn to tie shoelaces. The triumphant look on her face will be reward enough.

[Make a shoelace box](#)

Videos: [The Bunny Ears Method](#) [The Traditional Method](#)

Choose one of these methods and teach that first until your child has it down. Plan on multiple demonstrations and time for practice.

Knot Tying

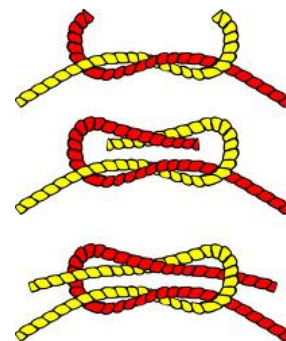


A fun way to get tied up in knots! Knot tying is a great activity. Once your child masters the knots shown, she can get as fancy as she likes. Knot tying kits are available, such as the [Channel Craft](#) kit shown at left. This kit sells for around \$10 on Amazon. It includes a booklet, cords, and a neat post for tying knots around, all in a nice box that looks great on the shelf with your child's other learning materials. [Illustrated guide to knots.](#)



In the Montessori At Home! do-it-yourself tradition, it is easy to make your own knot tying activity. All you need are **two lengths of cord in contrasting colors**, a few pictures of knots printed out from a Google search, and a nice bowl to put it all in. Later, you can add pictures and instructions for more complicated knots, or even a Boy or Girl Scout knot tying manual. There are soooo many knots to tie!

The knots pictured, top to bottom, are an **overhand knot**, a **figure eight knot**, and a **square knot**. The square knot is an easy one to get wrong, so have your child check his knot carefully compared to the photo you print out. Just remember: *right over left, left over right*.



Be sure to make name labels for your child to match to the knots – *language!* You can also take turns trying to tie knots **blindfolded** once you think you have them down pretty well.

[A fun site with animated knot photos](#)

Videos: [Tying Knots](#)

Locks, latches, keys, & links



Padlocks, keys, and curtain rings on a tray make a nice material that isolates the action of locking and unlocking. Use locks and keys from very tiny to large ones to provide a variety of fine motor work. Check the dollar stores. Later, add a combination lock. [Lock and Key blog post](#)

Photo: [Family Go Simple](#)



A camera bag with velcro and zipper pockets has a combination lock on its strap. Inside, it holds an assortment of colorful snap links, screw links, and a padlock and key. This material will keep a child busy for awhile. When your child is ready, the bag can hold her first digital camera.



A simple latches board makes a very nice material. Everything is at your home improvement store and easily attached.

Photo: [Teal and Lime](#)



A more involved latches and locks board that is still within the capability of most DIY parents. This one has light switches, hasps, a pulley, a magnet, and keyed and combination locks. Cool!

Photo: [Post-Apocalyptic Homeschool](#)

[DIY latches and locks board project](#)

Polishing



Polishing is a great activity to set up in a Montessori way. You can do all kinds of polishing trays. At left, a child sprays non-toxic glass cleaner (see below) on a hand mirror. A cloth will let her complete the work. Extend her new skills to windows.

Photo: [Chasing Cheerios](#)

Non-Toxic Glass Cleaner

Mix 3 tablespoons of vinegar & 5 drops of lemon juice in 2 cups of water.

Non-Toxic Metal Polishing Compound

Use fluoride toothpaste. Rub it on, let sit, wash it off, rub to polish. [See how here.](#)



A nicely organized silver polishing tray.

[The Education of Ours](#)



A wood polishing tray and a child making that wood shine. Practical Life activities teach concentration.

[Counting Coconuts](#)



I bet you have an old pair of sunglasses lying in a drawer. Turn them into an activity that will help your child develop fine motor skills and an organized approach to tasks.

Photo: Beautiful glasses polishing material, [Counting Coconuts](#)



Shoe polishing is easy to set up. This activity uses a shoe with leather strips, which increases the fine motor challenge.

Photos: [Tot School](http://totschoolshonnons.org)



Gardening



Gardening is one of the best Practical Life activities. Your child will experience how life unfolds, grows, and matures; where our food comes from; the responsibility of watering, weeding, and caring for living things; an endless supply of sensory and science experiences; and opportunities for sharing beautiful interactions with you. Along with the kitchen, make the garden a frequent hangout.

KidsGardening.org has lots of ideas.

[Gardening Launch Pad](#) has a library of useful links.

[My First Garden](#) is another wonderful site.



You can start a garden anywhere. If you can set a pot or planter on your patio, you can have a garden. Children get a lot from a little, so don't let a lack of space hinder you. You can even plant a [garden in a tire](#). Just [getting what you need at the store](#) can be a learning adventure.

[Gardening ideas at Carrots Are Orange](#)

[A pretend flower planting activity for toddlers](#)

Try an [Earth Box](#) for growing vegetables. A fence garden like the one shown in the photos from [Discovery Days and Montessori Moments](#) makes good use of space and can be a great experience. Gardening can lead to your child's involvement in home improvement projects. [A Preschooler's Guide to Home Improvement](#)

"Children are also attracted by plants. One Children's House did not have any land that could be tilled, so flower pots were set out all along a large terrace. The children never forgot to water the plants with a little watering can. One morning I found them all seated in a circle on the floor around a magnificent red rose that had opened during the night. They were silent and peaceful, completely absorbed in contemplation."

Maria Montessori, *The Discovery of the Child*

Care of Self

The drive toward independence finds a natural outlet in learning to perform personal care tasks. Children readily learn these skills with a little instruction and demonstration.

Bathing



Safety Note: Young children must be supervised continuously in the bathtub. Children can drown in very little water. Have everything you need by the tub before drawing the bath water. With guidance, a young child can learn how to put soap on a washcloth and clean themselves. Encourage them to reach every spot they can. Finish the job for them as needed. Shampooing usually requires assistance until a child is about 6 or so; but younger children can start learning how and help with rinsing and drying. Make bath time a warm, inviting, fun experience.

Using a faucet

Let your child practice filling a small cup by creating a moderate flow of water, fast enough to fill the cup fairly quickly, but not so fast that it splashes all over the counter. You will need to provide a small stepstool at the faucets you want your child to be able to use independently. Let your child turn on the hot water, feel how it warms up, and learn to adjust the temperature. **Safety Note:** Keep the heat setting on your water heater low enough to prevent scalding. Most experts agree this is around 120°F.

Washing hands

Frequent **hand washing** is the primary weapon in preventing infections. **More infections are spread by the hands than by any other route.** Provide antibacterial hand

soap in a pump container at every sink in your home. Remind your child to immediately wash her hands upon returning home from any trip – especially after a trip to the store. Show your child how to use lukewarm water and soap; and how to rub her hands together with moderate friction for at least 30 seconds, washing every hand and finger surface well. Show your child how to dry his hands properly and throw the towel away.

Video: [Suds Of Luv](#) **Blog post:** [Montessori-Inspired activities for care of self](#)

Oral care

Establishing good habits of brushing and flossing are essential elements of personal hygiene. Make this fun and participate in helping your child learn these skills. Let your child try out a few different tooth brushes and good toothpastes to find his favorites. Make sure your child has regular teeth brushing and flossing times every day, especially after meals. **Electric toothbrushes** clean teeth better than non-electric. There are many inexpensive models for kids available.

Plaque disclosing tablets are wonderful for demonstrating to children the importance of brushing properly and keeping their teeth clean. The experiences of seeing the plaque on their teeth stained blue or red, and brushing properly to get it off, make big impressions on young children.

Check out these web sites for more information:

[oralanswers](#)

[ehow.com](#)

[teachkidshow](#)

For a downloadable PDF chart showing how to brush and floss teeth, visit: [mycohi.org](#)

Video: [Tooth Brushing](#).

Fingernails

It is a good idea to wait until your child is older to allow her to clip her own fingernails, as this requires significant fine motor skill and can result in injury. Young children can certainly learn to clean the underside of their fingernails using a small nail file or nail stick.

Blowing nose

Kids and runny noses seem to go together. Young children's immune systems are learning to handle our planet's many bacteria and viruses. As they do, most children develop periodic infections that cause a runny nose. Clear mucous usually indicates a

viral infection or allergy. Mucous that is yellow, tan, brown, or green; and a cold or flu that causes a fever and a productive cough can indicate a bacterial infection and often requires a trip to the doctor.

Show your child how to always use a Kleenex type disposable tissue for blowing their nose. Avoid cloth handkerchiefs. To help avoid blowing mucous back into the sinuses, teach your child how to close one nostril with a finger and blow one side at a time. Show your child how to properly dispose of the tissue and then **wash her hands** after blowing her nose.

Encourage plenty of fluids when your child has a cold or the flu. See your physician for a cold that does not improve in a few days, if your child is producing colored mucous, or if your child has a temperature of 102-103° for more than a day. A higher temperature requires immediate evaluation by a doctor.

Coughing

Coughing accompanied by colored mucous and a fever usually means a trip to the doctor. A chronic cough in a young child is always a cause for concern and evaluation by a physician.

For normal coughs, such as when your child has a viral infection that just needs time and care to run its course, show your child how to turn away from others and **cough into a sleeve**. Coughing into hands covers the hands with microorganisms and should be discouraged. Encourage frequent **hand washing**, especially after every trip to the store!

Grace & Courtesy

Learning good manners and basic social skills is an essential part of early childhood education. Children will not learn to respect the rights, abilities, and value of other people if they are not taught how to interact with others in a civilized way. The earlier you teach your child these social skills, the better.

Please & thank you

Remind your child to always say these words when asking for things and when something is received. Establish natural consequences if the words are not used – such as the thing the child wants not being produced! Use these words yourself all the time.

Excuse me / Pardon me

Practice saying this with your child. Stand between your child and something he wants, and have him practice saying, “*Excuse me*,” as you move aside. If your child wants to talk to you when you or someone else is talking, always emphasize that he must wait for a break in the conversation and then say, “*Pardon me*,” rather than simply interrupt. Practice this at home and when shopping or in other social situations.

Introducing oneself, greeting people

Do some more role playing practice with your child. Pretend you are someone else and teach your child how to introduce herself to you, using her full name. Show her how to greet someone you meet.

Making a request

“*Please pass the salt.*” “*May I please use that when you’re done?*” Help your child learn how to properly phrase requests to others. Practice making requests back and forth with your child.

Allowing someone to pass

Always indicate to your child when she should step aside to allow other people to move by, such as at the supermarket or other store, or in a public venue where people are moving down a hallway or aisle. Teach your child to observe others and see when they are about to bump into someone or block someone’s path. This helps young children begin to recognize that they live in world with other people; and that they must responsibly share space with them.

The Silence Game

Learning how to **sit quietly** is an essential skill in many social situations. You can practice this at home by setting up a stopwatch or just watching the second hand on an analog clock and making a game out of remaining silent and still for a period of time. As your child improves, the time can be extended. For fun, have contests with rewards for sitting quiet and still. Make a record your current family record holder and put it up on the refrigerator for all to see.

[Grace & Courtesy blog post at Living Montessori Now](#)

[Learning table manners at Counting Coconuts](#)

[The magic of grace and courtesy](#)

Calling 911

Young children can do amazing things in emergencies, like calling 911. Check out the videos below. Here are things you can do to prepare your child:

- **Unplug the phone and let your child practice dialing 911.** Always refer to it as "**Nine-one-one**", not "nine eleven". Otherwise, in an emergency, your child may get stuck looking for an '11' button on the phone.
- **Reinforce that 911 is only for real emergencies.** These include a fire, someone trying to force their way into your home or someone in the home who is not supposed to be; or a person who cannot talk, won't wake up, can't speak, or has a severe injury.
- **Practice what to say.** Tell your child it is okay to be scared, but they must be able to answer questions that the person on the phone will ask. **Do mock emergency situation response drills at least monthly** and cover how to respond to questions from the 911 operator. These include:

Where are you calling from? Your child should memorize your address and be able to repeat it. Practice this regularly during a monthly safety review in your home that covers calling 911, what to do in case of a fire, and how to stop bleeding.

What kind of emergency do you have? Cover the possibilities: fire, someone trying to break into your home, a family member down who cannot talk, a severe injury.

Who needs help? Practice saying Mom, Dad, my brother / sister, a visitor, etc.

Is the person awake and breathing?

- **Make it clear that you are not to hang up until the person on the phone says it is okay.**

How to use 911

How to teach your child to dial 911

Video: [Teach kids when to call 911](#)

Video: [A 5 year old calls 911](#)

Video: [Three year old calls 911, saves Grandma](#)

Home & Personal Safety

Common causes of child injuries and deaths are car accidents, drowning, suffocation, fires, and burns. Check out [Safe Kids USA](#). Here are more helpful resources:

General Home Safety

[HealthyChildren.org: Safety at Play](#)

[ABC Parenting: Preschooler Safety](#)

[Teaching Safety to Your Preschooler](#)

[Talking Safety to Your Preschooler](#)

Personal safety, strangers

[Personal Safety for Children](#)

[Personal Safety: Preschoolers](#)

[Talking About Strangers](#)

[Stranger Safety Tips](#)

[Stranger Safety](#)

[Teaching Kids About Strangers](#)

Home safety

[Household Safety Checklist](#)

[Electrical Safety Tips](#)

[Home Electrical Safety Video](#)

[Childproofing Your Home](#)

[Kids Health: Fire Safety](#)

[Home Fire Safety Video](#)

[Childproofing Your Home 1](#)

[Childproofing Your Home 2](#)

[Home Safety Tips](#)

Driving safety

[Driving Safety Tips](#)

[Car Safety Tips](#)

[Parents Central: Car Seats](#)

[Car Seats: Info For Families](#)

First Aid

[Parents Magazine First Aid Guide](#)

[Printable First Aid & injury Chart](#)

[12 First Aid Skills for Parents](#)

[Find a Red Cross CPR class in your area](#)



Left: [Resuscitate! CPR, AED, & Choking](#) (iPad) is simple and easy to use in an emergency. Practice first! Right: [Emergency First Aid & Treatment Guide](#) (iPad) has clear instructions for most common emergencies.



Left: [Hands-Only CPR](#) (android) should be on everyone's android phone. Right: [Pocket First Aid & CPR](#) (android) is another great app every parent using android should have.



Practical Life Resources

General Information

[Montessori and Practical Life: Toddler, Preschool, Kindergarten](#)

[Practical Life Overview at Montessori Print Shop](#)

[Characteristics of Practical Life Activities at Mama Liberated](#)

[Montessori preschool Practical Life - more than pouring water](#)

[Nice post on children helping at home at Mama Liberated](#)

Activity Ideas

[Montessori Inspired Fruit Unit at Living Montessori Now](#)

[Montessori Inspired Vegetable Unit at Living Montessori Now](#)

[Washing a baby doll at Mama Liberated](#)

[Toddlers in the kitchen](#)

[Fine motor and practical life skills lesson ideas](#)

[Montessori Practical Life at Home](#)

[Photos of Practical Life activities at MontHome](#)

[Practical Life activities list at The Home Teacher](#)

[Activity ideas at Montessori Print Shop](#)

[Great activity ideas at the United Montessori Association](#)

[Practical Life activities for 3-5 year olds at An Everyday Story](#)

Equipment and supplies

[Montessori Services](#)

[For Small Hands](#)

[Dollar Tree store locator](#)

[Mini Kitchen utensils on Amazon](#)

[Cooking utensils for kids](#)

Practical Life Gallery



The Activity Mom



Discovery Days & Montessori Moments



Peaceful Parenting



Discovery Days & Montessori Moments



Counting Coconuts



The Education of Ours



Carrots Are Orange



Tot School



The Home Teacher



Montessori Print Shop



Living Montessori Now



Montessori-Inspired Food Preparation Activities for Preschoolers



Counting Coconuts



Tot School



Tot School



Chasing Cheerios



Laura Ingalls Wannabe



Tot School



Lace and playdough
Valentine's or
holiday ornaments

Mommy Labs



Your child can cut out & staple the
Geometric Shape Printouts (p.)
together as an art & Sensorial project



Simple nuts & bolts board

Monthome.com



A wood polishing material that also encourages pretend play.

The Work Plan



See this and more materials at

My Montessori Journey



Learning to pour

Chasing Cheerios



Washing the baby

Pink & Green Mama



Living Montessori Now



Soap shaving activity at

Carrots Are Orange

"The environment must be rich in motives which lend interest to activity, and invite the child to conduct his own experiences."

Maria Montessori

Sensorial



Sensorial materials educate the senses and develop strong brain architecture.

Bottom right: [Discovery Days & Montessori Moments](#)

"The mind of a little child is certainly not a blank when he begins the education of the senses, but his concepts are all confused. He begins to distinguish various traits in objects already known. He distinguishes quantity from quality and separates form from color. He distinguishes dimensions in objects that are long or short, thick or thin, large or small. He separates colors into groups and calls them by name. He notices the varying intensities of colors, calling the two extremes light and dark. Finally, he distinguishes tastes from smells, lightness from softness, and sounds from noises. He succeeds through the education of his senses in ordering his mental images. This is the first act of ordering in his developing mind. This sense of order that has been acquired early is of utmost importance for later life."

Maria Montessori, *The Discovery of the Child*



Practical Life activities give young children a variety of sense experiences. At the same time they are doing these, they can be using the **Sensorial** materials. **Practical Life and Sensorial activities are the indispensable foundation of Montessori for 2-6 year old children.**

Young children develop their minds by moving, holding objects in their hands, and acquiring sense impressions from the environment. Their muscles and senses provide the raw material from which children actively develop brain nerve

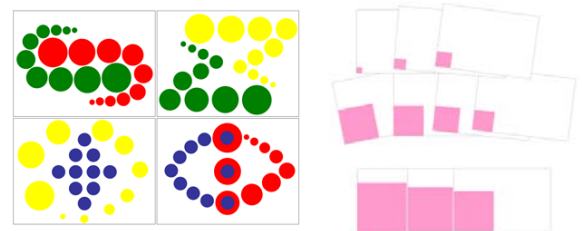
architecture and their concepts of the world. Young children have **absorbent minds**. In the early years they are continuously absorbing and processing information.

Montessori **Sensorial** materials lead a child to **focus attention** on sounds, smells, sights, tastes, and tactile impressions; and to make **comparisons and decisions**. They develop sensory **acuity** and **discrimination**: the ability to make fine distinctions. The **active ordering** of objects based on sense impressions helps develop strong brain architecture and skills such as **observation, comparison, judgment, reasoning, and decision-making**.

When your child sees, hears, smells, tastes, and feels; electrical impulses race to his brain, where they are interpreted as sights, sounds, smells, tastes, and objects being touched. Children's senses are very keen; **sense impressions are powerful brain nerve stimulators**. Montessori Sensorial materials focus a child's attention on **actively making distinctions** between objects based on their sensory characteristics:



Knobbed and Knobless Cylinders and the Pink Tower are graded by size and used for building.



Graphic Control Cards are used for matching the objects and moving the experience toward abstraction

Red Rods are arranged by **length** and can also be arranged many different ways.



Brown Stair prisms are graded by **thickness** and can be combined with the Pink Tower in all kinds of ways.



Sound Cylinders are matched by their **sounds**.



Smell Bottles are matched by their **smells**.



Color Tablets are graded by **shades of color**.



Tactile Tablets are matched by their **feel**.



Baric Tablets are matched by their **weight**.



Thermic Bottles are matched by **temperature**.



The **Fabric Box** allows matching by **touch**.



Geometric Solids introduce three dimensional **geometric shapes**.



The **Mystery Bag** develops a child's **stereognostic** sense.



Constructive Triangles allow a child to create **plane geometric figures**.



Tasting Bottles are matched by **taste**.



The **Binomial Cube** is a math material for older children, and a sensorial material for 3-6 year olds



The **Trinomial Cube** extends the challenge of the Binomial Cube.



The **Montessori Bells** are beautiful, but too costly for home use. Fortunately, there are good substitutes.



A **blindfold** is essential. It helps a child focus attention on senses other than the powerful sense of sight.



A mix of Practical Life and Sensorial materials on your child's shelves will give her a wonderful set of experiences that will perfectly prepare her for understanding science concepts and for the coming sensitive periods to numbers, reading, and writing. If your Montessori at home efforts were limited to Practical Life and Sensorial materials, you would be giving your child a fantastic preparation for school and life. These experiences all develop strong brain architecture in young children.

Photo: Sensorial materials at **Discovery Days & Montessori Moments**

(The primary purpose of the Sensorial materials is that), *"...The child train himself to observe; that he be led to make comparisons between objects, to form judgments, to reason, and to decide."*

Quote in italics: Maria Montessori, *Dr. Montessori's Own Handbook*

Making & Buying Sensorial Materials



Experiencing the four basic tastes

It is easy and inexpensive to make many of your sensorial materials, such as those featuring sounds, smells, tastes, weight, and fabrics. It is also natural to point out sensory experiences during your daily activities and trips. Taking time to listen, observe, taste, feel, and smell wherever you go will help your child key in on all of the sensory aspects of his environment.

With the dimensional sensorial materials - the **#1 and #3 Knobbed** and the **Knobless Cylinders**, the **Pink Tower**, the **Red Rods**, the **Brown Stair**, the **Geometric Solids**, the **Constructive Triangles**, the **Mystery Bag with geometric shapes**, and the **Binomial and Trinomial Cubes**, the only real option is to buy them. At the time of this writing, the dimensional materials listed cost about \$450 total, including shipping. That is a lot of money, but consider how you might reduce that total:

- Alternatives for the **Red Rods** are described in this section, and the **Brown Stair** is expensive. Eliminating those brings the total cost down to around \$340.
- You may be able to do without the **#1 and #3 Knobbed Cylinder blocks**. Children 4 and older usually use them less than younger children. The Knobless Cylinders have all the cylinders, just without knobs and the negative spaces of the cylinder blocks. Eliminating the two Knobbed Cylinder blocks brings the total cost to around \$275. You could also buy a set of **Mini-Knobbed Cylinders** for \$25 as an alternative.
- Assuming they are in decent condition, you will be able to sell these materials for about half what you paid for them on eBay when your child is finished with them. This reduces the total cost to around \$150 or less.

Children use these materials for at least 1-2 years. They are worth the cost for parents able to afford them. If not, don't worry, there are many other materials your child will love.

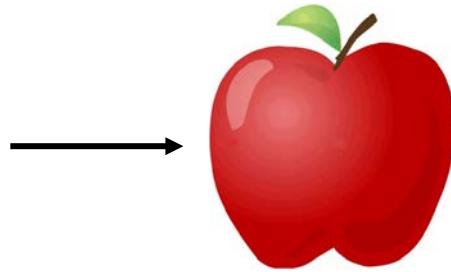
Making your own Montessori Sensorial materials

Abstract thought & learning to read

Young children first develop their minds through '**concrete**' experience with **real objects**. They can then develop their ability to think about the world **mentally**, using **abstract thought**, by working with **images** like photos, drawings, and video images. Finally, they make mental associations based on **words**. Photo below left: [Chasing Cheerios](#)



Working with apples

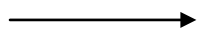


Graphic image

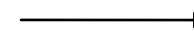
apple

Word

Concrete experience

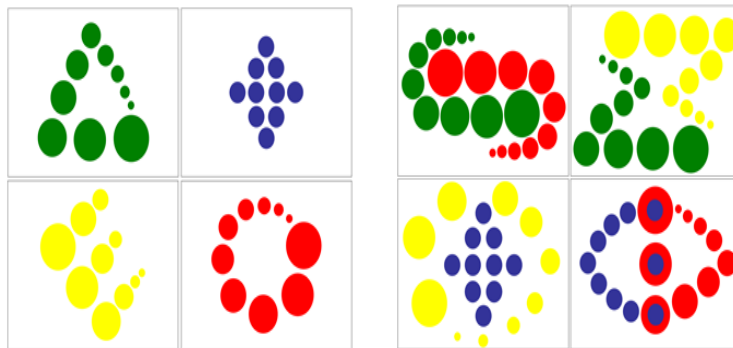


More abstract



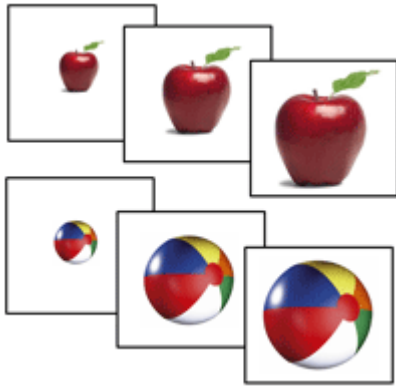
Most abstract

Sensorial materials are very helpful in the development of abstract thought and preparing a child to read. Many of the dimensional objects have graphic materials that accompany them. This allows a child to move from three dimensions to images in a natural way.



Photos L & R: [The Education of Ours](#) Control Card Images: [Montessori Print Shop](#)

The younger child at left is exploring with the Knobless Cylinders. When she is ready, she can match them to the **Control Cards** for the cylinders, shown in the middle. She can also start using **appropriate digital tablet apps**, and then use all three modes. The older child at right is clearly moving into abstraction. She has drawn a graphic depiction of the tower she built using the blue cylinders. This child is probably into learning to read, write, and do math. She can be working with quality tablet apps regularly now if they are available and you agree with their use.



At left are more graphic materials to help prepare a child for reading. You can download a free set of **small - medium - large sorting cards** at [Montessori Print Shop](#). Find more **size grading printables** on pages 447-450. Grading these cards from **left to right**, your child will start training her eyes in the **left to right tracking** habit required for reading.

Image: [Montessori Print Shop](#)

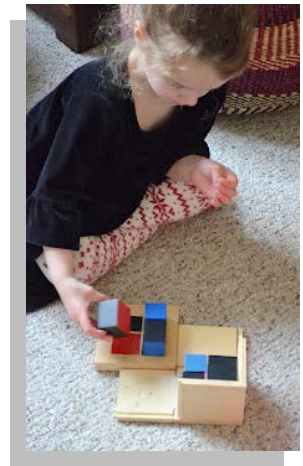
Using Sensorial materials

The same core principles apply to all Montessori activities:

- Have fun!
- Follow your child's interests and choices;
- Try different activities, looking for those that attract and hold your child's attention and that he wants to repeat;
- Demonstrate activities before you turn them over to your child;
- Encourage the Activity Cycle: rug or mat, use material, reorganize it and replace it on the shelf, put the rug or mat away;
- Allow for uninterrupted repetition of favorite activities;
- Look for ways to extend activities with new experiences to get the most from each.



James Dyck



Middle photos: [Chasing Cheerios](#)

[The Education of Ours](#)

In Dr. Montessori's words

" The training and sharpening of the senses has the obvious advantage of enlarging the field of perception and of offering an ever more solid foundation for intellectual growth. The intellect builds up its store of practical ideas through contact with, and explorations of, its environment. Without such concepts the intellect would lack precision and inspiration in its abstract operations. "

" A child of two-and-a-half or three has, during the previous years.....accumulated and absorbed a host of impressions....Accidental and essential impressions are all mixed together, creating a confused but significant wealth in his subconscious mind.... it becomes imperative to establish some order and clarity within the mind and to distinguish what is essential from what is accidental. A child at this time is ready to rediscover his environment and the inner wealth of impressions which he has of it. "

Maria Montessori, *The Discovery of the Child*

Montessori saw that children develop their brains by using their bodies. She saw that development proceeds in roughly three year cycles. From birth to about 2 1/2 or 3, children accumulate a storehouse of impressions of their environment. From about 2 1/2 - 6, they enter a period in which they create structure and order in their minds and make sense of all the impressions they stored in their brains from birth to three.

Modern neuroscience has confirmed that a great deal of '**rewiring**' occurs in the brain from 3-6 years of age (page 27). This is especially prominent in areas associated with **organizing, planning, and executive functions** such as **focusing attention, making decisions, and developing self-control**. All of these activities are encouraged and exercised when a child uses Montessori materials.

*" Our didactic material renders **auto-education** possible, permits a methodical education of the senses. Not upon the ability of the teacher does such education rest, but upon the didactic system. This presents objects which, first, **attract the spontaneous attention** of the child, and, second, contain a **rational gradation of stimuli**.... With my methods, the teacher **teaches little and observes much**. In fact, when the child **educates himself**, and when the control and correction of errors is yielded to the didactic material, there remains for the teacher nothing but to observe. "*

Maria Montessori, *The Montessori Method*

The child is to be **free to choose** materials that interest him - called auto-education - and to **repeat** the use of any material as long as he likes, uninterrupted, until he has derived what he needs from it. **The teacher, or parent, does not develop a lesson plan or other program for the child to follow. That is nature's job.** A young child has an internal program leading her individual development much more effectively than we can with a schedule. We create an **environment** containing learning materials and the child spontaneously does the rest, with a little help now and then.

When we see a child choosing, talking, sorting, moving objects, and engaging in other forms of **outward** activity, the important development is happening **inside the child's brain**. With the right material, a teacher or parent can sit back and quietly observe nature at work. **We allow children to work independently, make mistakes and discoveries, to fail and succeed. We step back more than step in.** It's a little different than the type of education most of us experienced. Montessori trusted that all life is intelligently guided.

" When they want to exercise their senses, such as that of touch.....everyone condemns them: "Do not touch!".....they are mercilessly driven back to their toys. How often one of those marvelous moments when their attention is fixed, and that process of organization which is to develop them begins in their souls, is roughly interrupted; moments when the spontaneous efforts of the young child are groping blindly in its surroundings after sustenance for its intelligence."

Maria Montessori, Spontaneous Activity In Education

Montessori was a tireless crusader for the rights of young children to freely develop as nature intends; and to build from their own efforts independent, capable, intelligent, socially well-adjusted people. She designed the Prepared Environment to help and sustain their natural development. [Blog post: Don't Touch!](#)

" Now when a child once shows deep interest in any one of the objects we present to him.... he goes on to show a like interest in all the objects, and begins to develop activities as by a natural phenomenon. When once the initiation has taken place, it leads to progression which goes on steadily, and develops of its own accord."

Maria Montessori, Spontaneous Activity In Education

Once a child experiences a focusing of attention, and discovers that this satisfies her internal impulse to develop her brain, she wants to continue. We respond by providing more materials and activities, and encouraging that spark. That is how it is done in Montessori schools; and you can do the same thing at home.



Three of the cool sensory bins at [Snails and Puppy Dog Tails](#). **Left:** a beach theme bin with sand, shells, toy sea animals, and sand mold forms. **Middle:** a December holiday bin with cotton balls, jingle bells, snowflakes, and decorated boxes. **Right:** a fall theme bin with fall colored gems, corn, silk leaves, gourds, pine cones, and a little basket.

Sensorial Bins encourage creative exploration. To your base material, add **kitchen tools** like measuring spoons and cups, a sifter, tongs, etc, for small muscle exercise. You could add **orange or lemon peels** and **spices** to add **smells**. **Jingle bells** and small objects in tiny containers for shaking adds **sounds**. Use all kinds of **textured objects**: spiny rubber balls, cotton balls, beans, paper from the shredder, soft pom poms, squeezable rubber objects, marbles, peanut shells, anything with a distinct texture, smell, or sound.

Sensory Bin Extensions

Parking lot numerals

Hide toy cars with the numerals 0-10 on them in the base material. Draw black lines on card stock to make parking spaces. Write the numerals 0-10 in the parking spaces. Start with zero at left and go right (left to right for reading). Your child finds the cars and parks them in their spaces by matching the numerals.

How many are there?

Bury objects in the base material – 1 of one object, 2 of the next, and so on, up to however high you want to go. Give your child a plastic sifter and let him sift through and find the objects. Have him set them in groups for counting.

Find my name

Write the letters of your child's name one letter each on ping pong balls or other small, identical objects. Use a capital letter for the first letter of your child's first and last names. Now your child can find his name and lay it out. Do this with many words.

Sorting

Sorting objects according to their size, shape, color, and other common characteristics is a classic early Sensorial activity. Sorting helps a child start to focus in on the sensory qualities of objects; and is great preparation for the activities that follow. Adding tools such as tweezers, tongs, spoons, etc., to move the objects creates opportunities for fine motor skill development, as in the **Transfers** (page 124).



Sorting beads by color
using tongs



Sorting beans using a
small spoon



Children love changing a container of mixed items into sets of similar items. They experience the satisfaction of creating **order out of chaos**; and learn about classifying objects based on **common physical properties**. Learning to recognize similarities and differences helps a child create organized mental patterns of **thought and information retrieval**.

Sorting develops **visual discrimination**. **Counting** and **new words** are easily introduced. Objects can be labeled. Math concepts of **sets and groups** are easily visualized when sorting. Sorting activities prepare young children for understanding science concepts like grouping objects or living things according to **properties** such as magnetism, flotation, type of substance, and biological categories. Adding tweezers, tongs, and spoons provides small muscle exercise, which helps a child develop a proper writing grasp (p. 124).

You probably have objects to use for sorting at home already. More can be inexpensively obtained anywhere. The clear cups shown are **condiment cups** that cost less than a dollar. Using identical containers reduces distractions and helps highlight the differences between the objects. Use nice glass, wood, and ceramic bowls if possible. This adds interest to the activity and makes it special, which draws in a young child's attention. A tray keeps everything organized.

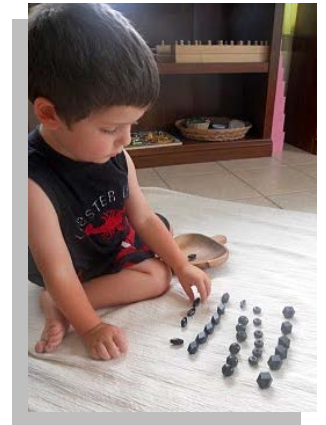
Bottom Photo: Sorting buttons at [*The Education of Ours*](#)



Left: sorting paint chips in different shades by color onto larger sheets with color name labels at *Peaceful Parenting*. **Middle:** sorting rubber bands by color. **Right:** sorting coins. You could also use metal washers in various sizes, including some pretty close in size. This would add more challenge, as would picking them up with a thin rod.



A shapes sorting material from *Counting Coconuts*. The beads are similar in size and all black. This isolates shape as the variable to sort them into groups. Simple touches like this, and the attractive dish, help a child focus in on the essential elements.



At left: a **Land, Water, and Air** sorting activity at *The Learning Ark*. Photos of animals and objects printed from the internet are sorted based on where they are found. Similar ideas:

Transportation: photos of buses, cars, bicycles, motorcycles, airplanes, boats, etc.

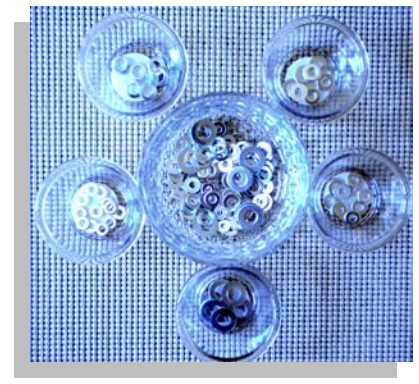
Clothing: hats, pants, shorts, coats, gloves, dresses, etc.

Fruits: see pages 451-453 for a printable for this activity.

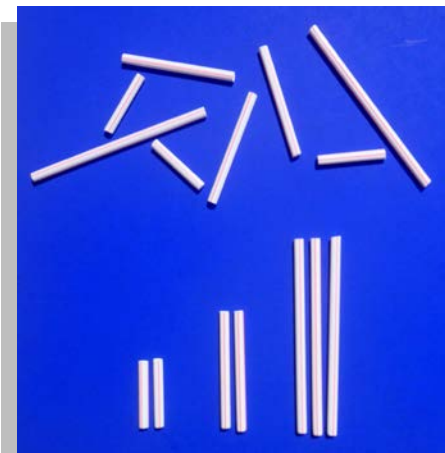
Living things: plants, insects, mammals, birds, fish, etc.

Video: [Sorting pom poms with tweezers](#)

Sorting photos and graphic images takes sorting one step into **abstraction**. When your child begins doing reading and writing activities, he can start grouping words into categories. Eventually, your child will be able to work with images, emotions, ideas, concepts, and words mentally, the final stage of the passage into abstract thought.



Left: sorting identically sized paperclips by color. **Middle:** sorting pasta. **Right:** sorting metal washers - a greater challenge, especially if they are close in size.



Length Sorting with Straws

When your child has developed some sorting skills, try this. Cut straws 1.5", 3", and 5" long. Let your child make a random group. Your child can now group the straws by length. Try other lengths. For more challenge, make a few each of straws that are 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 inches long. This is a good lead-in to the **Red Rods**, page 199.

Encourage Careful Counting

Careful counting is easy to incorporate into sorting activities. It helps to **limit the number of similar objects to no more than 10**, as counting from 0-10 is the first step. When your child has made a group of objects, encourage him to carefully count them. Show your child how to **say each number right at the moment that her finger touches each object**. This careful counting will help your child understand **1:1 correspondence** and make it much easier when he begins the math activities.



When your child is getting familiar with counting, prepare a sorting activity that has objects in 5 colors, as in the photo. Include **one object of one color, two of the next color, three of the next, four of the next, and five of the last color**. After your child sorts them, she can count each group and see that each group gets larger by one.



Top: **SimpleSort** (iPad) is a nice sorting app. The difficulty is easily varied depending on how many buckets are chosen.



Middle: **Sort it Out** (iPad) is another good sorting app. It has a nice clean interface and allows a child to sort many different categories of objects.



Bottom: The **Smart Fish: Magic Matrix** (iPad) app provides greater challenge. Objects and shapes are organized in a matrix based on more than one quality. This is an excellent app.

Colors!



Even though today's children are exposed to color and the names of colors all the time, specific color activities still have their place. A few are big favorites in most Montessori preschools. I bet they will be popular at your house, too. There are also great tablet apps for reinforcing your child's hands-on color activities.

You can easily make home materials to teach your child colors and provide the Montessori experiences of **matching**, **making groups**, and **grading** that build new brain nerve networks. Review the **Three Step Lesson** (p. 85). When needed, use this method to teach your child the names of colors. **Point out colors at any time** to get the ball rolling. He may know them all by the time you start.



The paint department at your local home improvement store is your best friend when making home color materials. Buy some paint from them sometime, too.

The Three Montessori Color Boxes explained

Primary Colors

Video: [Montessori Color Box #1 - the Primary Colors](#)



To teach the names of the **Primary Colors**, you can use paint sample cards or download the **free Color Matching Cards** from [Montessori Print Shop](#) (left). Print these onto white card stock. First your child can **match** the colors. Next, do **Three Step Lessons** (p. 85) until your child knows their names well. You can also simply point out the colors and names until your child knows them well.

Primary & Secondary Colors + more

Video: [Montessori Color Box #2](#)



Get 2 each of paint samples in the Primary colors: **red, yellow, blue**; and the Secondary colors: **orange, green, purple**; and also get **pink, brown, white, grey, and black**. Get the best example of each color. Cut off words so they are all the same size. Print out the **Color Name Cards** on page 454.

Activities

Matching & Three Step Lessons. First, your child **matches** the colors (photo). Use **Three Step Lessons** (p. 85), three colors at a time, to teach your child all the color names.



Clothespin Matching. Cut 2 circles or squares of each color. Mount one set along the outside edge of a bowl or box. Mount the other set to clothespins. Now your child can match the colors and attach the clothespins. The container holds the clothespins on the shelf. Using clothespins adds a nice fine motor element to the activity.

Photo: [Chasing Cheerios](#)

[Color matching with bows](#)



The free [Colors iPad app](#) is a good example of the many colors apps available.

Videos: [The Colors Train](#)

[The Rainbow Colors Song](#)



Have a Color Hunt. Give your child a color and he can search your home for objects with that color and bring them to a rug for grouping by color.

Photo: [Peaceful Parenting](#)

[Color sorting post at The Education of Ours](#)

[Pipe cleaner poking and color matching](#)

Play 'I Spy'. Stand in a room of your house or your garage. Say, "*I spy with my little eye something orange.*" Let your child find it. Do different colors, then reverse roles and let your child send you out to find the objects.

Color Mixing



This activity is a big hit with most kids. Spills can get messy; use a cookie sheet or large tray with a lip around it with a younger child. Your child will need to be able to use an eyedropper - let her practice with **Transfer** activities (p.124) first as needed.

In this activity, red, yellow, and blue food coloring are mixed to create the **secondary colors**:

Red + Yellow = Orange

Blue + Red = Purple

Blue + Yellow = Green



The top two photos from [The Education of Ours](#) show one way to do it. Food coloring and water are used to make the primary colors in eyedropper bottles. Your child puts a couple drops of yellow in one of the depressions in the paint mixing tray; a couple drops of blue in another; and a couple drops of red in a third depression. The brush is used to mix them as above in the remaining 3 depressions. Be sure your child **washes and dries off the brush** between putting it in each color.





The next photo (bottom, previous age) shows another way to do the activity. Use a **plastic ice cube tray**; **red, yellow, and blue food coloring**; **eyedroppers** (pharmacy); and a **pitcher**. The activity pictured also uses **name labels** for the colors.

Presentation & use

Your child gets water in the pitcher and fills each space on the tray half full.

Your child squeezes a few drops of red into the first space on the left; a few drops of yellow into the second space; and a few drops of blue into the third space (top photo).

Using an eyedropper, and washing it out between each color, your child mixes a drop or two of yellow and blue in the fourth space on the tray to make green.

A few drops each of yellow and red are mixed in the next space to make orange.

A few drops each of red and blue are mixed in the next space to make purple.

In the next space, your child mixes 2 each drops of red and yellow. Now, she can add blue a drop at a time until she makes brown. The more blue, the darker the brown.

The last space can be left empty to show white.

In the next row, mix all the colors to make black.

NOTE: This activity moves from **left to right** to help reinforce the eye tracking required for reading.



More ideas and extensions

Video: [Toddler Color Mixing](#)

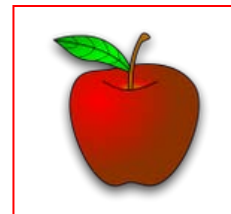
Video: [Mixing Colors in Bags](#)

Computer color mixing game (turn the sound off!)

[Color Wheel Activity with printables](#)

[More Color Mixing Printables](#)

[Mom makes her own cool color tablets](#)



The [Preschool Basics app](#) (Android) is a nice first app for 2-3 year olds. It has basic letter sounds, colors, shapes, numbers, and sight words.



Pattern Matching

When your child has colors down pretty well, extend into **patterns**. This cool, frugal activity uses scrapbook papers glued onto fruit juice lids. Your child can match the patterns and play a **memory game** (p. 228) with these. Store on a tray or in a basket. Nice!

Photo: [Laura Ingalls Wannabe](#)



Here are examples of good **iPad apps** for reinforcing your child's developing visual skills:

Top left: [Photo Touch Food](#)

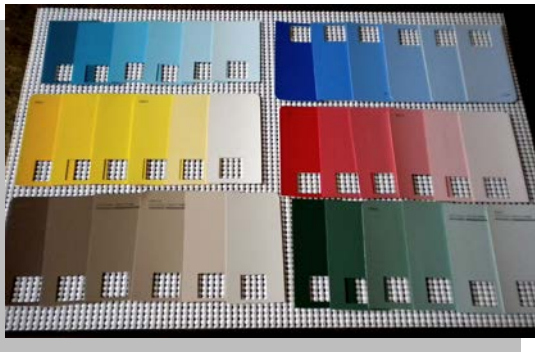
Top right: [Memory King](#) (start with fewer cards)



Bottom Left: [Kids Can Match - Animals](#)

Bottom right: [iTot Cards](#)

Color Shades



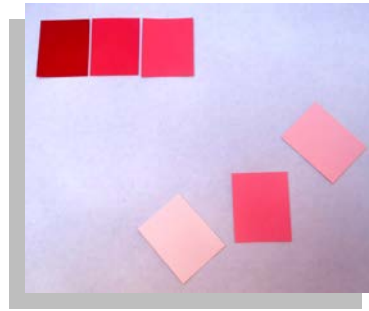
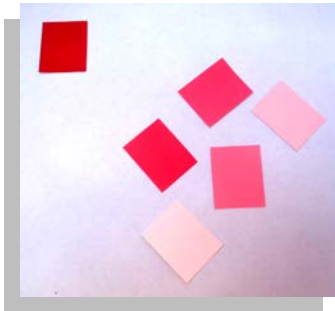
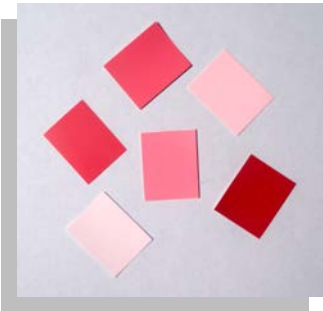
A collection of free paint sample cards with shades of colors substitutes for the expensive **Montessori Color Box #3** shown below. In this fun activity, your child **grades** the shades of colors from **darkest to lightest**. This is a great example of the Montessori Sensorial approach, which encourages children to make **comparisons**, identify **differences**, and make **decisions** about objects related to their sensory characteristics.

This activity is done similarly to the Pink Tower, Red Rods, and Brown Stair. When your child compares the colors and decides which one comes next, you will almost be able to hear those brain nerve networks opening.



Look for paint sample cards you can combine to get at least 6 - 7 shades of each color. Those shown at left have 4, which is ok for starting out. Cut out all the colors, removing any words and making them all the same size. Get a nice variety of bold colors.

Photo: [Laura Ingalls Wannabe](#)



Left: Your child sets up a work area and lays out all the shades of one color in a random group.

Middle two photos: "*Can you find the darkest one?*" Your child finds the darkest shade and sets it at the top left. "*Can you find the darkest one of the these that are left?*" Your child continues, always looking for the darkest shade in the group and placing it to the right of the last shade in the line at the top.

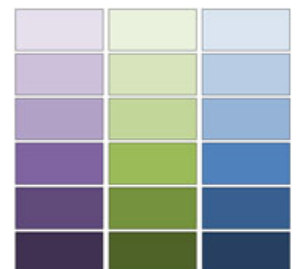
Right: When your child has the colors graded, ask where the darkest and lightest shades are. Now your child can do more colors as she wishes. The left to right arrangement reinforces **left-to-right visual tracking** for reading.

Note: If your child is unable to identify the darkest shade, try first showing your child the darkest and lightest shades and saying, "*This one is the darkest, this one is the lightest.*" If necessary to increase your child's success, try using just 3 shades that are clearly different at first. Use more shades and shades that are more similar as your child's skills improve.



L: A fun extension. Get two of each card. Glue pieces from one set onto clothespins. Your child attaches the clothespins to their matching shades. **R: Color Grading Cards** from Montessori Print Shop.

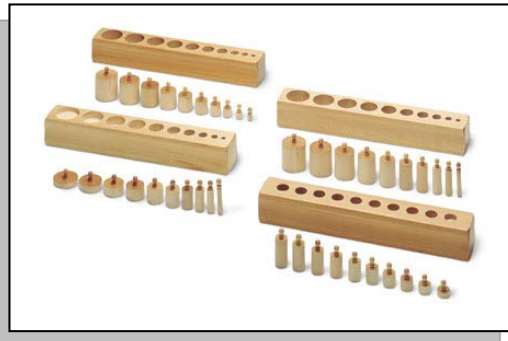
Photo: [Laura Ingalls Wannabe](#)



Dimensional Materials

These include Montessori materials and a number of other great items . They encourage a child to make **comparisons** and **decisions** using sensory information. As a child holds and looks at these objects, she starts understanding shapes and dimensions in a very concrete way. When he takes the next step and arranges the materials according to their size, thickness, and length, he begins the critical process of **ordering the mental storehouse of information** about the environment that was acquired from birth to age three.

Montessori Knobbed Cylinders



Left: Knobbed Cylinders at [Counting Coconuts](#). **Middle:** Montessori Knobbed Cylinder Blocks from [Montessori Outlet](#). **Right:** \$25 set of Mini-Knobbed Cylinder Blocks from [Alki](#).

If you have a 2-3 year old, the Knobbed Cylinders will probably see a good amount of use. Older children will also use them, but usually not for as long. They are expensive, so make your own cost vs benefit decision. The full set of the Montessori cylinders includes four blocks, each with ten cylinders with little knobs for handles and fine motor exercise.

As you can see in the **middle photo above**,

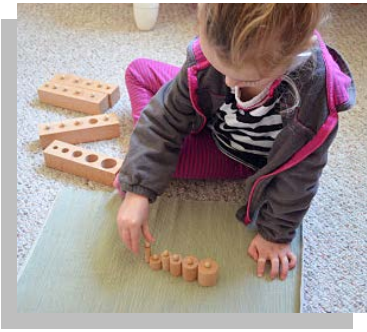
The #1 block (top left) cylinders get smaller in both diameter and height.

The #2 block (top right) cylinders are all the same height but get smaller in diameter.

The #3 block (bottom left) cylinders get smaller in diameter while getting taller.

The #4 block (bottom right) cylinders stay the same diameter and get shorter.

A set of all four Montessori blocks costs around \$125 or more, too expensive for most parents. One good option is to just get the **#1** and **#3** blocks. The blocks are sold individually at [Montessori Outlet](#); and these two will cost about \$70. Still expensive. Yet a



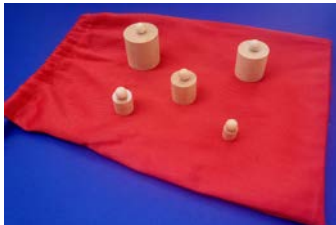
third option are the [Mini Knobbed Cylinders from Alki](#). These were \$25 + shipping for all four at the time of this writing. You can often find these on Ebay. Many parents report that their children love this material. You can sell all these blocks on eBay when your child is no longer using them.

Photo: [The Education of Ours](#)

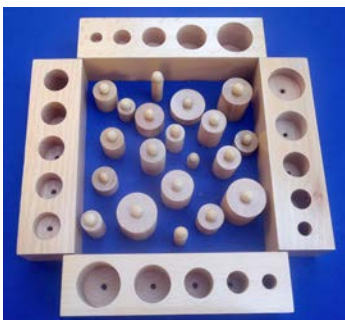
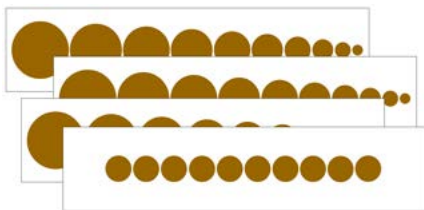
Video: [Montessori Teacher demonstrates Knobbed Cylinders](#)

With the dimensional materials, extensive demonstrations are usually not required. It's all about discovery and time for uninterrupted use of the materials. Show your child how to carry the blocks safely and how to carefully remove and replace a few cylinders. Let your child explore. As long as she does not abuse the material by handling it roughly, let her discover things on her own. This is what Montessori meant by **auto-education**.

When the time seems right, ask your child to point out the *shortest, tallest widest, and thinnest or narrowest* cylinders. If she has trouble relating to those terms, point out which cylinders fit the terms and talk about them. Other terms you can introduce: *full, empty, cylinder, knob, block, largest, smallest, wide, narrow, tall, short*.



Use a **blindfold** or **Mystery Bag** to let your child experience **identifying the cylinders by touch alone**. Start with 2 cylinders very different in size. Later, add another in between and ask your child to find the largest, smallest, and in between sizes by feeling them. This educates a child's **stereognostic** sense.

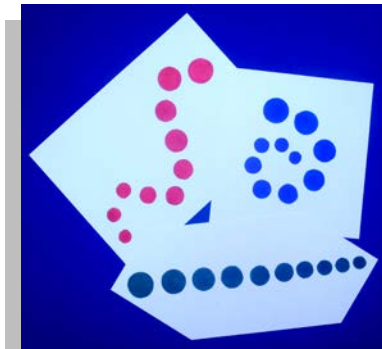


When your child is ready, the [Cylinder Blocks Sequence Cards](#) from [Montessori Print Shop](#) are \$.99 to download for printing onto legal size paper. Glue to poster board and cut them out. You could also trace the cylinders and color in the circles (harder). Let your child explore matching the cylinders to the control images. **Bottom photo:** The four [Mini-Knobbed Cylinder Blocks](#) set in a square, with all the cylinders placed in the middle. Getting them all back in place correctly can be a challenge.

Socket Cylinders & Extensions

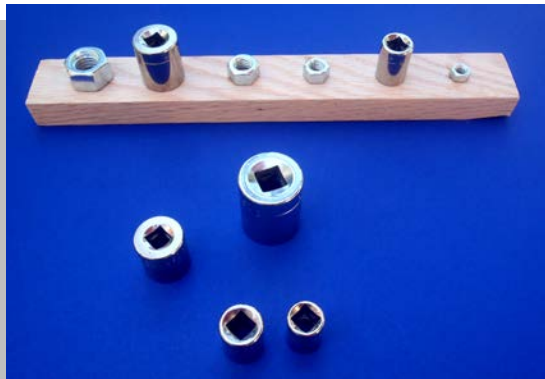
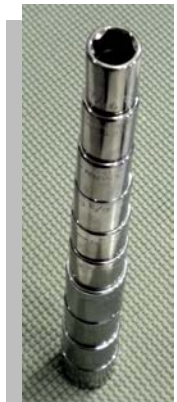


Most households have a socket set. If not, here's your chance to get one that can double as a learning material. These can be graded in a line left to right from largest to smallest, or used to make many different designs, as above.

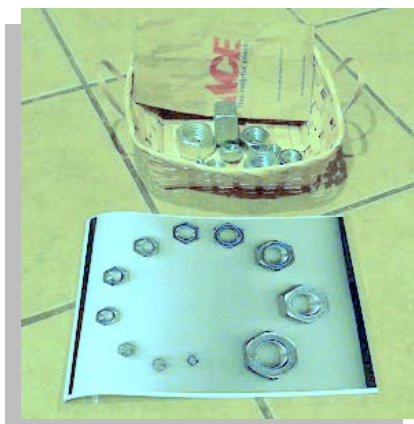


Left: Sockets were traced to make control cards for matching.

Right: Sockets can be stacked.



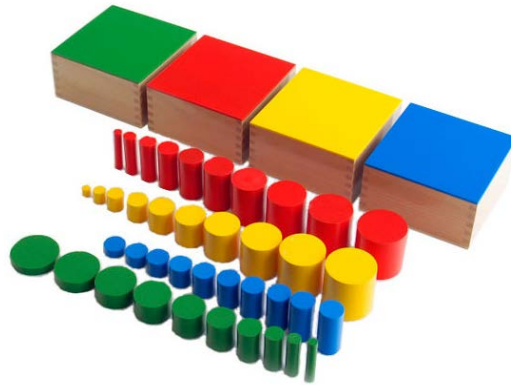
A **socket & nuts matching board** DIY project. Nuts that fit the sockets are glued largest to smallest to a board with super glue. The sockets fit snugly over their matching nuts. You could also drill holes for inserting hex bolts so your child can screw on the nuts using the sockets and socket handle. This would combine Sensorial and Practical Life.



An assortment of nuts can be laid out in various designs on the glass of a photocopier and copied. Match the nuts to those on the copies. Mount the photos on poster board for added durability. Nice!

Photo: [Post-Apocalyptic Homeschool](#)

Montessori Knobless Cylinders

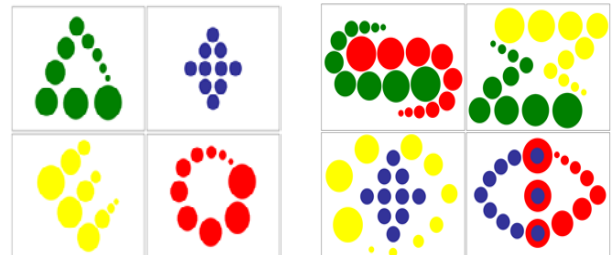


Left: *The Education of Ours* Middle: *The Knobless Cylinders* Right: *Counting Coconuts*

The **Montessori Knobless Cylinders** come in four sets, in different colors, each in a beautiful wooden box. At around \$60 for the complete set, they are a wonderful investment in your child's brain development.

Videos: [A 20 month old & the Knobless Cylinders](#) [A Teacher demonstrates](#)

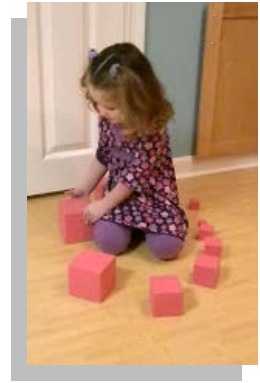
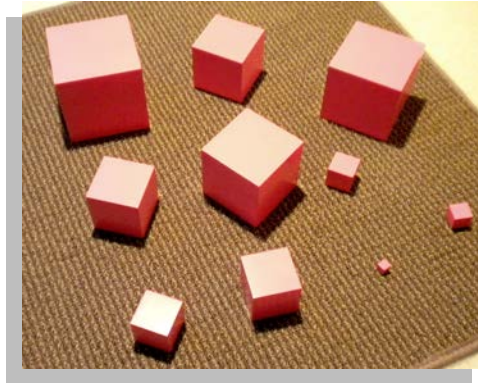
Free exploration and **repetition** are the goals. If your child does simple stacking and lining up and then starts losing interest, try **getting out the cylinders and building yourself**. Build a variation like one of those in the two left photos from *Our Montessori Story*:



Right above: [Control Cards from Montessori Print Shop](#). Below: extensions using graphic images at *The Work Plan*. Two middle photos: cutting and pasting control card images to make custom control sheet designs. Right photo: Matching cylinders to a custom control sheet.



Montessori Pink Tower



Left: [The Pink Tower](#) Second photo: [Mz Educator](#) Right: [Discovery Days & Montessori Moments](#)

The **Pink Tower** is probably the most recognized Montessori material. Ten cubes, the largest 10 cm on each side. The other nine get smaller by 1 cm each, down to the tenth cube, which is 1 cm on each side. If you get the Tower, keep an eye on that smallest cube! The use a child gets from the Tower depends largely on age. The Pink Tower is most appropriate for 2-3 year olds. Older children can make a variety of designs, and combine it with the Brown Stair (p. 201) in a number of interesting extensions, as well as using [Pink Tower Control Cards](#), to progress into abstraction. At around \$40 it is expensive, but a very worthwhile investment if your child is 2-3 years old.

Videos: [A Teacher demonstrates](#) [A child builds the Pink Tower](#)

Presentation and use

Have your child set out a rug. Show him how to bring the cubes one at a time very carefully to the rug and lay them in a random group (third photo from the left above). Stack a couple of cubes very carefully so your child sees how to handle them with care. Let your child explore. It is best of she discovers the Tower herself. Give it time. If your child gets bored after awhile, try the next presentation:

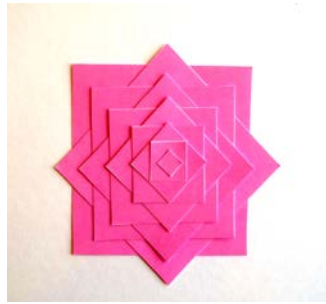
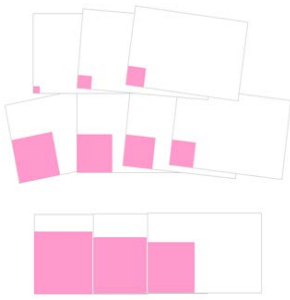
Start with a random group on the rug. Ask, "*Can you find the largest cube?*" Have your child set the largest cube aside.

Ask, "*Can you find the largest cube of those that are left?*" Have your child set it on top of the largest cube. Continue in this manner until the tower is built.



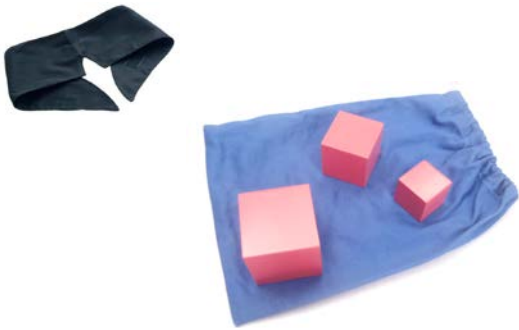
A brief demo of making a new design with the cubes may spark a new round of enthusiasm in a child who is not using the Tower as much as before.

Video: [Pink Tower classroom demonstration](#)



Left: The **Pink Tower Control Cards** from **Montessori Print Shop**.

Next three photos: designs made using cut out control cards. These materials take a child's use of the Pink Tower into abstraction using plane (flat) figures in two dimensions.



Work on training your child's **stereognostic** sense by using a **blindfold** or **Mystery Bag**. Start with 2 very different size cubes. Progress to three more closely sized cubes until your child can indentify subtle differences in size between the cubes by **feel alone**. Ask her to find the smallest or largest cube each time.

FAQ's

How about the Pink Tower and similar iPad apps, are they good?

I am not a fan of tablet apps that try to mimic dimensional materials. The purpose of these objects is for children to handle and see **three dimensional objects**. You cannot replicate that experience with a tablet app. Tablet apps become appropriate when a child is moving into **abstraction** using graphic images and photos (p. 90).

"My child likes to pretend with the Tower and other materials. He calls them names and pretends they are people or animals. Should I let him do this?"

Why not? Young children work out concepts and feelings through pretend play. It's a self-guided therapy and personality development activity. Montessori had beliefs about young children needing to predominantly experience the real world, which they certainly want and need to do. Pretend play is also now understood as a very valuable activity in early childhood. It allows children to imagine, create, try out different roles, explore emotions, and organize and validate their perceptions. The only time it is a concern is if a child lives most of the time in a fantasy world, which is rare and can indicate more serious developmental issues. Most children naturally mix real world and pretend play as they develop. Just be sure your child puts materials back together and back on the shelf when he is done.

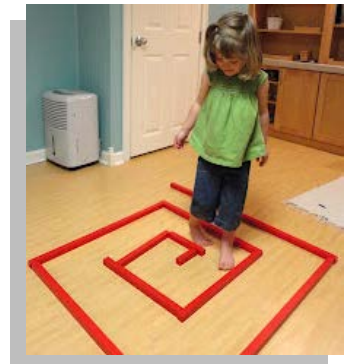
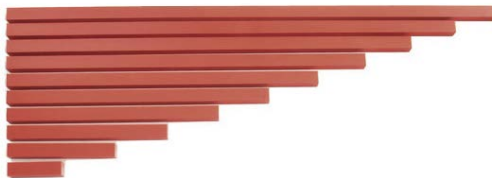
"My child throws the cubes and handles them roughly. What should I do?"

Be a parent. You don't let your child throw dishes, why allow him to abuse learning materials? Many kids are pretty hyper before they learn to focus their attention, which is a primary purpose of Montessori activities. It can take awhile to happen, though. As in all areas of parenting, **clear, consistent boundaries and consequences** work best. If your child abuses materials, take them away until he shows he can use them carefully. Did you **demonstrate** how to handle and use the materials carefully? A little more of this may help. Montessori materials are displayed and used as special items worthy of respect. Unless you promote this idea, they will never be as effective as they can be in helping your child focus attention and develop better brain architecture. Also, it may help to limit materials to just a few for awhile to avoid sensory overload.

"My five year old hardly looks at her Pink Tower. What gives?"

Ages 2-3 are prime time for the Tower. An older child still may love making extension designs combining the Tower and the Brown Stair (p. 201). With older children, you have to try things and see what **attracts and holds their attention**. It's a moving target; but the activities your child really gets into will make it all worthwhile. Go with the flow and keep trying things.

Montessori Red Rods



Left: Ready to grade the Rods, *Montessori MOMents*. Middle: The **Red Rods** in the classic size-graded layout. Right: Exploring designs, *Discovery Days & Montessori Moments*.

The ten **Montessori Red Rods** start at 10 cm long and add 10 cm with each rod, up to the longest rod which is 1 meter long (10,20,30,40, etc., up to 100 cm or 1 meter). Another expensive material at about \$40, but most 3-4 year olds will get a lot of use from a set. Be sure you have room on a shelf for these - they are long!

Presentation and Use

As with the Pink Tower, your child sets out a rug, brings the rods carefully to it one by one, laying them in a random group.

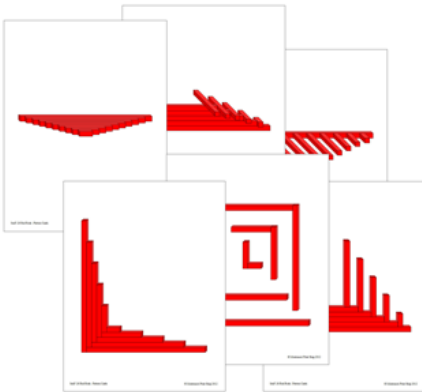
"Can you find the shortest rod?" Your child looks and compares (it helps to stand up), chooses one, and places it at the bottom left of the rug. If she picks incorrectly, that's ok, see if she notices it when she chooses the next one.

"Can you find the shortest rod of those that are left in the group?" Your child does this and sets that one above the first, with their left ends even. this is where she will see if she chose the wrong rod first - the material is self-correcting. Repeat until all ten rods are graded from shortest to longest, as in the middle photo.

Videos: [A Red Rods demonstration](#) [Walking the Maze](#)

What if my child cannot differentiate to find the shortest rod each time?

No worries, he is just not ready to see the different lengths closely enough to decide. They probably all look like a confused jumble. Try eliminating every other rod. Take the shortest and longest rods and do a *"This is short, this is long"* lesson. Play games comparing them to other objects. Provide activities such as sorting, blocks, legos, and puzzles that your child can work with successfully. Return to the Red Rods when they are in her **Learning Sweet Spot** (p. 72).



Left: The **Red Rods Patterns Cards** from **Montessori Print Shop** will help your child make great extension layouts.

Right: The **Montessori Board** app has ordering activities with red rods and number rods, and other math activities.



If the Red Rods are a bit expensive or long for you, make your own **Mini-Red Rods**. Start with three straight, 5/8" X 36" long, poplar crafts wood rods. Poplar cuts and sands very easily. Saw carefully to make 10 rods. The first will be 1" long, the next 2", the next 3", the next 4", etc., up to the last rod at 10" long. Sand them smooth without taking too much wood off, and paint them primary red. Now your child will have a more manageable set of rods. You could also use straight 3/4" wooden doweling.

Montessori Brown Stair



The **Brown Stair** (also called the Broad Stair) is the final material of the 'big three' Montessori dimensional materials. The others are the Pink Tower and the Red Rods. At around \$70, it is the most expensive, leading many parents to pass on getting a set for home use. All the prisms are 20 cm long. The thinnest is 1 cm wide, the next 2 cm wide, the next 3 cm wide, etc., all the way up to the tenth prism which is 10cm wide. As you might expect, the larger rectangular prisms can get a bit heavy. The stair is often the last material introduced, as it takes good visual discrimination to see the differences between the rectangular prisms.

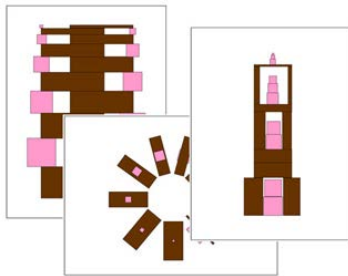
Presentation and Use



As with the Pink Tower and Red Rods, have your child bring the prisms one at a time to a floor rug and make a random group. Ask, *"Can you find the most narrow (or thinnest) prism?"* Let your child pick and set that one aside. *"Can you find the most narrow (or thinnest) prism of those that are left?"* Your child picks and sets that one to the right of the first, with both ends even. Repeat until the stair is made as in the photo.

Photo: [The Education of Ours](#)

Video: [A Brown Stair classroom demonstration](#)



If you do get both the Pink Tower and Brown Stair, building new creations with them is a whole lot of fun. **Montessori Print Shop's** three sets of **Pink Tower and Broad Stair Pattern Cards** (left) are a great place to start. The extensions shown in the next photos are from **Our Montessori Story**. These building projects can really spice up your home early learning. A wood or tile floor works a bit better than a rug for these projects.

Montessori Binomial & Trinomial Cubes



The **Binomial Cube** (top) and the **Trinomial Cube** (bottom) are big hits with most young children. The **Binomial Cube** is introduced when a 3-4 yr. old has had some experience with dimensional materials. When your child masters the Binomial Cube, consider getting the more challenging **Trinomial Cube**.

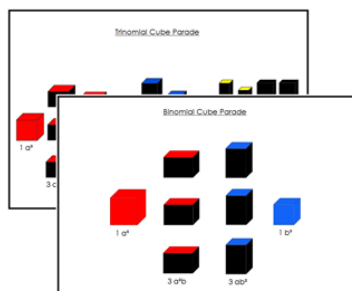
These materials show the **Binomial Theorem** and the **Trinomial Theorem** in three dimensions. Understanding the math is not necessary (whew!); for now they are just cool Sensorial materials. They come in great wooden boxes with two sides that fold down. Inside are blocks painted in different colors that fit together one way. If your child forgets, there is a handy key painted on the lids of both boxes.

Presentation and use

Video: [A Binomial Cube Demonstration](#)

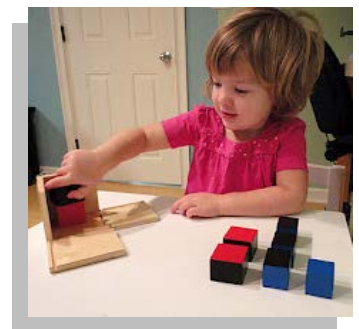
Video: [A child rebuilds the Trinomial Cube after grouping the blocks](#)

I recommend doing a presentation similar to the first video, including grouping similar blocks. Use the lid as a guide and remember: **the larger blocks go on the bottom; and the colors on the blocks cover the colors in the box.** After this, let your child explore. You will know soon enough if the Binomial Cube is in his **Learning Sweet Spot** (p. 72).



When he is ready, the **Binomial and Trinomial Control Cards** from Montessori Print Shop (left) will help your child make the transition to abstract thought.

Right: *Discovery Days & Montessori Moments*



Montessori Classroom **Binomial Cube** and
Trinomial Cube presentations

Note: for a big challenge, add a **blindfold**.

Bolts, Washers, & Nuts

We used socket cylinders and nuts on page 195. There are more things you can do with these items from the hardware store. **Hex bolts**, **washers**, and **nuts** are great Sensorial dimensional materials for size grading, matching, and making designs. Store these materials in special containers to look inviting on your child's shelves.



3/4 X 3
 5/8 X 2 1/2
 1/2 X 2 1/4
 7/16 X 2
 3/8 X 1 3/4
 5/16 X 1 1/2
 1/4 X 1 1/4
 1/4 X 1
 1/4 X 3/4
 1/4 X 1/2

A set of Hex Bolts in the sizes shown makes a nice group of ten objects for size grading as with the Red Rods and other dimensional materials. Standing them on end and lining them up close together is a fine motor exercise. The bolts can be carefully counted for a math experience.



Get a set of washers and nuts in sizes to fit the hex bolts above. Let your child explore. They can be lined up from largest to smallest, stacked, and used to make designs.



Trace washers and nuts and color in the tracings to make **custom control cards**, as with the cylinder materials, to assist your child in progressing to abstraction.



You can also line up these objects on a **photocopier**, copy the designs, then have your child match the real objects to the copy images. See page 195.

These objects can be used with a **blindfold** or **mystery bag** to educate your child's **stereognostic** sense. Start with two objects very different in size and progress to 3-4 objects closer in size to each other. Let your child identify the largest and smallest by feel alone.



Of course, your child can always put on the washers and screw on the nuts for fine motor work.

More Great Dimensional Materials

There are many excellent materials for children who are getting started using dimensional materials. Here are just a few:



The [Melissa & Doug Geometric Stacker](#). This company probably has the largest collection of excellent materials to supplement your child's Montessori materials.



Guidecraft's [Nesting Sort and Stack Cylinders](#). This company also has many great materials of good quality.



[Melissa & Doug Wooden Animal Nesting Blocks](#). These can be nested and stacked. They are more durable than the cardboard versions.



[Inchimals](#) are like a small set of Red Rods, but with images painted on them. This would be a no-no in Montessori, but children seem to love these all the same.

Video: [Inchimals!](#)



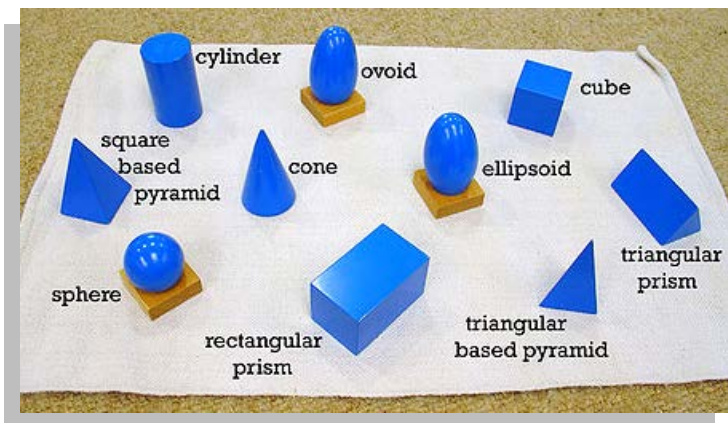
[Legos](#) are classic dimensional materials.

Geometric Solids



Left: A basket of solids at [Counting Coconuts](#). Middle: The [Geometric Solids](#) and their bases. Right: Experimenting with curved and straight sided shapes at [Chasing Cheerios](#).

The [Geometric Solids](#) are wonderful materials that teach simply by being handled. They provide concrete experience with the properties of the basic geometric shapes and introduce new language. A set for home use is highly recommended.



Print out the **Geometric Solids Name Cards** on page 455. Present the name card at the same time you present each solid. The language is an important part of using this material.

Photo: [Montessori Album](#)

Geometric Solids Presentations

Presentation and Use

Video: [A Montessori teacher discusses presenting the Geometric Solids](#)

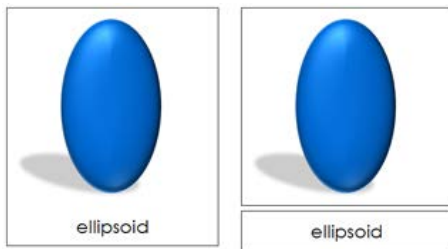
Video: [Presenting the Geometric Solids](#)

A typical first presentation is to **handle**, **talk about**, and **name** the **Cube**, **Sphere**, and **Cylinder**. Talk about their straight and curved edges, the points where edges meet, what objects they look like, how curved sided figures roll but straight sided do not, their relative weights - any points of interest you can think of.

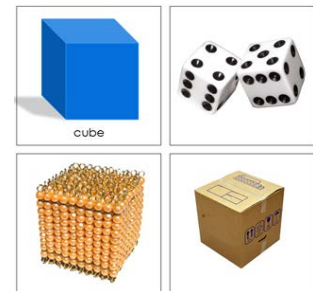
Present your child with the **name** for each of the solids at the same time you are talking about each one. If you have a set with the bases, you can set the solids down on them with the name card in front of each solid. **Geometric Solids Name Cards** - page 455.

Do a **Three Step Lesson** (p. 85) with the **Cube**, **Sphere**, and **Cylinder**.

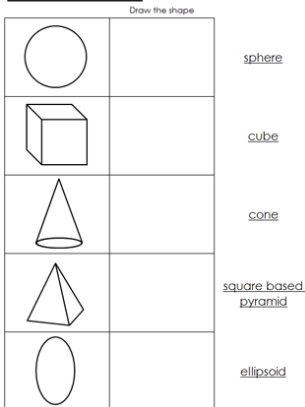
Next, or during a future session, introduce the **Rectangular Prism**, the **Triangular Prism**, and the **Ovoid** or **Ellipsoid**. Don't worry about using complicated sounding terms with your preschooler. They absorb this language as easily as everything else. Most children actually like the challenge of mastering 'big words'. Next, you can introduce the rest of the solids the same way.



L: The **Geometric Solid Three Part Cards** and, R: **Geometric Solid Sorting Cards** from Montessori Print Shop are excellent companion materials when presenting the solids.



Geometric Solids



See pages 96-97 for information on using the **Three Part Cards** pictured above left. These are great teaching tools used in most Montessori schools. The **Sorting Cards**, above right, allow your child to relate the solid shapes to real world objects. Older children can try drawing the solids using the **Geometric Solids Worksheets** from Montessori Print Shop, shown at left.

You can download a set of free picture cards for your child to match with the solids at **Our Montessori Story**. This is a fun activity.

[Geometric Solids at Living Montessori Now](#)

[Very cool interactive geo solids tool](#)



An attractive material for a first presentation. Note that this material uses a **blindfold**. You could also use a **mystery bag**. Identifying the solids by touch alone educates a child's **stereognostic** sense. Read about this activity in [a very nice post from Elaine Ng Friis](#).

Photo: [Elaine Ng Friis](#)



The **Geometric Solids from Learning Resources** at left cost only around \$15, and are an alternative to the more expensive Montessori material. This set lacks the ovoid, ellipsoid, and cylinder, but includes a few polygon prisms and two half spheres. The pieces are smaller; but this can be a good option for parents on a tight budget.

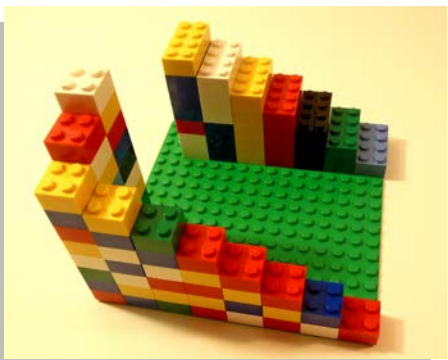


I highly recommend that every parent get their preschooler the **Mystery Bags with Geometric Shapes**. The little geometric shapes are great and the bags can be used for all kinds of stereognostic activities. This material also costs around \$15, and is a great bargain for what it will teach your child. See page 208.

Legos



Legos are great dimensional materials. The small sets that make **one object**, like the set at top left, are excellent, inexpensive projects. Using the printed guide is a wonderful **visual - spatial** exercise. Handling the tiny pieces is classic **fine motor** work. Following the steps of a project through to completion provides experience with **sequencing** and **organization**. Each set can be stored in its original box on your child's shelf, and added to a larger Legos collection later.



As in the lower photo, Legos can be used to make all kinds of dimensional shapes and designs. The designs shown imitate the Brown Stair and Red Rods. There are infinite possibilities.

Blocks



Left: **The Plan Toys 50 Construction Set**. Second photo: **Melissa & Doug 100 Piece Wood Blocks Set**. Third Photo: **Melissa & Doug 60 Standard Unit Blocks**. Right: **Guidecraft 34-Piece Hardwood Block Set**.

Every preschooler should have a set of blocks. Blocks are wonderful, hands on Sensorial materials. They have a universal appeal to young children and generate imaginative play while teaching a child about dimensional relationships. Store in a nice container.

Mystery Bags



The Mystery Bag educates a child's **stereognostic sense**. You can make one from almost any bag, even a sock. Your child handles the items, puts them in the bag, reaches in, and identifies them by feel. At left above: the **Mystery Bag with Geometric Shapes**, which comes with two nice drawstring bags. Middle: using the bag with common items. Right: using more similar items, like coins, adds to the challenge.

Video: [A Montessori presentation with the Mystery Bag & Geometric Shapes](#)

Video: [Another Presentation with the Mystery Bag & Geometric Shapes](#)

The Mystery Bag with Geometric Shapes has two of each shape and two bags. This enables, enabling you to put one set in each bag. Take out from one bag, show it to your child, and have her find it by feel in the other bag. This can, of course, be done using two each of almost any common small items that will fit in the bag: coins, washers, pasta shapes, small toy animals and other figures, etc.

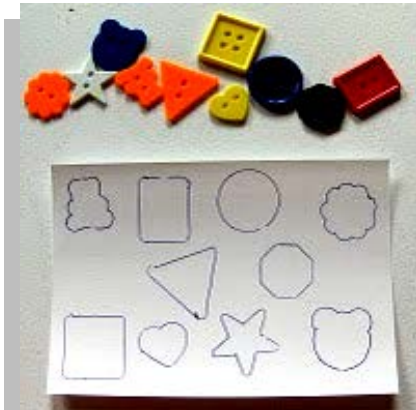
Extensions

1. Make **name cards in lower case letters** for the items or shapes and have your child match the items to their labels as they are removed from the bag. **The geometric Shape names are:** rectangular prism, sphere, cube, ovoid prism, cylinder, and triangular prism.
2. Make cards that say 'straight sided' and 'curved sided'. Place shapes in the bag and have your child feel them one at a time, identify each as straight or curved sided, and then bring each one out of the bag and put it under the proper name card.
3. Use as much **new language** as possible: *curved, straight, corners, edges, flat, round, smooth, rough, metal, plastic, wood, glass, coin names*, etc.
4. Put 10 quarters in the bag. Set a specific from 0-10 quarters out on the rug. Your child now pulls that number of coins out of the bag, counting as she goes, to match the number of quarters on the rug. Be sure to practice with zero by putting zero quarters on the rug and asking your child to match the amount on the rug. "*Zero means nothing.*" When your child has learned the numerals 0-10, **write the numerals on cards** and show the cards instead of putting quarters on the rug.
5. Put **magnetic numerals** in the bag and let your child find them by feel.
6. When your child is learning the letters and alphabet sounds in the Phonics step of the reading sequence, place a few **lower case magnetic letters** in the bag and have your child find them by feel. This will be more difficult, so let your child feel the letters outside the bag while looking at them first.
7. Set out a penny, dime, nickel, and quarter on the rug. Put one of each in the bag. Point to a coin on the rug, say its name, and have your child find and pull it out of the bag. This will be a bit harder for younger children.

Plane Figures & Geometric Shapes

Once your child has worked with three dimensional materials for awhile, she can begin working with **plane, or flat, figures and shapes**. These include the classic geometric shapes and many other flat shapes or figures. **Handling** geometric and other flat shapes while also working with **drawings, photos, and iPad apps**, facilitates the **passage into abstraction**.

Object & Line Shape Matching



Top: visual matching, small muscle, and writing practice. At a crafts store, let your child pick different colors, sizes, and shapes of **buttons**. Let your child help trace the buttons on a sheet of card stock. Help as needed if your child is just starting out. Mix the buttons up in a nice little dish and let your child match them to their shapes on the paper. Your child could also color in the shapes with colors that match the buttons.

Photo & activity: ***The Activity Mom***

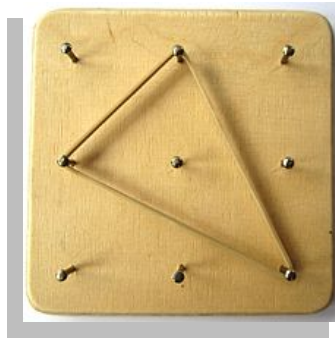
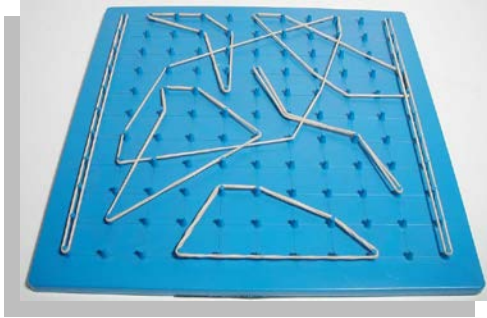


Middle: The above activity can also be done using wood shapes from a crafts store. These are excellent for tracing practice and matching. You can also put the shapes into a **Mystery Bag** (p. 208). Let your child feel the shapes with one hand and choose a shape without removing it. With the other hand, have your child point to the tracing of that shape. Now she removes the shape and compares.

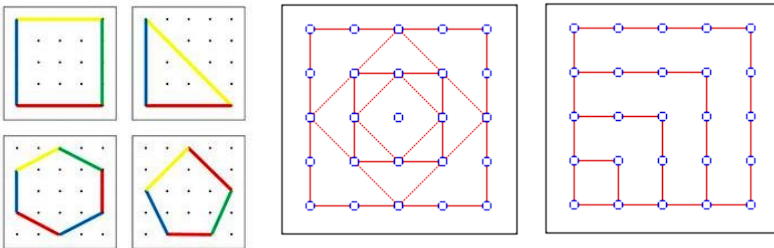


Bottom: Common objects can be traced and matched in the same way. All these variations provide experience with plane figures. Tracing objects with a variety of sizes of circular, square, and rectangular bases adds a more difficult size matching activity to the material.

Geo Boards



A **Geo Board** is a sheet of wood or plastic with screws, nails, pushpins, or other protrusions sticking out of it in a precise grid pattern. Stretch rubber bands over the pins and you can make all kinds of plane shapes and figures. **Above left:** An inexpensive plastic geo board like [this one](#) or [this one](#) will work very well. **Middle:** a small homemade geo board using a piece of wood and 9 nails. **Above right:** a homemade design from [Kindergarten & Mooneyisms](#). This is a sheet of soft wood with pushpins pressed into it.



After your child is familiar with the Geo Board, make up pattern sheets using the **printable masters** below for her to copy with rubber bands.

[Geo Board master sheets printable PDF](#)

Digital Geo Boards



Left: **Geo Board (iPad)** is a very nice free app that provides fun experiences creating shapes.

Right: **Mosaic HD (iPad)** is a pegboard type app that also makes a great digital Geo Board. Your child will have fun with this one.



Video: [Child forming shapes on a Geo Board](#)

[A virtual Geo Board that can be extended into math games](#)

[An incredible page of interactive Geo Boards and Pattern Block games](#)

Pattern Blocks



Top: The **Melissa & Doug Pattern Blocks** are an excellent material. Your child can build free form shapes and match shapes to colorful master tiles. If your child loves these, you can get a **set of 400 at Lakeshore Learning**.

An interactive computer pattern block activity.

Download free printable pattern block design sheets

Free printable pattern block master sheets

Second photo: **Chasing Cheerios**

Shapes in most Pattern Block sets:



hexagon



trapezoid



square



triangle



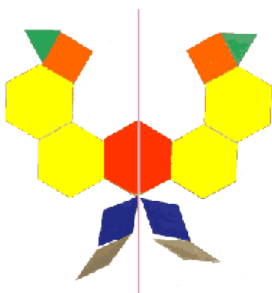
large & small rhombus

Third Photos: The **Pattern Blocks by Braining Camp** (left) and **My First Tangrams** are nice iPad apps .

Fourth photo: The **Melissa & Doug 40 Piece Wooden Beginner Pattern Blocks** is another good material for hands-on work for very young children.

A collection of interactive digital pattern block tools

Extension: teaching symmetry



Pattern blocks are perfect for teaching a child about **symmetry**. The photo is from an activity page at **Kindergarten-Lessons.com**. Create a pattern and then let your child replicate it in a mirror image. Start with very simple designs at first and gradually make them more complex.

Geometric Shapes

Working with basic **geometric shapes** is another great way to help your preschooler make the hands-on material → printed image → digital image transition. You can start by making a set of shapes your child can hold and trace. Printable materials then take the experience another step into abstraction. Interactive digital tools complete the process and prepare your child for today's digital learning.

Activities with hands-on shapes, printed images, and digital apps can be used during the same time period rather than in a strict sequence. Moving back and forth between these experiences is good brain exercise.

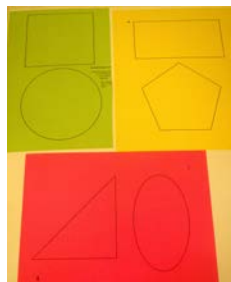
Printable sheet of geometric shape names



The **Melissa & Doug Shapes Puzzle** is a great introduction to geometric shapes for a 2-3 year old. It also offers fine motor work, language, and figure-ground matching as the shapes are matched to their spaces on the board.

Making Geometric Shapes

On pages 456-461 you will find the **Geometric Shapes Names and Shapes printouts**. Print these out onto brightly colored paper. Follow the directions below.



1. Gather the printouts, a sheet of **14 pt. illustration board**, shears, spray mounting glue, and a pack of small wooden knobs.
2. Spray the board and roll the sheets onto it from one edge to the other to prevent bubbles.
3. Rough cut the shapes.
4. Cut them exactly on their lines.
5. Glue on the knobs with a drop of contact cement.
6. Put the shapes in a tray or box for your child's shelf.

[Read the blog post](#)

Crafts foam shapes

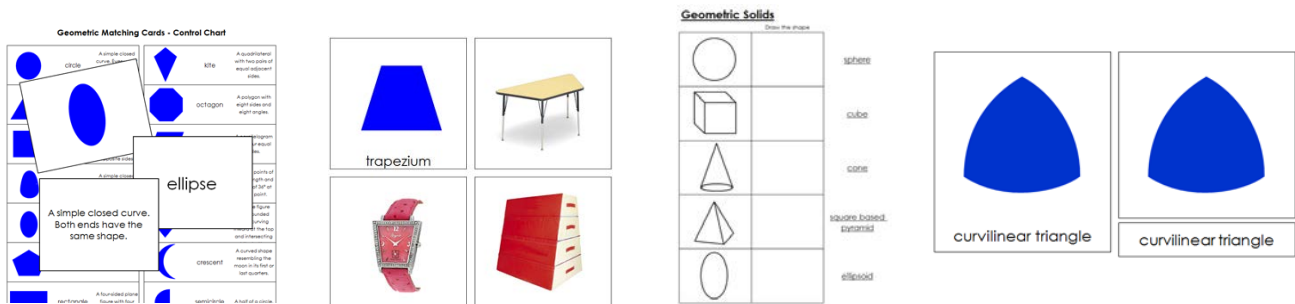
As an alternative, print the Geometric Shapes onto paper or card stock, cut them out, and use them for tracing onto colorful **crafts foam sheets** from a crafts store or Walmart. Cut them out carefully and you have your shapes.

Activities

1. Do **Three Step Lessons** (p. 85) with three shapes at a time to learn their names. Use the **Geometric Shape Name Cards** from the printout on page 455 at the same time. Teach the names along with the shapes and let your child practice matching them up.
2. Let your child **trace the shapes with a pencil**. They can be overlapped to make all kinds of designs. This is excellent practice for developing a **proper writing grasp**. If your child is using a different grasp, try more activities like the **Transfers** (p. 124) to help her develop her fine motor skills.
3. Using shapes tracings or the printouts themselves, let your child **punch out the shapes using a sharp pencil**.

Videos: [Tracing and poking shapes](#) [Basic colors & shapes](#) [Childrens: Shapes](#)
[The Shapes Train](#) [3.5 Year old names shapes](#) [The Shapes Song](#)

Shapes Printables



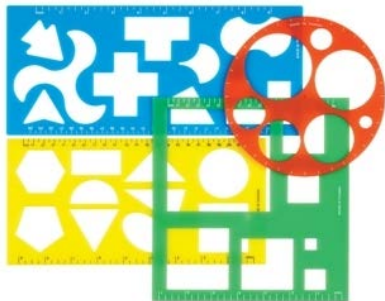
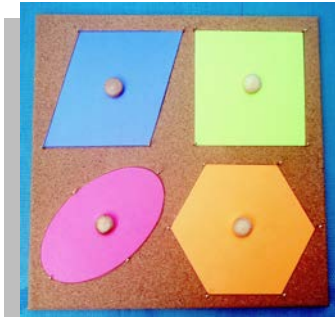
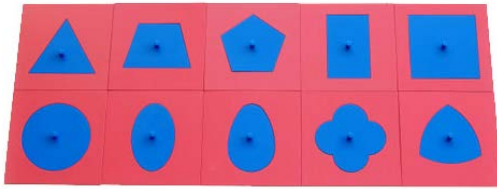
Great shapes printables from Montessori Print Shop. L to R: [Geometric Matching Cards](#), [Geometric Shape Sorting](#), [Geometric Shapes Worksheets](#), [Geometric Shapes 3-Part Cards](#)
 These materials will extend your activities and help your child transition to abstract thought.

Shapes iPad apps for 1.5 - 3 year olds



Far left: **Baby Games My First Shapes** from Grasshopper apps. This company has many great apps for kids.
 Near left: **Shapes Toddler Preschool** by Toddler Teasers.

Tracing Shapes



Top photo: The **Montessori Metal Insets** are used in Montessori schools to give children direct experiences with shapes by tracing them onto paper. They are too expensive for most parents for home use, however, so we need alternatives.

Second photo: on page 213 are instructions for making these geometric shapes from illustration board. These can be traced with two fingers and a pencil, just like the Montessori inset shapes.

Videos:

[Presenting the Insets in Montessori school](#)

[Not Just Coloring!](#)

[Tracing insets at Oak Haven Montessori](#)

Third photo: These plaques and shapes are available at most crafts stores. The oval and rectangle shapes in this photo allow tracing the shape around the inside of the inset, as with the Montessori insets.

DIY inset shapes at Living Montessori Now

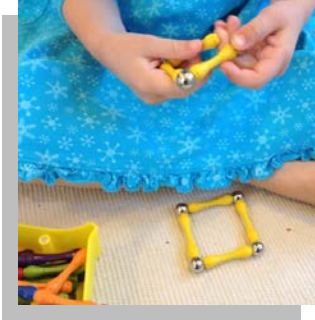
Fourth photo: **Geometric Template Sets** like these can often be found online or at crafts stores. These provide inside border tracing, as with the Montessori insets. This is easier at first than tracing the outside of a shape.

Bottom photo: Embroidery rings make great curved edge tracing shapes. Other common items like cookie cutters can also work well for tracing.

Tracing also prepares your child for writing letters and numbers.

Free form building materials

Below are more materials that encourage exploration, creativity, discovery, and fine motor skills development. **Small objects, choking hazard: Not suitable for children under 3.**



Goobi Magnets are really fun, and allow your child to experience creating all kinds of geometric and other shapes. Keep in their original box on the shelf or find another attractive container. Also check the **Skrooz Magz** sets, which have adjustable bars.

Photo: **Chasing Cheerios**



The **Melissa & Doug Construction Set in a Box** is a very nice set for free building that offers experiences with measurement, attaching threaded connectors, and making creations with wheels and propellers.



Brio sets are wonderful building sets that most children use over a period of years as their skills and imaginations grow. You can sell used Brio sets on eBay when your child outgrows this wonderful material.

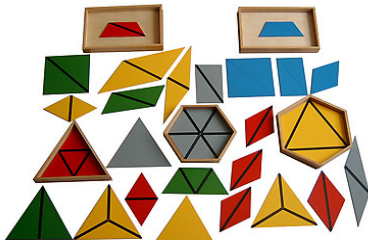


The **Tedco Blocks & Marbles** set is a nice change of pace from simple construction. It requires planning and balance to make constructions that allow the marbles to fall and travel.



GloBonz are a unique, whimsical material that allows kids to make all kinds of custom creatures and learn about skeletons at the same time. Plus, they glow in the dark!

Montessori Triangles



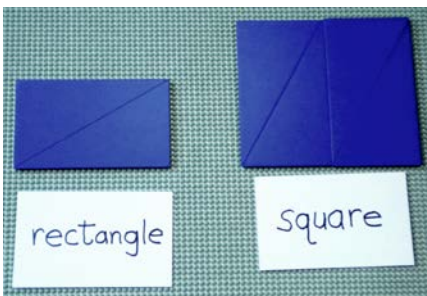
The Montessori materials at left give children hands on experience with straight sided geometric shapes. **Top:** the **Blue Constructive Triangles**, a set of 12 scalene right angle triangles. These are only around \$12. **Bottom:** The **5 Montessori Constructive Triangle Boxes**, with a variety of triangles used to make all kinds of geometric shapes. The set of five boxes runs around \$80, making them unaffordable for most parents. Luckily, there are good DIY options.

The Blue Constructive Triangles

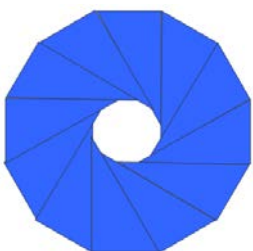
These make a nice first material. The set above, only \$12 at the time of this writing, is recommended for home use. It is also easy to make your own from **crafts foam** from a crafts store or Walmart. To make your own, download the **Blue Triangles Template**. Print this out on card stock, carefully cut out the triangles, and use them to trace **12 triangles** onto **crafts foam sheets**. Cut them out and you have your set.

Videos: [Presenting the Blue Constructive Triangles](#) [Sliding the triangles](#)

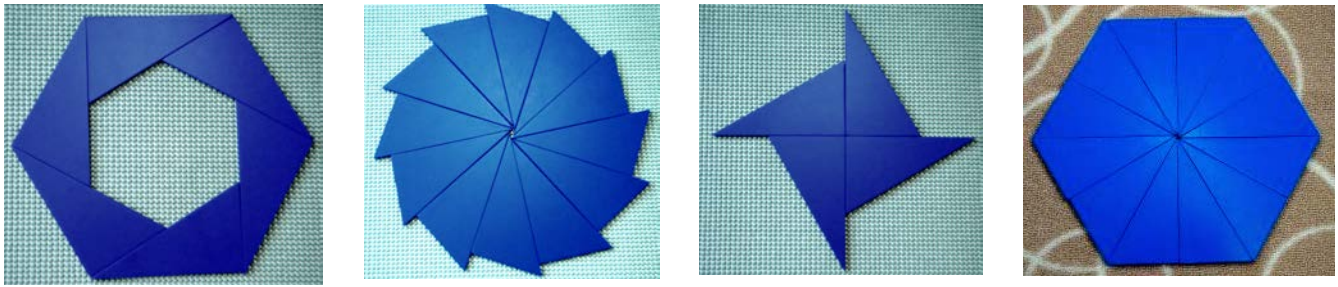
The triangles do not require an extensive demonstration. Simply help your child spread them out on a rug and put a few together to make shapes. Let your child explore. When it seems appropriate, make the shapes below, along with **name cards**, and present them.



Great free Montessori Blue Triangles Printables at The Helpful garden



When your child has had some practice with the blue triangles, you can introduce many new designs. The **Constructive Triangles Blue Design Box** printables from Montessori Print Shop cost only \$.99 at the time of this writing and give you templates for making the triangles and 6 neat designs your child can make.



Above are some classic designs with the blue triangles, see if you and your child can discover more. [Blog post on making designs](#) Photo far right: [The Learning Ark](#).

The 5 Constructive Triangle Boxes

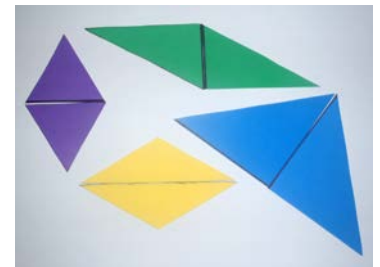
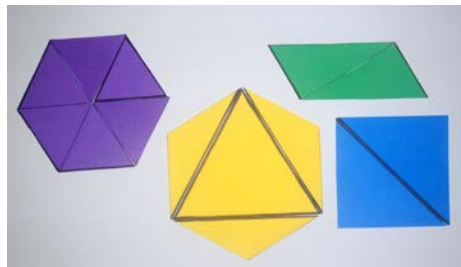
At around \$80, most parents find the **Montessori Constructive Triangles** 5 box set too expensive for home use. Children doing Montessori at home will probably not get enough use from the triangles to justify their purchase. They are a great material, but most children today make the figures a few times, learn their names, and move on. Luckily, there is an excellent, very affordable DIY option for parents.

Making your own triangles

1. Go to [Livable Learning](#) and download the '[Constructive Triangles Sets 1-5 Outlines](#)'.
2. Print these out onto card stock and cut all the triangles out carefully.
3. Use these as masters to trace onto [crafts foam sheets](#). Cut out the triangles carefully.

Note: If, for instance, you have orange foam instead of yellow, make all the yellow template triangles orange. Your triangles do not have to match the colors on the printouts, but try to keep those that are supposed to be in one color matching.

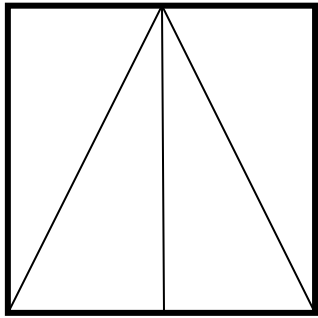
4. You do not need special containers shaped like the Montessori boxes. Put your foam triangles in any nice box or basket. Zip-lock bags can also help keep them together.



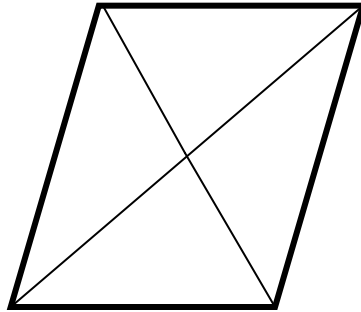
Left: Montessori Constructive triangles. **Middle & right:** Crafts foam triangles in a variety of configurations, with name cards. Mix, match, and explore to discover shapes and designs. It's all good. Here are some videos with ideas:

Videos: [The Rectangular Triangles](#) [The Triangular Box](#) [The Small Hexagonal Box](#)

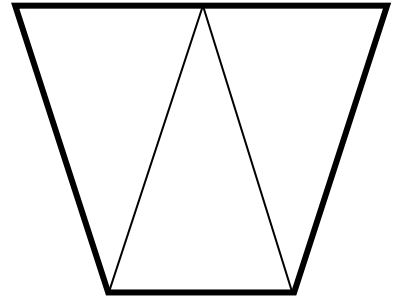
Plane figures to build with foam constructive triangles



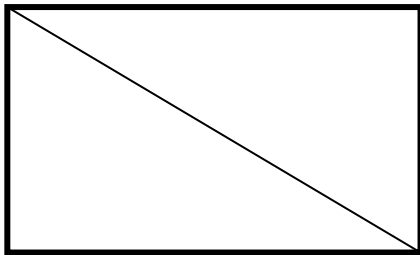
square



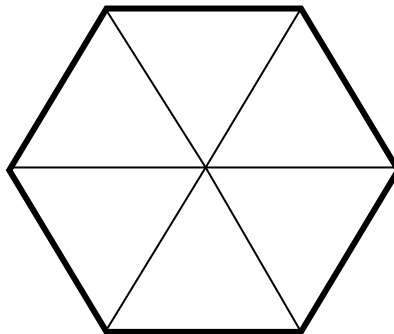
parallelogram



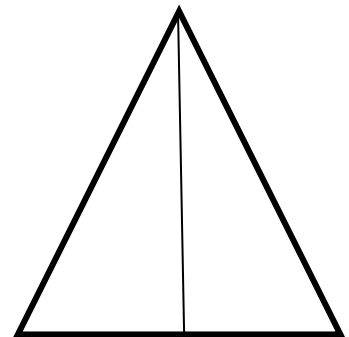
isosceles
trapezoid



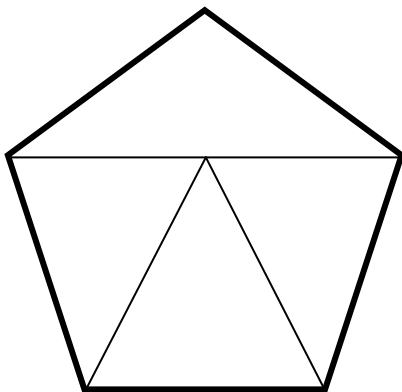
rectangle



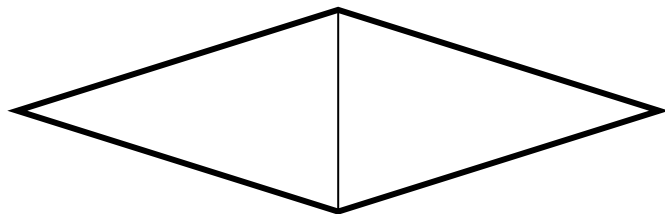
hexagon



triangle



pentagon



rhombus

[Another source for downloading Constructive Triangle templates](#)

It can be helpful to draw the black guidelines on one side of the triangles. Leave the other side blank for free building of shapes.

NOTE: When making the Constructive Triangles from the templates using crafts foam sheets, **you will soon see that it is not necessary to make every triangle**. Many shapes in the 5 Montessori triangle boxes repeat, but in different colors. As long as your child can build each shape once, you are fine. Making the fewest triangles required to make the basic shapes will save you a lot of time. If you like, you can draw black strips along the edges of the triangles with a ruler and magic marker to match the black edges of the Montessori triangles and guide your child in putting them together.

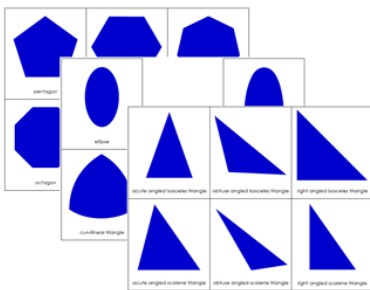
More Printable & Digital Shapes Resources



Your child may enjoy the **Geometric Cabinet App** from **Rantek**. It is a shapes naming, matching, and size grading activity, with solid and line drawings and a good deal of sensorial and geometry language, all of which is valuable at this point in a child's transition to abstract thought.



My First 3D Puzzle: Animals is a good app when your child is ready for a shapes challenge. The 3D shapes fit together like a puzzle, and the animal often has to be rotated 180 ° for pieces to fit properly.



The **Geometric Cabinet Control Booklet** from **Montessori Print Shop** gives you six printable pages of geometric shapes that match the trays of the **Montessori Geometric Cabinet**. You can use these as templates to make your own shapes; and as reference flash cards to help your child learn the names of the shapes.



The **Math Zone Interactive Math Games and Activities** site has many great computer games that will help your child make the transition to abstract thought using shapes. Excellent games on this site for preschoolers

include: **Shape Lab**, **Buried 3D Shapes**, **Shape Facts**, **Geometric Solids** (twirl and turn the shapes), and **Reflective Symmetry** (click on the squares on the left to change to the correct colors).

The [Geometry Workbench](#) from [iKnowthat.com](#) is a fun activity with many free form options for manipulating shapes.

When your child knows the shapes pretty well, the [Shapes Reveal Game](#) lets her slowly reveal and guess which shape is appearing.

Here is a [Math & Geometry](#) page with many more activities to explore.

More good shapes materials



[Mindware Pattern Play](#), at around \$25, is an excellent hands on material that also promotes the development of abstract thought. Your child can play freely with making designs, and also build designs to match the included control cards.



Puzzles are great plane figure activities. Top Left to Right: The [Farm Chunky Puzzle](#) is a simple first puzzle. This [Alphabet Puzzle](#) teaches letters and phonetic sounds. This [Animal Puzzle Pack](#) is an introduction to jigsaw puzzles. The [Vehicles Cube Puzzle](#) offers multiple puzzles by rotating the blocks. Bottom L to R: The [Melissa & Doug USA Puzzle](#), \$12, is a challenging puzzle and a wonderful Geography material. Print out a photo or use the box image as a guide. The [Melissa & Doug Solar System floor puzzle](#), \$12, is a great science experience for 4-6 yr. olds. Help as needed, but only if your child needs it. The [Melissa & Doug Shapes Sorting Clock](#) should, IMO, be on every preschoolers shelves.



The **Melissa & Doug Stack and Sort Board** is a classic material for 2 year olds. The colors nicely key the child in sorting the shapes; stacking the shapes evenly calls attention to their particular characteristics. A clean, effective design.

Visual Activities

Once your child is using plane (flat) figures, puzzles, printed images, etc., there are many activities he can do to improve his visual discrimination and memory as he continues the passage into abstract thought and prepares for reading.

Food Box Fun



The **Activity Mom** at describes this inexpensive and versatile activity she did with her child at home:

“For this activity, cut and save the front and back from each package. Put in a pile and work together to match them up.”

More Package Activity Ideas:

Hunt for and circle numbers

Hunt for and circle certain letters or letters of your name

Hunt for and circle words you know

Sort by size (small, medium, large)

Sort by shape (square, rectangle)

Sort by color

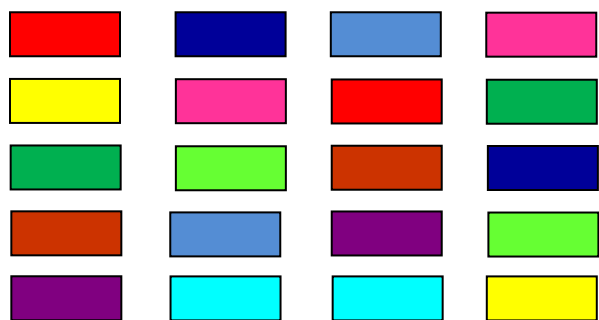
Read and talk about the ingredients

Label each box with a price and play store with a calculator



Photos: **The Activity Mom**

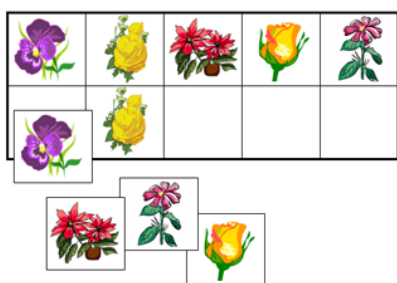
The Memory Game



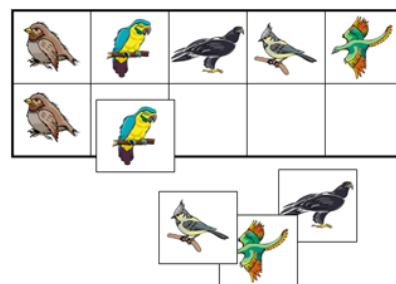
The Memory Game, also called '*Concentration*', is a classic game for visual discrimination and memory skills. It can be used with **pictures, letters, words, numbers, shapes, colors, designs**, almost anything. The game is played with **pairs of cards** with the same object, photo, or figure on them. If you are doing colors, your game could be set up like the one shown at left.

Help your child lay out the cards in random rows as shown. Turn all the cards over. Take turns turning over two cards at a time. If they don't match, turn them back over. After a couple of turns, you will remember where the colors are located and start to be able to match the first card you turn over with your second. When you match two cards, you get to keep those. The person with the most cards wins.

If your child is just starting out playing this game, **play it with the cards face up first**. You can also limit the game to just 3 pairs of cards. These adjustments will help insure a **successful experience**, which is always your goal. Your child can play this game alone, also, with almost anything on the cards that she is interested in at the moment, such as sight words, geometric shapes, pictures of animals, etc.



Montessori Print Shop has 36 sets of **Match-up & Memory Cards** for every season and topic. Two sets are free! The rest are \$.99 each, a bargain for beautiful materials like these. *Click-Print-Teach*.



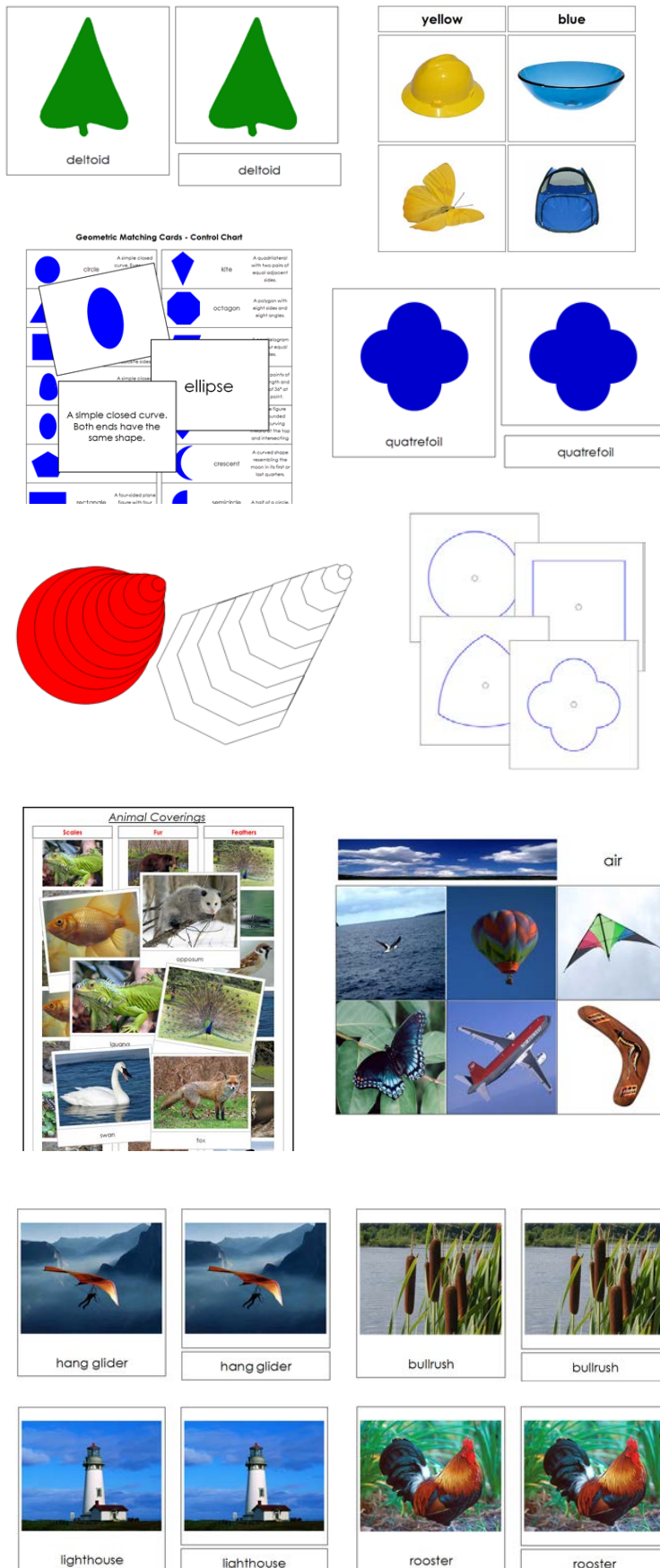
[Memory and other games at Learning Games for Kids](#)

[Memory Games on The Kidzpage](#)

[Memory Games at PBS Kids.org](#)

[Primary Games.com](#)

Printables for visual & thinking skills



Montessori Print Shop has over 1200 excellent and inexpensive printable materials. Download, print onto card stock, cut them out, and you are ready to go. They can be always available for use, provide a bridge between hands-on and digital activity, and won't wear out your expensive iPad. Children enjoy and relate to printed materials as tangible objects as well as abstract depictions. Printed material can be laid out and manipulated physically in groups in ways that tablet app images cannot.

Top to bottom, L to R:

Leaf Shapes Three Part Cards

Color Sorting Cards

Geometric Matching Cards

Geometric Shapes Three Part Cards

Superimposed Geometric Figures

Geometric Shape Inset Outlines

Animal Coverings

Air, Land, & Water Sorting Cards

Bottom photos, Three Part Card Sets:

Air Transportation

Aquatic and Wetland Plants

Buildings

Farm Animals

iPad Apps for early visual, thinking, ordering, and language skills



Top row, L to R: **Preschool Memory Match**, **Photo Touch Concepts**, **Shapes Builder**, **Little Solver - Preschool Logic**, **Pattern Recognition Preschool**

Bottom row, L to R: **Comparative Adjectives**, **Things That Go Together**, **Little Puzzles**, **Photo Touch Farm Animals**, **My First Tangrams**

The Copy Me Tray

This is an excellent material from the [Activity Mom](#).



Start by helping your child collect two each of various objects with distinctive shapes and colors. Keep one of each object for you, and give the other set to your child. Arrange your objects in a pattern of your choosing on one side of a tray. Now your child matches your pattern with her objects on the other side of the tray. Try it with both of you sitting on the same side of the tray at first, and then on opposite sides. You can also each use your own tray. Be sure to also switch roles and let your child go first and you match her layout.

Photos: [The Activity Mom](#)

Touch

These experiences help educate a child's sense of touch. They include activities involving **recognizing and matching objects by feel, temperature, and weight**. Focusing attention on these sensations, and making comparisons and decisions based on them, assists a child in the important work of organizing his brain nerve architecture.

Tactile qualities of objects



Top: A basket of objects to handle and identify as *hard, soft, rough, smooth, large, small, solid, spongy, firm, elastic, compressible, star-shaped, heart shaped, spherical, rubber, glass, fabric, tile, organic, inorganic, light, heavy, square, etc.*

"Don't touch!" How un-Montessori



Above: **Theme treasure baskets from *Counting Coconuts***. These nice baskets **isolate** tactile qualities in a Montessori way for younger children. **L to R: rings, wood, soft, brushes.**



When your child is familiar with objects in a treasure basket, Try this **stereognostic** activity. Your child close her eyes while you put 2-3 objects in a Mystery Bag. Describe each object **using as many terms as possible** and have your child bring it out. Repeat using different objects as long as your child is interested. Be sure to switch roles and let your child describe objects for you to pull out.

Fabric Box



A great early Sensorial experience that a toddler can enjoy. Mari-Ann at [Counting Coconuts](#) repurposed a box of wet wipes by filling it with fabric squares from old clothing and remnants. Close the lid and your child can pull out fabrics with all kinds of textures. Sweet!

Photo: [Counting Coconuts](#)

Montessori Fabric Feel



Above: A fabric feel basket from [Monkeytoes Montessori](#)

This Montessori activity for **4-6 yr. olds** is easy to put together and do with your child. It develops tactile acuity and discrimination, and provides experiences with organizing objects according to a common sensory characteristic: **texture**.

You will need two 5-8" squares each of fabrics with varied textures. Good examples are **corduroy, silk, burlap, felt, denim, vinyl, terrycloth, nylon, and lace**. Each fabric needs to have a **distinct feel**. Fabric stores usually have remnants available. You can also have them cut 6-8" strips of fabrics that you like. Cut these into squares and place in a nice basket. Put a **blindfold** in the basket.

Photo: [The Wonders Of](#)



Presentation

Your child sets out a floor rug or table mat and brings the basket.

Your child sits down and puts on the blindfold, or closes her eyes.

Hand your child a fabric and let her feel it with one hand.

Hand her a different fabric in her other hand and ask, "*Do they feel the same or different?*" Repeat 1-2 times.

Hand her the matching fabric and ask the question. Did she say they feel the same? If so continue.

If your child could not tell that the fabrics felt the same, try letting your child feel all the fabrics without the blindfold first. Let your child get familiar with feeling and looking at the fabrics. Try again later with the blindfold and use a fabric with a very distinctive texture, like lace. This should get your child going successfully. It takes time and practice to identify fabrics that feel more similar to each other.

Sandpaper Matching



This challenging activity for **4-6 yr. olds** matches different grades of sandpaper by touch. For a successful first experience, start with the **roughest** and **smoothest** grades and add the in between grades later. Write the grades of the sandpaper strips on the backs of the cards. This activity also prepares your child for using the **Sandpaper letters** (p. 404) and **numerals** (p. 358).

Cut two colors of bright card stock into 2X5" cards. Make 4 of each color.

From sandpaper sheets in 80, 100, 150, and 220 grit, cut two 1.5 X 4" strips of each grade.

Glue stick one of each sandpaper pair to one color of card, and the other to the other color. You should finish with four pairs. For example: you will have an orange and a red card with 80 grit, another pair with 100 grit, etc.

Have your child close his eyes or put on a blindfold. Hand him a strip and have him feel it with the tips of his fingers. Now hand him different strips and ask, "*Do they feel the same or different?*" When he makes a match, have him check the numbers on the back to see if he matched the strips correctly. Be sure to wear the blindfold yourself and have your child hand you strips. This is a challenging activity, so be patient and positive.

Tell me about it



This is a fun activity for **4-6 year olds** who have pretty good descriptive vocabularies. Put **one object** with a distinctive tactile profile, like an orange, a cube from the Pink Tower, a shot glass, a feather, a small toy farm animal, etc., into the Mystery Bag. Have your child reach in, feel the object, and **describe** it every way she can without removing it from the bag. If necessary, cue your child the first few times you do this activity. For instance, if there is an orange in the bag, talk about how it feels **round**, like a **sphere**, has a **rough surface**, and can be **squeezed**. What is the object made of? Rectangular and cube shaped objects, like boxes, have **6 sides**, as well as **edges** and **corners**. A Pink Tower cube will be **solid**, but a cardboard box will be **flexible**. What is it? This will take time and practice as your child builds up a vocabulary of descriptive terms. Be sure to reverse roles and let your child hide objects in the bag for you to feel and describe.

Thermic Touch



This activity for **4-6 yr. olds** allows a child to grade water by **temperature**, using the **thermic** sense. The **Montessori Thermic Bottles** on the left cost about \$40-65. At home, you can use **4 or 8 unopened, small bottles of water** and **4 name cards** that say: **hottest, warm, cool, and coldest**.

Presentation #1

Put one bottle in your **refrigerator** and one in your **freezer**. Take these out in about 10 minutes. When you take them out, heat a third bottle in your microwave for **40-60 seconds**. Test the coldest and heated bottles to be sure they will not hurt your child's skin. You may have to vary the times based on your equipment.

Mix the glasses up in a line and have your child feel them. Have her **blow on her hand in between** so she has fresh temperature sensors for each bottle. Ask your child to set the hottest bottle to the left. Then ask him to find the room temperature glass and set it to the right of the hottest one. The cool glass comes next, followed by the coldest. Put the correct name card in front of each glass.

Presentation #2

Prepare the bottles the same way, but do **2 of each**. Mix them up on the counter and have your child match pairs that are the same temperature and set them together.

Why the temperature and weight activities are shown under 'Touch'

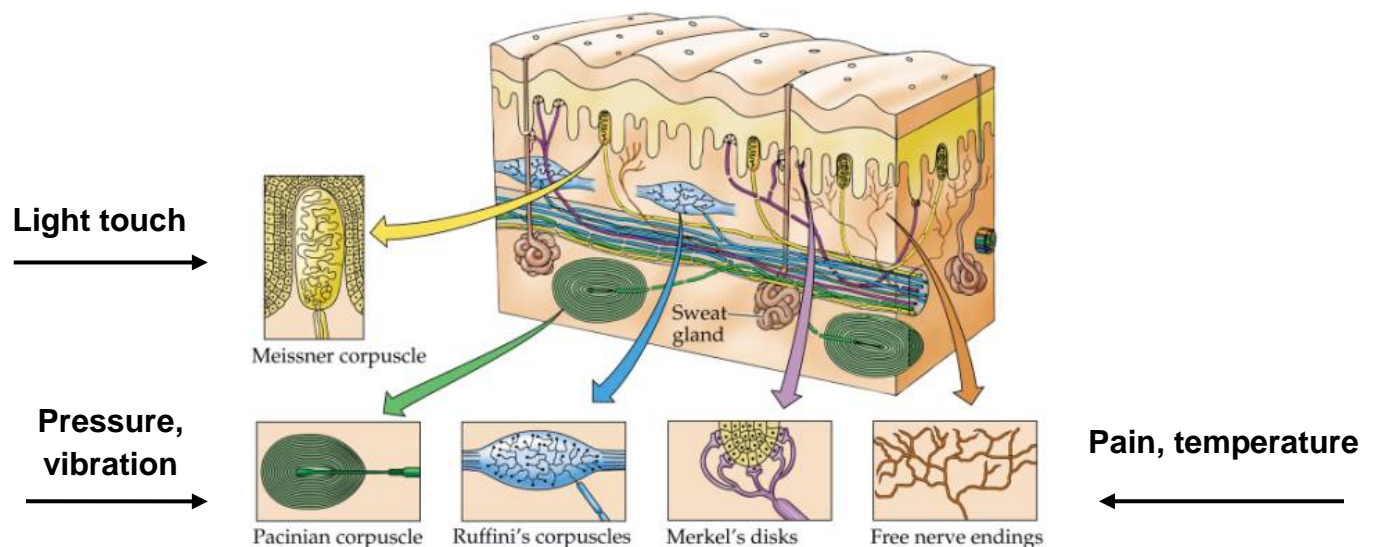
The **sensory receptors** for *light touch*, *vibration*, *pressure (weight)*, *pain*, and *temperature* are all in our skin.

Meissner's Corpuscles sense **light touch**. They are concentrated in many areas, including the fingertips, which is where we instinctively feel objects to sense their tactile qualities.

Pacinian Corpuscles lie a bit deeper in the skin and sense **pressure** and **vibration**. There are many in the palms of our hands. They react quickly, but also stop transmitting impressions quickly. When we bounce an object up and down in our hand, we are turning these receptors on and off to more accurately feel the weight of the object.

Thermoreceptors near the surface of our skin act as receptors for **temperature** sensations. Because all these sensory receptors are in our skin, the activities using them have all been placed here in the Touch section.

Chart below: **Rutgers University**



Baric Touch



Baric means weight. This material for **4-6 yr. olds** helps a child to sense and compare the **weight** of objects by holding them in her hands. The **Montessori Baric Tablets**, top left, can be replaced at home with a simpler and more versatile material that quantifies weight differences and introduces math, using **quarters**, **clear plastic mini-cups** (very useful, cheap little cups with lids), and a **blindfold**. You will know quickly if the material is appropriate for your child's current abilities.



Presentation & use

Gather the items above and invite your child to do the activity.

1. Lay out 8 cups (photo).
2. Have your child count out 1 quarter into each of two cups so that each cup has 1 quarter in it. Help your child if needed to write the numeral 1 on each of these cups.
3. Have your child count out another pair of cups, this time with 3 quarters in each cup. Write the numeral 3 on each of these cups.
4. Make a third pair of cups with 6 quarters in each cup and write the numeral 6 on each of these cups. Make a fourth pair with 10 in each cup and write 10 on each cup.
5. Have your child put on the blindfold and stretch her hands out, palms up. Set a cup with 1 quarter in one hand and ask your child to feel the weight of the cup.
6. Set a cup with 6 or 10 quarters in your child's other hand and ask, "*Do they weigh the same, or are they different?*" Your child should say that they feel different. Ask him which one feels *heavier* and which one feels *lighter* than the other.
7. Your child opens her eyes and checks to see that the cups have different numbers of coins and whether or not she identified the heavier / lighter cup correctly.

NOTE: If your child says that the cups are the same weight, try letting her feel how much the different cups weigh with her eyes closed, but without the blindfold on, so she gets familiar with how they feel. You can also make the difference in the numbers of coins greater to make the difference in their weights easier to feel. If these steps don't help, and your child has trouble identifying any cups as heavier or lighter, bring the activity to a positive conclusion. Look for opportunities to have your child feel everyday items to compare their weight. Try the activity again in a few weeks to two months.

Extensions

Try using **pennies and nickels**. See how many more coins you have to add for your child to be able to feel that one cup is heavier than the other. Test different members of your family to determine everyone's **weight sensation threshold**.

Gradually give your child cups with less difference in how many quarters each cup holds. See if your child can develop the ability to recognize **a difference of as little as 1 quarter**.

With a younger child, try this interesting experiment. Find a few objects that are **small but fairly heavy**, like a dense rock, a heavy piece of solid glass, or an exercise dumbbell. Now find objects that are **large but light**, such as a balloon, a large styrofoam figure, or a large, hollow piece of plastic fruit. Set one of each in front of your child and ask which one she thinks is heavier. Repeat with other combinations. Until a child develops enough ability to use abstract thought and reasoning, he will often think that any larger object must also be heavier.



A **balance scale**, like the **Balancing Bear Scale** in the photo, is a fun and versatile learning material. Your child can feel the difference between various amounts of coins, toy bears, or other objects, then test them on the scale to visually see which are heavier. Many **math** experiences are also possible.



Mechanical, analog bathroom and postage scales also make great learning materials. Weigh and compare objects from small to large. For young children, a visible dial or bar visually reinforce the concept of weight better than a digital scale showing only numerals.

Sound

These activities help young children be aware of sounds in their environment and develop their **auditory acuity and discrimination**. **You Tube videos** and **iPad apps** are very helpful here. The **Montessori Sound Matching** activity matches and classifies materials based on sound. The education of a child's auditory sense supports a **3-6 yr. olds** work of ordering and building her brain architecture. These activities also develop the ability to distinguish the **sounds of letters** in the **Phonics** step of the **Reading Sequence** (p. 412).

What is making that sound?

Using your **cell phone or tablet**, make a collection of **short video clips** of things like those below and other interesting sounds that you find. Below are samples.

birds singing	busy store	alarm clock going off
ball bouncing	children playing	loud wind in the trees
clothes dryer drying	bubbles in water	paper being crumpled
lawn mower	rushing water in a river	rain
thunder	dog barking	door opening and closing
car starting	vacuum cleaner	kitchen blender

Let your child play these video clips with headphones to get familiar with the sounds. Once she knows them all, let her just listen to the audio when you play them and see if she can identify the sounds. You can also use **You Tube** to do the same thing. **Create a free You Tube account and save a playlist of videos with sounds**. Here are more videos to get your collection started:

waves	rain & thunder	cars	birds 1
hammering nails	jackie evancho	traffic	footsteps on concrete
footsteps on wood	cricket	dialing a phone	knocking on a door
drum roll	human heartbeat	breathing	balls bouncing
bees	locomotive	babbling brook	church bells
doorbell 1	doorbell 2	birds 2	applause

There are a number of **iPad apps that focus on sounds**. Some are appropriate for toddlers, others provide older children with more memory challenges. Here are a few:



Left to right: **Animal Sounds**. Use **all lowercase letters**. **Let's Hear the Animals!** Only capital letters but that's ok, great sounds and a memory game option. **What's That Sound?** This app has a nice, simple interface. **Mini-Adventures Animals**. A lovely, rich experience in animal sounds and videos. **Zoola Animals**. A fantastic app with all kinds of animals and games. **Mini-Adventures Music**. Similar to the animal app above, this time with a universe of musical instruments and more super cool video clips.



Left to right: **Android sound apps**. **Kids Zoo Animal Sounds & Photos**. A nice, simple collection. **Zoola Animal Sounds for Kids**. The Android version of the great app above. **What's The Sound** has musical instruments, animals, tools, and transportation sounds. **Sound Touch** has animal, transportation, household, and musical instrument sounds.

What do you hear?

In different environments, such as a parking lot, a supermarket, your home, and out in nature, **close your eyes with your child and say every sound you hear**. This helps your child learn to focus attention at will and identify specific sensory inputs from a bunch coming in at once. You can also do this impromptu activity whenever there is an **interesting single sound** happening. Running water at the sink, mowing the lawn, listening to water in a river, a windy day, thunder and rain, food sizzling in a pan, different types of music, supermarket carts, glass touching, a garage door opening and closing, all are examples of everyday opportunities to focus in on specific sounds.

Montessori Sound Matching



Left: **Montessori Sound Cylinders**. Middle: DIY Sound Matching using **Glad Mini-Round food storage containers**. Right: Another DIY project that involves the child in making the material and uses film canisters (remember those?). Photo: **A HandMade Childhood**

The \$40 **Montessori Sound Cylinders** are two sets of 6 sealed wooden cylinders. One set has red tops, the other blue. Each set has a box with a colored lid. The cylinders in one set are filled with the same materials as the other set, so each blue cylinder has a matching red cylinder that makes the same sound. The child pairs the cylinders up by shaking and listening to make 6 red & blue matching pairs.

Your DIY material will be even more versatile than the Montessori version. Your child can be involved in making the material, adding a Practical Life feature; and you can easily change the contents of your containers to give your child different sounds to work with. **This activity usually is best for 4-6 year olds.**

DIY Sound Cylinders using jewelry boxes (this variation is not easily refillable)



Decision: colored tops or not? If you use a blindfold and see-through containers, you don't need colored tops. Your child simply lifts the blindfold to see if she correctly matched the materials. The **DIY Montessori Smell Bottles** made from spice jars, shown in the photo from **Counting Coconuts**, use red and blue labels because the bottles all contain cotton balls soaked in scent. If these bottles were **sound** bottles the

materials would look different, and colored tops would not be needed. Clear containers with removable lids also let your child open and close them easily. If you like the idea of colored containers, using **plastic Easter eggs in 2 colors** is an easy solution.

Materials

- 8-pack of **Glad Mini-Round 4 oz. clear food containers**, or similar clear containers from a dollar or discount store
- Blindfold
- Various materials to put in the containers, such as salt, rice, a finely powdered spice, Corn flakes, Grape Nuts cereal, whole peppercorns, beans (small and larger), paper clips, coins, or any other suitable material that makes a distinctive sound when shaken.



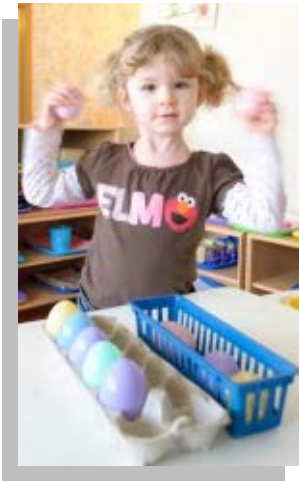
Presentation

1. Gather your materials. Start with things like *salt, corn flakes, beans, and coins*.
2. Invite your child to make a new activity for matching sounds. *If the interest is there, start with your child. If not, make the material yourself* and look for an opportunity to bring it out when your child is looking for something new to do.
3. If your child is able to, let her fill two containers each half full with the same material: 2 with salt, 2 with corn flakes, 2 with a few beans, 2 with a few coins. *Talk about each material's name and how it looks*. Once the lids are on, shake the containers to see how they sound and *talk about the sounds being the same or different*.
4. Have your child put on the blindfold. If he doesn't want to, see if he'll go for you putting it on and him handing you the containers at first.
5. Hand your child a container in one hand and tell her to *shake it next to her ear* and see what it sounds like.
6. Hand your child a material with a *very different sound* in her other hand and have her shake just that one next to her other ear. Now she can shake them back and forth to compare the sounds.
7. Ask, "*Do they sound the same or different?*" If your child says different, have him lift the blindfold and see that they are different, then continue. If not, go back to step 3 and explore by shaking the containers without the blindfold, then bring the activity to a positive conclusion and try it again in a few weeks to months.

NOTE: Nothing is gained by pressuring a child. Early learning should always be fun! Your goal is a series of **successful experiences**. If an activity does not go as planned or your child is not quite ready for it, don't let that dampen the positive mood. Make something positive out of it and move on. It may help to re-read about the **Learning Sweet Spot**, page 72.

8. Continue handing your child containers until she finds two that sound the same and states that they are the same when you ask, "*Are they the same or different?*" Set these two matching sound containers aside.
9. Continue until all the containers are matched.

Since you have easy-open containers, you and your child can empty and refill them with different materials whenever you like. Once your child has some skill in identifying sounds, try materials that have **more subtle differences** in how they sound, like salt and a powdered spice. Be sure to wear the blindfold yourself and have your child hand you containers. Make a mistake now and then to show that it happens to you, too.



For a wonderfully honest account of a child who is a little young for this activity and wants to use it in a way that is more interesting to her, I highly recommend "[Sound Eggs](#)" or "[A descent into hysteria](#)", and [Sound Eggs Part 2](#), at [Tot School](#). Parents run into these situations at home all the time. It helps to remember the Montessori mantra: **follow the child**. Children will show us what they need to get from everything we put in front of them if we watch and listen. I think you will enjoy and learn a lot from these two great posts, and from many posts at [Tot School](#). Thanks, Shannon 👍!

Identifying tones



All this activity for 4-6 yr. olds requires is **three identical drinking glasses**, **water**, a **dinner knife**, **three strips of paper**, and a **dry erase marker**. Leave one glass empty. Fill the second 1/2 full with water; and the third almost full with water. Help your child as needed to write highest, middle, and lowest on the strips of paper in lower case letters.

Presentation

Show your child how to strike the sides of the glasses with the knife and listen to the tone each one makes. Help your child identify the empty glass as the highest, the almost full glass as the lowest, and the 1/2 full glass as the middle tone.

Strike the empty glass and tell your child, "*This glass has the highest tone.*" Set the '**highest**' slip in front of the glass.

Repeat with the other glasses, identifying the 1/2 full glass as the '**middle**', and the almost full glass as the '**lowest**'.

Have your child close her eyes or put on a blindfold. Hit the highest and lowest tone glasses and have your child practice identifying them.

Now include the middle tone and let your child practice identifying all three.

Be sure to switch roles and let your child hit the glasses while you name the three tones.



Apps like [Easy Xylophone](#) (iPad), also make it easy to help your child identify high, low, and middle tones. You can then make up and play 1-3 note sequences for each other and try to match them. Identify them with the letters of the notes (E,F,G, etc) and write down your sequences to check your responses.

Where is that sound?



Young children have yet to develop a clear sense of their **body position in space**. They need help to understand **position concepts** like *left, right, above, below, in front, to the side, and behind*. Use a bell, two objects to hit together, or your voice as the **sound**. Use a **blindfold**. The only other thing you need is a quiet space.

Spend a few minutes standing facing the same direction as your child and showing her by pointing which directions *in front, to the sides, and behind* her body are.

Have your child close his eyes or put on the blindfold. (The blindfold helps focus attention)

Stand behind your child and make a sound.

Ask your child, without moving his body, to point to where the sound is coming from. Ask, "*Is the sound coming from in front of you or behind?*" Talk about his answer, helping as needed.

Repeat, making the sound in front of, and then on each side, of your child. Ask after each sound, "*Is the sound coming from in front, behind, or to the side?*" Make sure your child does not move her body, just point.

When your child is pretty familiar with these terms, introduce *left, right, above, and below*. You may want to do just one at a time and practice it, as learning left and right can take time.

Switch roles and let your child make the sound while you point and say which direction it is coming from.

This activity can be used in many daily situations. Ask your child to get something that is to her left or right, in front of or behind her. Talk about these directions when you are walking. Ask where a sound is coming from and in what direction an interesting sight is.

Taste



Scientists now list as many as six or seven types of **tastes**. For our first activity, we'll use the **traditional 4 types**. The second activity involves matching tastes, just as we did with sounds, and will soon with smells. Tastes are more sensory experiences you can point out all the time as your child eats different foods.

Four Kinds of Tastes



On page 462 is a printout of the **four taste names** for this activity: sweet, sour, salty, and bitter. Print these on card stock and cut them out, or just write out a set of taste name cards.

Gather lemon juice, a piece of candy or some sugar, salt, and a piece of unsweetened chocolate (photo), and a blindfold.

Have some water at hand for your child to swish between tastes. Dissolve a bit of salt in water for the salty taste. Some lemonade or other fruit juice makes a nice treat after the tasting is finished. This activity blends very nicely into a cooking experience.

Ask your child if he would like to see what a few different things taste like. Have your child set out a plastic mat and bring the cups, name cards, and things to taste to it.

Show your child the name cards and have him repeat the names. have your child put on the blindfold.

Start with the lemon, or lemon juice. Let your child put a little on his tongue and wait for the reaction! Explain that this kind of taste is called *sour*. Put the sour name card in front of that cup or the lemon. Let your child wash his mouth with a little water.

Now do the rest: potato chips or salt dissolved in water – *salty*; candy or plain sugar – *sweet*; and unsweetened chocolate – *bitter*. Let your child take a drink of water between each taste and put each name card with its taste.

Read the name cards with your child.

Smell



As with the other senses, taking time to be aware of and point out different smells in your child's environment is the first and easiest way to develop your child's **olfactory acuity and discrimination**. Food, flowers, plants, your pets, your bodies, a smoky fire; there are limitless opportunities. Don't avoid unpleasant smells - every sensory experience adds to your child's brain architecture.

What is it?

All you need are **things with distinctive smells** and a **blindfold**. Use **easy to name objects**, like cookies, fruits, a flower, green grass, clean laundry, a household cleaner (pledge, windex) sprayed on a cloth, a candle with a distinctive odor, flavors of Kool Aid, or spices that you help your child learn the names of, like cloves or cinnamon.

Have your child put on the blindfold and hold the items next to her nose so she can identify them. Practice and try different things. **Switch roles** and wear the blindfold while your child hands you things to smell and identify. You can make **name cards**, too.

Smell a little, smell a lot



Another easy activity. You will need **two small plates** and something with a **distinctive smell**, like barbeque sauce or ground cinnamon. Put a **very small amount** on one plate, and **quite a bit more** on a second plate. Let your child smell them back and forth. Does the small amount have a more **faint smell**, and the larger amount a **stronger smell**? Why? There are less molecules of scent reaching your nose from the smaller amount. Try different smells. Does your child smell the smaller amount more easily than you? Children's senses are very keen.

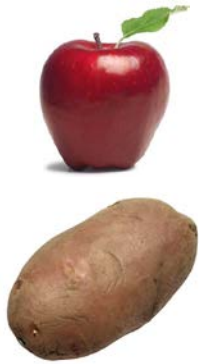
Scratch & Sniff



Scratch and sniff stickers make great smell experiences. The multi-fruit smells pack at left is at StickerGiant.com. Find more scratch and sniff stickers at EverythingSmells.com. Everything Smells has a lot of **fun, fragrant items for kids**. You can do identifying and matching activities with these, make up new activities, or just use them for fun.

A scented play doh recipe that works!

Can you taste without smell?



Cut similar, bite size slices of an apple and a potato. Have your child hold her nose closed tight and taste each slice. Could she tell the difference? Now let her taste more of each with her nose open. Why do they taste stronger and different? Smell and taste work together to help us enjoy our food.

Spice Smell Matching



The classic Montessori smell activity for **4-6 year olds**. The **Montessori Smell Bottles** (top left) hold pairs of smells, just like the Sound Cylinders had pairs of matching sounds. The DIY version (top right) at [CountingCoconuts](http://CountingCoconuts.com) uses spice jars and cotton balls soaked in different scents. Red and blue star labels identify the two sets of smells, as with the Montessori material. At bottom is the simplest material of all: **spices poured into clear condiment or plastic cups**. All you need is a **blindfold** and you are ready to go. This easy setup lets you change materials.

Gather your materials:

- 8 **clear plastic mini cups** with lids.
- Spices: *Mrs. Dash*, *ground cinnamon*, *cumin seed*, *ground thyme*, *vanilla bean*
- Blindfold

Presentation



Invite your child to do a fun activity matching smells. Have your child set out a table mat and bring the spices and cups to it.

Help your child as needed to pour some of each spice into its own cup. Take turns smelling each and talking about how they smell.

Now make a second set of cups with the same spices, so you have 2 cups of each spice.

Have your child put on the blindfold.

Hold a cup under her nose and have her smell it. Now hold a different spice under her nose and ask, "*Do they smell the same or different?*" If she says different, let her lift the blindfold and see that they are different.

Continue until your child has matched all the spices by smell. Let her check by looking as needed.

Switch roles and let your child hold up spices for you to smell.



Left: At **Carrots Are Orange**, they made an inexpensive set of **Montessori Smell Bottles** containing cotton balls soaked with different scents.

Photo: **Carrots Are Orange**

More smell activity ideas at Living Montessori Now

Smell masking with coffee

The next time you have a really strong smell going on at your house - even in the bathroom - try pouring **new, dry coffee grounds** into a coffee filter or on a plate and setting it near the source of the smell. In just awhile, all you'll smell is coffee. Why? Coffee's irregular crystals have an enormous cumulative surface area to absorb odors. You just learned a favorite trick of nurses working in hospitals and nursing homes ☺.

Sensorial Gallery



**Alternative Color Shades
activity idea**

What Do You Do All Day?



Neat self-mixing colors activity

Chasing Cheerios



Counting Coconuts

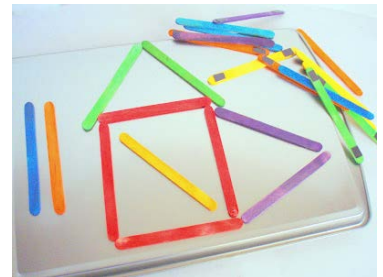


Buddy Blocks Farm Animals



Size grading with wrenches

Counting Coconuts



**Glue pieces from magnet
strips on the ends of crafts
sticks & use a cookie sheet.**

Laura Ingalls Wannabe



Knobless Cylinders extension

Our Montessori Story



**Cut a photo & glue on crafts
sticks for a homemade puzzle**

What Do You Do All Day?



**Duct tape the eye holes for a
cheap blindfold**



Color Matching with Bows
Laura Ingalls Wannabe



Rainbow Musical Glasses at
Choices For Children



Photo: Julie Josey



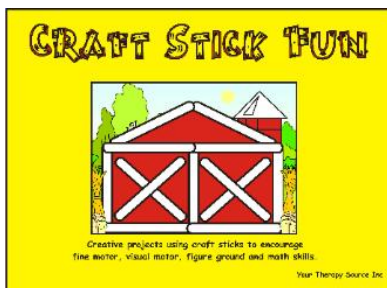
Number Rods and Red Rods
extension at
Our Montessori Story



Affordable alternative to
Montessori Metal Insets



Cool Marble Pattern Material



eBook with many great
activities using crafts sticks



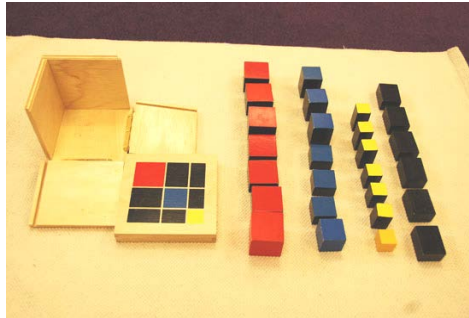
Discovery Bottles & Bags
Laura Ingalls Wannabe



Smell bottles at Tot School



Frozen sensory fun at
Counting Coconuts



Organizing the Trinomial Cube
blocks at
Just Montessori



Zip Lock Color Mixing at
Chasing Cheerios



DIY Thermic materials at
Living Montessori Now



Sticky notes shapes hunt at
The Activity Mom



Homemade lava lamp
Chasing Cheerios



Tactile Matching Balloons
Laura Ingalls Wannabe



Catch a rainbow
Chasing Cheerios



Great explanation of
Montessori Sensorial at
The Education of Ours

Art & Music



For young children, art and music are not just amusing pastimes. These experiences resonate in children's souls. Children love freely creating artwork and moving to music. Art and music activities for preschoolers are not aimed at creating famous artists or symphony musicians. As with science, the simplest activities are often the most meaningful. Expose your child to art and music in fun ways and let things evolve. Art and music have a number of very **important developmental benefits** for children, including:

- Activating millions of new brain nerve pathways
- Increased ability to acquire reading and math skills
- Large and small muscle exercise
- Visual experiences with line, color, and design
- Improved visual, tactile, and auditory acuity and discrimination
- Improved memory
- Freedom of self-expression

Photos: Shutterstock



Art projects and preschoolers go together. The developing personality finds avenues for exploration, free play, and expressing ideas and feelings. A child learns about color, line, shape, and the textures of different materials. Art allows a child to create memories and keepsakes of significant events, the seasons of the year, holidays, and their own growth and development. Giving special works of art they made themselves as presents is very meaningful for children. When our children have grown, these precious gifts become some of our most cherished memories.

Collage

Colored construction paper, a glue stick, a bottle of washable white glue, and a pair of scissors are the basics for creating endless collages. The word collage comes from the French word *coller*, which means, 'to glue'.



The simplest way to approach collage is to get a big bowl and start putting things in it for your child to glue. Lay out a plastic tablecloth or a cookie sheet. Let your child run the show, starting with picking the color of construction paper. Assist as needed until your child has developed good control over the glue stick and white glue. A **paper plate** also makes a good collage background.

The possibilities are endless. For a sample of ideas, search 'children's collages' on Google and check out the 'images' link at the top. Here are just a few of the many things that can be used for making collages:

pasta	coins	magazine pictures	photos
beads	stick-on shapes, letters	cotton balls	pipe cleaners
buttons	paper clips	metal washers	leaves
sticks	grass	fabric	tissue paper
q-tips	construction paper shapes	straws	raisins
flowers	seeds	shredded paper	popcorn
beans	glitter	foil	Labels
yarn	colored rice	crayon shavings	newspaper

- Get out the watercolors and crayons and let your child draw a picture on the paper before doing the collage.
- Let your child cut photos from magazines to use in collages. Print others from the internet.
- Experiment with gluing layers of tissue paper and combining things in weird ways.
- Pre-cut some sun, flower, house, and other shapes for your child to use
- Make prints of family photos & special events and trips on plain paper and let your child make a collage with them.
- Collect objects when you take a walk or visit a forest and make a collage with them when you get home.
- Have your child tell you something about a collage. Add the child's words to the collage in lower case, block letters. If your child uses a sun, write 'warm' or 'the sun makes light'. Use these as sight words for reading practice.

Handprint Poem



This is always a favorite. Get a sheet of brightly colored construction paper. Cover the bottom of a shallow bowl with brightly colored finger paint. Have your child make a handprint on one side of the sheet. Print out the poem, cut it out, and glue it to the other side of the sheet. Frame & hang.

Sometimes you get discouraged
Because I am so small,
And always leave my fingerprints
On furniture and walls.
But every day I'm growing,
I'll be grown up someday,
And all those tiny handprints
Will surely fade away.
So here's a special handprint
Just so you can recall,
Exactly how my fingers looked
When I was very small.

Play Doh

If it had been available, I believe Maria Montessori would have required Play Doh in all her schools. It allows artistic expression & creativity, provides excellent hand and finger muscle exercise, and can be used to teach counting, shapes, and colors. There are nearly endless uses for Play Doh.



Yes, **Play Doh** can get messy. Use a vinyl tablecloth or a cookie sheet, and have your child wash her hands when she is finished.

An internet search will give you a bunch of home recipes for playdough. My recommendation is to save yourself the trouble and buy Play Doh. It's everywhere, cheap, and comes in great colors and handy kits with tools and toys that kids love. The cost – benefit ratio is very favorable with Play Doh kits. With that said, make a batch yourself using any recipe you choose if you like. This is an activity your child can participate in also.

Go to [hasbro](#). Look under '**Fresh Ideas**'. In the beginner section you will find a bunch of great Play Doh projects.

- Teach your child to roll up balls using her palms. When she is good at this, show her how to do it using just her thumb, index, and middle fingers. This is excellent fine motor exercise.
- Squish the balls into discs for more finger control exercise. Press coins into the discs and take them out to see the imprints. Make 5 pennies, then 1 nickel. Make 10 pennies, then 1 dime.
- Hide a coin in one ball and play a 'shell game' with it and two other balls. Line up the three balls. Show your child as the coin goes in one ball. Line them back up then start moving them around fast into new lineups while your child tries to keep an eye on the ball with the coin. Finish with the balls in a line again and let your child dig into the one he thinks holds the coin. Did he guess right? This is a great visual concentration exercise. Let your child move the balls around while you keep track of the ball with the coin.
- Use different colors of Play Doh to teach colors.
- Make a series of identical balls and use them for counting, then addition and subtraction exercises.
- Use scissors to cut Play Doh for cutting practice. See [page 87](#).
- Let your child pound Play Doh with her fists and the little plastic hammer, knead it with the rolling pin, and push holes in it with her fingers. Everything she does will be good hand and finger exercise. Have your child make small balls and pick them up with tongs without crushing them.
- Show your child some of the Tactile Letters ([p. 235](#)). Have him roll out strips of Play Doh and use them to make the letters. Do the same with the shapes on [page 116](#).

Water colors

A set of water colors is an easy and fun art activity. Get a big pad of water color paper, a jar of water, and show your child how to get the brush wet and get color on it.



Painting and Drawing

Paper and markers, crayons, colored pencils, and paints are all good. If you can afford one and have space, **painting easels** are great. They encourage free movement of the arms and hands. A piece of plywood painted with chalkboard paint and leaned against the wall can work also; and does double duty as a chalkboard. Painting can, of course, get messy! Aprons, floor coverings, and old clothes work well.



Keep these drawing supplies available:

- Colored pencils, crayons, washable markers, chalk, pastel charcoals
- Writing paper, notebooks (lined & unlined), card stock, construction paper
- Safety scissors
- Chalkboard (buy or make with blackboard paint)
- Desk or table with a firm, flat surface and good lighting

Let your child use tools other than paintbrushes for painting: cotton balls, q-tips, leaves, crumpled tissue paper, foam paint brushes, sponges – try things out!

Painting and drawing are great ways to help your child learn **color names**. Ask your child to tell you about her artwork and **write her words** on her pieces to bring **language** into the activity. **Display your child's creations with his name on them.** Learning to write your name is a great first step into letters and reading. Here are more ideas:

- Make designs on paper using strips of tape, then paint over it and remove the tape when the paint dries to reveal a pattern.
- Try using different objects to paint with: a toothbrush, a small foam paint applicator, a ball of string, pieces of sponge, cut vegetables, straws you blow through, etc.
- Stand one object on a table and let your child try to paint or draw it.

Great arts & crafts activities from the Mom Blogs

Shannon's Tot School

Modern Art with a Matchbox Car

Stringing Straws and Buttons

Gluing Sand to Paper

Origami for kids: simple cat

Coffee Filter Spray Art

Make Your Own Lacing Cards

Shaving Cream Marbled Paper

20 Frugal holiday crafts

Chasing Cheerios

Painting Her Dream

Straws and Box Lid Marble Maze

Dyed Paper Towel Art

Seashell Fish Collage

Our Art Museum

Do A Dot Art Painters

No Time for Flash Cards

3 Fruity Cheerios Activities

Apple Print Wreath

Cardboard Roll Crafts

Recycled Bird Feeder

Band-Aid Art

Recycled Book Order Beads

Pink & Green Mama

My favorite art supplies for preschoolers

Father's Day backrub t-shirt

Paint sample leaves

Festive napkin ring craft

Pet rock valentines

Rainbow yarn wrap color wheel

Life sized, mixed media body maps

Science at home projects

The Home Teacher

Hand & footprint art

Dollar store Valentine hand print plate

The Home Teacher Wiki

Embroidery floss Easter eggs

Reindeer handprint craft

DIY telephone number bracelets

The Activity Mom

How to draw activities

Copy Me - a drawing version

Straw painting

Organizing art supplies

Pom pom caterpillar

Tissue box challenges linkup

Chocolate Muffin Tree

Sculpture, collage & playdough ideas

Painting ideas

Crafts with recyclables

Liquid watercolor experiments

Printmaking & drawing ideas

Featured arts & crafts blog posts

What do you do all day?

Shoelace box

Lego maze

Cloud dough

Grape construction

Spider web string 'laser' crawl

Ice cube tray mud bricks

Toddler Approved

Volcano egg dyeing

Paint with spaghetti brooms

Valentine's Day crafts for toddlers

Making spring flowers with egg cartons

DIY gift wrap with celery stamping

7 Ways to be crafty with your toddler

Craft supplies & organization

Creating art with painter's tape

The Crafty Crow

Paper strip & toothpick tops

Party favors you can make yourself

What can you make from a plastic lid?

Colorful cellophane sun catcher

What can you make from a cardboard box?

Homemade musical instruments for kids

Display fine art in your home

Young children absorb their environment. Displaying fine art throughout your home gives them classic beauty and art to absorb. Check out AllPosters.com. These folks have all kinds of great art you can put an inexpensive frame around and get on the wall.

More art resources

Jump Start

KinderArt.com

Preschool art & activities on Pinterest

Arts & Crafts at Family Education

Teach Preschool

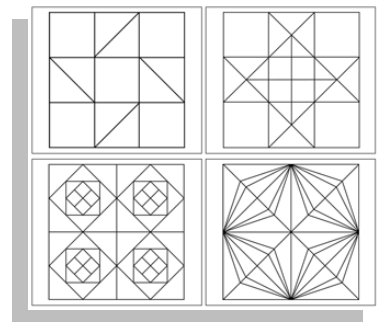
Pink and Green Mama

Art Station

Crayola.com

More Ideas:

- **Tape crayons together** in a bundle and let your child use it for drawing.
- Make **pasta frames** by cutting cardboard frames, painting them with glue, and letting your child place pasta around the frame.
- Make **vegetable stamps**. Cut vegetables into different shaped pieces and use as stamps for dipping into paint or stamp pads and stamping on paper or cardboard.
- Make **Thumbprint Bugs** by getting paint on your child's thumb and pressing it onto paper. Draw legs and two antennae to make a bug. Make a whole swarm!
- When your child has the control to color inside the lines, check out the fabulous [Geometric Art Patterns printable materials from Montessori Print Shop](#).

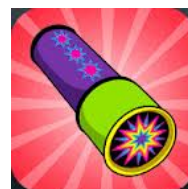
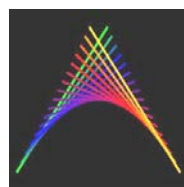
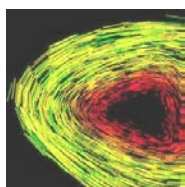


Creative apps

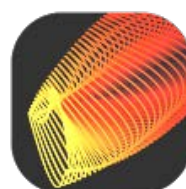
There are many good tablet apps for drawing, coloring, tracing, and other creative activities. Here are just a few:



Left to right: **Blackboard to write** (iPad) has smooth flowing 'chalk', great colors, and a save option. **Drawing Pad** (iPad) is a nice free form drawing app that also has many coloring books to choose from that are just \$.99 each. **Dibu's Monster Maker** (iPad) lets your child create an array of wild monsters. **Faces iMake** (iPad) is a digital take on Mr. Potato Head, but with many more options. **Splash of Color** (android) is a popular app with many nice options. Used with a stylus, **Wow Doodle** (iPad, **android**) helps your child develop the skills required for writing letters. There are more drawing and painting apps than I can possibly review, try some and see what your child likes.



These **iPad** apps let your child branch out into digital art, using the graphic capabilities of the iPad to create endless stunning designs. L to R: [Forge of Neon](#), [Uzu](#), [Flowpaper](#), [Artonics](#), & [Kaleidoscope Drawing Pad](#).



Android free design apps. L to R: [PicsArt Kaleidoscope](#), [Tripping Fest Drawing](#), [Imagica+](#), [Flowscope](#), & [Let's Create! Pottery](#).

Music

Expose your child to many different kinds of music. Children's songs, classical, jazz, popular, country western – practically any quality music you put on will benefit your child. Kids love to move, dance, and sing along. They get large muscle exercise and develop a visceral feel for rhythms. Children remember things better if they learn them in a song. We taught every class a large collection of songs for a year-end performance for our parents. They were always amazed at how many songs the children had memorized. Simple musical instruments can help your child develop auditory acuity and discrimination, learn the basics of music, and learn to play simple songs. Research shows that music has many important benefits for young children. Here are links to more information:

[Study finds link between music and preschooler's reading readiness](#)

[Parenthood.com: How music benefits children](#)

[Why music education rocks!](#)

[The benefits of music and movement](#)

[The benefit of music for children](#)

[Exploring movement and music with young children](#)

Dance & Workout to music

The easiest way to bring music into your home is just to play music at home. Old time rock and roll is always a kids favorite. There are too many kids music CD's out there to count - get a few and dance with your child. If you get one or more of the Fit Decks (p. 52), you can do exercises to music. Turn down the sound on a fitness video and turn up the tunes. Everyone can get in better shape and have fun doing it.

Get Rhythm



L: The **Melissa & Doug Band In A Box**. Rhythm instruments are great. Put toe tapping music on and let your child play. Practice matching different beats. R: A bowl full of music at **Chasing Cheerios**.



Working with **rhythms** is a good first experience in music for young children. Start by **clapping your hands to the beat** of your favorite songs. Try different beats and speeds. **Clap a short rhythm and let your child try to match it**. Let your child try all the rhythm instruments and learn to keep time with her favorite songs. Get your own percussion ensemble going!

Tones and Notes



The **Mini Chimalong** is a classic music toy that has won numerous awards. Children love it, it is well made, and it teaches the musical scale. Your child can play songs right away with the color coded guide.

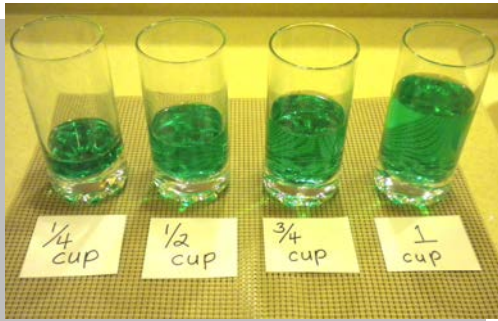


A xylophone is an excellent first musical instrument. It can be used for both percussion and playing melodies. Amazon has them for \$15-40. The **Hohner Kids Toddler Glockenspiel** (different kind pictured) gets high ratings for sound quality and tone accuracy. You can write the notes on the bars with a marker. Have your child turn away while you play a note. Play another note and ask your child if the notes sounded the **same or different**. Mix up the notes as you play, then let your child hit the notes while you turn away and answer 'same' or 'different'.

Teach your child the difference between **low** and **high** notes. Once she can distinguish and identify notes that are higher and lower, have her **try to hum along at the same pitch** as different notes. Strike the note on the xylophone repeatedly as your child adjusts his humming to match the note's pitch.

[Play Twinkle Twinkle Little Star and Mary Had a Little Lamb](#)

Notes from glasses and water



Glasses with water and a little food coloring can be struck with a pen or a fork to make a variety of tones from low to high. Work with your child to identify the highest and lowest tones; and identify tones as being the same or different

[Water & glass xylophone project](#)



L: A **Piano Horn** is a cool little instrument for kids. R: A **Harmonica** is another inexpensive instrument that makes real music and is very suitable for young children.



If your child really gets into music, a **portable electronic piano** makes a great instrument. There are many good guides for learning the piano for kids; and learning piano has been shown to improve math and reading skills!

[Homemade musical instruments for kids](#)

Videos

[Old McDonald Had a Farm](#)

[Wheels on the Bus](#)

[Shapes Song For Children](#)

[Super Simple Songs video collection](#)

[The Tuneables!](#)

[Nursery Rhymes Volume 1](#)

[Toddler learns pitch](#)

[Sam's preschool music program](#)

Music apps



L to R: **iXylophone** (iPad) has many songs your child can learn. Play them and write the notes down to make sheet music. **Kids Music Maker** (iPad) has multiple instruments and 6 songs to learn. **Magical Music Box** (iPad) has wonderful songs to play on a variety of colorful music boxes. Your child can control the speed of play, or play them on autopilot. **The Day The Music Stopped** (iPad) is the story of a magical journey to Harmonia Springs, where everything is made of music. An engaging, amazing, unique app. **Loopy Tunes** (iPad) lets your child experiment with all kinds of interesting sounds and rhythms in thousands of combinations. Excellent graphics. **Toddler Jukebox** (iPad) comes with 12 classic kids songs, and you can buy more libraries of songs. Children can control the volume and tempo of each song. Engaging graphics, great for younger kids for listening to quality music. **Songs 4 Kids** (iPad) lets your child listen, follow along with the words, and play the songs on a piano. **My First Songs** (iPad) has 15 classic children's songs and wonderful graphics.



L to R: **The Top 30 Preschool Songs** (iPad, **Amazon**) is a collection of classics. **Kids Song Machine** (android) needs more songs and is very basic, but toddlers will sing along. To use **Kids Music Maker** (android), at least at first, write down the notes and make your own sheet music. This app includes musical notation, so your child can grow into that later. **Virtual Instruments** (android) has different instruments and songs to play along to. **Kids Piano** (android) is a nice app, with different instrument sounds and a large song catalog. **Kids Favorite Songs** (android) has many classic songs your child can sing along to.

Musicians

There are many talented folks making children's music. Here are just a few:

Justin Roberts

Raffi

Dan Zanes

The Sippy Cups

Elizabeth Mitchell

Recess Monkey

The Wiggles

Jewel

Sandra Boynton

Music Online

There are many great sites where your child can find wonderful music and sensory explorations with sound. Here are a few good ones to get you started:

[pbs kids](#)

[Free kids music](#)

[Creating Music](#)

[funschool.kaboose.com](#)

[KiDiddles - the most extensive song collection around](#)

[Music on Sesame Street](#)

[Childrensmusic.org](#)

[Musical resources for kids](#)

[kidsknowit](#) Has a selection of educational topics and songs that tell about them. You can use these songs to make multimedia presentations. For instance, play the song about volcanoes under the geography selection while you find and watch a You Tube™ video showing a volcano erupting, or looking at Google images of volcanoes erupting. The possibilities are endless. Explore and find more music sites. Save them on the desktop for easy access.

Music activities

- Using a xylophone or a xylophone / piano app, play the musical scale one note at a time and have your child try to match the pitch of each note saying "Ahhhh".
- Play different songs and, using rhythm instruments like a tambourine, maracas, two sticks to hit together, or just your hands clapping, play a simple, steady beat and let your child follow along and match it. When she has that down, vary the beat by adding different beats between the main beats, like double beats, etc. Add one new beat at a time and let your child practice each. Do 'echo beats' where one of you claps a beat and the other matches it.
- Print out the instrument and artists cards at [Montessori Materials](#).
- Play a catchy tune and dance. Take turns yelling "Freeze!" and stop in whatever position you are. Hold it as long as you can. First one to move loses.
- Once your child knows a few songs, play just the first few seconds of them and see how many she can recognize.
- Act out your favorite songs as charades by expressive dancing, without music, and see if you can guess each others songs.

Digital Life



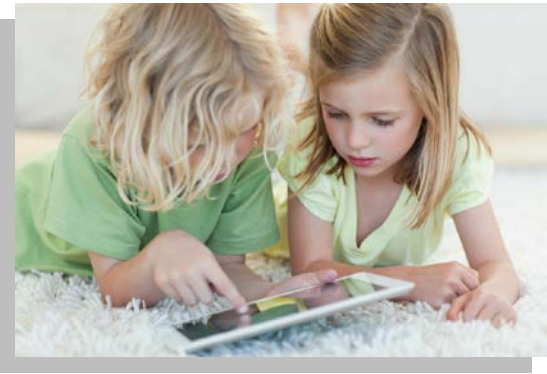
Bottom right: *Discovery Days & Montessori Moments*, Other photos: *Shutterstock*

"The most important thing is a person. A person who incites your curiosity and feeds your curiosity; and machines cannot do that in the same way that people can."

Steve Jobs

"Our students have changed radically. Today's students are no longer the people our educational system was designed to teach." "...the most useful designation I have found for them is 'Digital Natives'. Our students today are native speakers of the digital language of computers, video games, and the Internet."

Marc Prensky



Maria Montessori never saw a computer. When she left us in 1952, color television had not arrived. Montessori did amazing things with wood, metal, paper, and paint. Imagine what she could have done with Google Earth and Garage Band.

I believe that if Montessori were alive today, she would be all over E-learning. We are witnessing a revolution in how children learn. Thinking that preschoolers should be kept segregated from this is holding onto the past. The better question is how to incorporate technology into early learning in the safest, most effective ways. Technology can genuinely promote early learning if it is used intelligently.

Technology is seductive. We may believe it is the answer to everything, but, people are still the most important influences on us. We are fascinated with gadgets, but connected to each other. Laptops and tablets are tools, like three dimensional objects and images printed on paper. All are important for young children today. At the right time, a **balanced amount** of digital experience can help your child to learn, and also make the passage into abstract thought that characterizes the years from 2-6. It is, however, easy to overdo a good thing.

Tablets and computers facilitate your child's development of a brain ready to succeed in the age of technology. The world is shrinking. Holding a tablet, your child has access to the knowledge of the human race and the entire world. Used appropriately, technology can assist your child's development from age 3-6 and beyond.

Precautions and limits

I know, where's the fun in limits? Why not give your child an iPad and turn her loose? We first make sure that a powerful car has good brakes. It is important to take a similarly common sense approach to exposing a young child to digital technology. **Young children are in a period of experiencing the world *directly*. Overdoing screen time short circuits that process.** We want to maximize the value of screen time and limit its negative effects. At the time of this writing, little actual research has been done on preschoolers using tablets. The studies that have been done, however, and the experiences of parents, point to a number of guidelines that make the use of digital technology by young children safer and more beneficial. The key is *balance*.

Keep it real & limit screen time

Sitting passively in front of a TV is not healthy, and neither is the overuse of computers and tablets. **Young children need to move their bodies, handle three dimensional objects, interact with their family and other children, get outside as often as possible, and use all their senses.** From birth to about 6 most of their time should be spent doing these things. This is how strong brain architecture develops in the early years.

Around age 3, appropriate tablet apps can become a good *extension* of a child's early learning, but only as a **supplement to real world activities**. 5-6 year olds who are reading and doing more activities on paper can spend more time using a tablet or computer, but still as a supplement to real world experiences and interactions with people. **Hands-on activities, movement, and all kinds of experiences in the real world remain vitally important throughout the formative years from birth to age 6.**

Good apps require critical thinking and interaction, teach in a meaningful way, encourage creativity, and develop real skills. They provide increasing levels of challenge and engage a child's mind. **When your child uses a screen, tablet time with a quality app is preferred over TV. Video screens should never be used as babysitters.**

Parents find different ways to limit their child's time with digital devices. Some set simple time limits. Others reward good behavior and completed chores with tablet time. You will have to find what works for you.

The National Association for the Education of Young Children (NAEYC), in their January, 2012 paper, [Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8](#), lists a number of organizations recommending total screen time limits. On average, these sources recommend **no screen time at all for children up to 2, and no more than 1-2 hours per day total screen time on all devices after that**. Even this sounds high to me, especially if a TV is one of those screens. The negative effects of passive TV watching are well documented. A tablet or a short educational video is a far better choice for screen time for a preschooler than TV.

[eParenting: setting limits even when your kids know more than you do](#)

[How to limit your kid's \(digital device\) usage](#)

Control the content

TV and the internet can be savage places for a child. Uncontrolled access to content from either means inappropriate exposure to all kinds of things at best, and a subverting of your parental role and brain development issues at worst. TV time should be very limited with children of all ages. I truly understand parents who eliminate it altogether. Exposure to TV

advertising is reason enough to turn it off. Then there is the incredible violence, rapid fire images and refresh rates that stun the nervous system, inappropriate images and language, the depersonalization of human interaction, and the way it turns children into passive zombies addicted to flashing lights. The use of internet streaming devices makes it easier to manage content, but careful monitoring is always required.

Tablet apps vary widely in quality from the barely usable to truly excellent. Good parental controls and choosing apps wisely are essential. I reviewed over 500 apps while doing this edition, and many (especially android) were junked. Those that made the cut are apps that have the highest quality content and can be used safely by a preschooler.

Here are some good resources for parental controls:

How to set up iPad parental controls

Mobicip Safe Browser is used by many iPad owners.

Kids Place is a popular parental control app for android users with access to Google Play.

Kindle Free Time is used by many Kindle Fire owners.

Funamo Parental Control app can be used on all android devices, including Kindles.

The **Nabi 2** kids tablet comes with parental controls built in. This feature, along with this tablets specs, it's ability to access Amazon's app store, and a protective case at no extra cost, make it a great choice for parents looking for a tablet designed for kids.

Track and control the content your child sees on all screens right from the start. **Independent use of tablet apps is to be encouraged, but join in and participate with your child whenever you can. Turn screen time into family time.** Discuss what your child is doing and play games with her. Help him find videos and safe web sites dealing with topics he is very interested in. Show your child how to use the internet as a productive tool for information gathering and understanding our world.

Protect your child's eyes and ears

Improper use of headphones can negatively impact your child's hearing. **Exposure to even a short burst of loud sound through headphones can cause immediate hearing loss in children.** Get your child **volume-limiting headphones** and make sure she uses them.

Overexposure to video screens can result in **Computer Vision Syndrome**, a complex of symptoms that negatively impact a child's vision and eye development. Take **common sense steps** to prevent eye strain and more serious problems. Start by strictly controlling screen time.

Choosing a device

Tablets are ideal for preschoolers. Laptops have larger screens and are better for learning to type. Having both available is ideal. Get a **stylus** for practicing writing and drawing on touch screens. This encourages the development of a **writing grasp** (p. 401).

iPad



The **iPad** and **iPad Mini** have wonderfully crisp displays, powerful processors, and access to, by far, the current best collection of quality apps. The iPod Touch is too small and expensive when you can get an iPad mini, an iPad2, or a used iPad for not much more. A **used iPad2** is nice for kid use. A **screen protector** and a **good case** are recommended for iPads that kids use.



To use your iPad to **access educational web sites that still use flash**, Like Starfall and many others, download the **Rover Browser app**. This great little browser gives your child access to all those flash based sites you could otherwise only view on a laptop. Many sites recommended in this book use flash, so Rover is a great tool for iPad users.

When it comes to apps for preschoolers, **the Apple app store shines far brighter than Google's or Amazon's android app collections at the time of this writing.** This is the major advantage the iPad has over android tablets right now. *If* android apps improve (and that's a big if), look for iPad sales for kids use to decline due to their higher price.

Android



I use a **Google Nexus 7** to review android apps, and I really like it. The preschool apps are not on par with Apple's, but I found the tablet about as good as my iPad in terms of screen resolution and ease of use. A child will probably not notice any difference. The biggest difference is the price. Many parents find it hard to justify buying an iPad Mini when the Google Nexus 7 and **nabi 2** are far cheaper. The problem is that **Apple kids apps are far superior.** You save money on an android tablet, but the apps are inferior, so your child does not gain anything in terms of learning. Many people like the Kindle Fire HD android tablet. You can rent devices at **Gizmotakeout** and try them before buying.

Google Nexus 7 VS Kindle Fire HD 8.9



Tablets designed just for kids are everywhere. The **nabi 2** has a quad core processor, the latest android OS, and good screen resolution. Memory is expandable, and it comes with a protective case and parental controls included in the price. To try one out, rent it from **Gizmotakeout**. If android kids apps improve dramatically (see below), look for tablets like this to take over.

Apple vs Android

The iPad edges out the best android tablets in hardware performance. **Apple's apps for children far outshine the android apps on Google and Amazon.** You save money buying an android tablet, but what good is that if the apps are lousy? Until android apps for children improve dramatically, I recommend saving up for an iPad or iPad Mini. Android apps for preschoolers may equal Apple's one day, but that day looks a long way off. Android apps may work for you, but your child will get a lot more from Apple educational apps.

Video games vs Educational apps & games



Educational apps and video games are very different experiences. **Video game time should be strictly limited.** Young children are very vulnerable to **video game addiction**. Educational apps are a better choice. Examples of good games are found on pages 268 - 269.



Using a laptop or desktop



A video on African dancing at
Discovery Days
& **Montessori Moments**

Traditional computers have great value for early learning. Videos and games can be more interesting on a larger screen. There are still more education web sites than apps. Children can learn to type. Internet searching can be a bit easier, and files can be saved, moved, and organized more easily. Using a word processor on a laptop is still easier than on a tablet. Downloading and printing is easier. Learning their way around Windows and Apple operating systems gives a child a head start for school. You can also access older sites that still use Flash.



You Tube and **Vimeo** have videos on almost any topic a child would be interested in. As our children become "*Show me, don't tell me*" learners, **videos are becoming a primary teaching tool**. Their typically shorter lengths concentrate information and prevent extended passive watching. Videos usually focus on one topic or experience.

It is easy to set up favorites and playlists on You Tube so that your child can watch videos of special interest multiple times. You can set up a family channel and post your own videos with your child as the star. Use them to relive special trips and other meaningful experiences. Take advantage of these resources for your home early learning program.



An **Apple TV** unit (\$99), or a **Roku 2 HD** box (\$79), let you easily stream educational You Tube videos, and all kinds of cable-free television programming, right to your TV using your home internet wifi system.



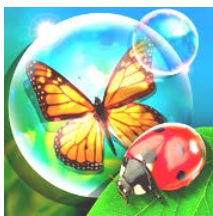
Lots to Learn is You Tube's own collection of preschool early learning videos.

Turtle Diary is a free site with all kinds of educational, animated videos.



Multi-purpose Tablet Apps

Good apps are recommended throughout this book, especially in the Sensorial, Reading and Writing, Geography, Science, and Math chapters. Below are examples of great apps that teach multiple skills, and that most young children will enjoy.



Bugs and Bubbles (iPad) by **Little Bit Studio** is a beautiful, thoroughly engaging app. Gorgeous graphics and a variety of perfectly interactive games revolving around a bubbles theme make this a must-have app for every preschooler with an iPad. These folks are good.



Bitsboard (iPad) from **Grasshopper Apps** is just about the only object - color - shape - word - sound - animal - number or anything else you want to identify app your child will ever need. Replaces a hundred lesser apps. These folks create wonderful apps with real world images.



Bugs and Numbers (iPad) is another marvelous app, one of the best currently available for young children. It is hard to say too many good things about the apps **Little Bit Studio** produces - keep it up!



Scribble Press (iPad) lets your child create her own ebooks, with stock or custom illustrations, a wonderful way to draw a child's attention into reading and encourage creativity while making custom books that guarantee a high level of interest. Younger children will need help, but they'll take over soon enough.



Teach Me Kindergarten (iPad) is an example of a good multi-purpose app for a 5-6 year old who is doing addition, subtraction, spelling and sight word recognition activities. A child goes back and forth between different challenges and skills, adding variety.



Finding Nemo Storybook Deluxe (iPad) is an interactive storybook with multiple reading options and good companion activities. Good multi-purpose apps based on a popular movie or book can become fond memories for today's kids, as well as teach real skills.



PBS KIDS Video (iPad) is a good alternative to TV when your child needs some down time. If you like PBS's offerings like Curious George, Arthur, Sid the Science Kid, and The Electric Company, your child can watch them all with this app.



Zoo Train (iPad, **android**) is a nice multipurpose app for a 3 year old, with different games and interactive experiences.



Grandpa's Workshop (iPad, **android**) is a nice app with many fun activities for younger children.

Games

We all love games, and why not? For young children games are not only fun, they teach critical thinking, planning, strategy, cooperation, healthy competition, and how to win and lose graciously. This makes them perfect candidates for tablet apps. Here are just a few of the many good game apps for young children:



L: **Battleship For Kids** (iPad, **android**) has beautiful graphics & kid-friendly design. R: **Labyrinth** (iPad, **android**) is fun and develops fine motor control while teaching strategy and timing.



L: **Draw With Squares** (iPad) develops visual acuity & counting skills & prepares kids for the **Hundred Board** (p.). R: **Tangram Puzzles** (iPad) develops visual-spatial and problem solving skills.



L: **Flow Free** (android) requires strategy and planning & develops visual acuity. R: **Grid Drawing for Kids** (iPad) is similar, & helps a child focus on lines and form, an essential pre-reading skill. Using a stylus will prepare your child for writing.



L: **Mini Train for Kids** (iPad), encourages planning and attention to visual detail. R: **Air Hockey** (iPad, **android**) has 1 and 2 player options so you can play together.



L: **My Play Home** (iPad), is a free play and exploration app about a family & their home. Probably more suited to younger children. R: **Toca Kitchen** (iPad) is part of a wonderfully **fun series of Toca apps**.



L: **Jelly Car 3** (iPad) is *not* a typical racing app. Everything is squishy. R: **Pool Break** (iPad) takes pool out of smoky bars and makes it a game for learning about angles, colors, numbers, and physics.





Where's My Head? (iPad), **Amazing Alex** (ipad, **android**), and **Cut The Rope** (iPad, **android**) are physics-based games requiring planning, timing, and predicting how objects will behave. Your child can try alternatives, experiment, and learn as she goes.



L: **Family Golf 3D** (ipad) is a fun app. R: **Crazy Golf 3D** (iPad) requires aiming, planning, physics awareness, and strategy. **More great golf apps**



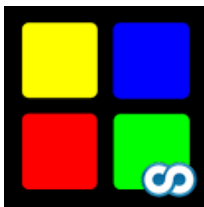
L: **Sprinkle Jr.** (iPad, **android**) is a nice app for younger kids. R: **Dr. Panda's Hospital** (iPad, **android**) lets kids play doctor, learn a few things about health care, and make cute, but sick, animals very happy.



L: **Awesome Eats** (iPad) is an awesome sorting game app. R: **Snuggle Truck** (iPad) is a fun racing game with great graphics.



L: **Road Trip Bingo HD** (iPad) will keep your child occupied and building visual discrimination skills on the road. R: **Chess Free HD** (iPad) Lets older children get started for free with this wonderful game.



L: **Classic Simon** (android) is just like the original, only with more. R: **Where's My Water?** (android) is a super popular app with many android users.



Common Sense Media is an excellent review site covering all kinds of media

Laptop Links

If you start your child out with a laptop or desktop instead of a tablet, there are an enormous number of great sites with games, activities, and other resources. Here are a few good ones to get your child started:

Disney jr.	Funschool	Enchanted Learning
Seussville	Knowledge Adventure	Dance Mat Typing
Nick Jr.	Mother Goose Caboose	National Geographic
Shambles	pbskids	Funbrain
freeonlinetypinggames	abc mouse	Kneebouncers
Auntlee	kidsknowit	Lawrence Hall of Science
Lego Games	tvo kids	Sesame Street
Jumpstart	Explore The Blue	Kidzui search engine
Math Nook	Great Websites for Kids	Cookie
Starfall	Kidsites.com	Discovery Kids

Install safety

Parental control software has come of age. Programs like [AVG's Family Safety](#), [K9 Web Protection](#), [Net Nanny](#), [McAfee Safe Eyes](#), and [Web Watcher](#) provide you with the ability to track your child's activities online and block unwanted sites. Install one and use it religiously from the time your child first touches a computer.

Safe search engines for kids give you another level of protection. Here are some resources:

[10 Search Engines for Kids](#)

[SafeSearch for Kids powered by Google](#)

[5 Safe Search Engines for Kids](#)

[Common Sense Media](#) is a wonderful site for checking out safe places to go, seeing website ratings, and other information.

[Keeping Kids Safe Online](#)

[Google guide to staying safe online](#)

Learning computer basics

Most three year olds can learn to use a mouse. Do some simple, one word searches (red, lion, house, etc.) and let your child click on photos for practice. Teach your child the names for things: keyboard, display, mouse, power cord, trackpad, etc., and where everything is. Show him how to print something. Here are more resources for ideas:

[Teach your child how to use a computer](#)

[Kids & Computers: teaching basic skills](#)

[Teach your child computer skills with Boowa and Kwala](#)

Search together

- Using a safe search engine (p.270), do 1-2 word internet searches together, like red, house, squirrel, ice cream, etc. Let your child come up with some. Take a look at the **sites**, **images**, and **videos** you find and talk about them. When your child is getting familiar with the process, give her a specific task to accomplish, like "*Find a red frog eating.*" This will evolve as your child grows and learns.
- Surf new links as you find them. Show your child how to go backwards and forwards through recent pages viewed, and how to open new tabs and cut and paste in URL's.
- Search for activities related to your child's favorite books.
- Whenever your child has an experience that is obviously interesting or meaningful to him, expand on it with an internet search. See if you can find something new about it. Print out photos and make a book.
- Show your child how to cut and paste something of interest from the internet into a new document, then print it out.

[Practical advice for parents: computer use](#)

[Kids, computers, and computer vision](#)

[PBS Parents: Children and Media](#)

[Computers in preschool: hurting or helping?](#)

Science



“It is necessary to place the soul of the child in contact with creation, in order that he may lay up for himself treasure from the directly educating forces of living nature.”

"We especially need imagination in science. It is not all mathematics, nor all logic, but it is somewhat beauty and poetry."

Maria Montessori



Young children have a natural curiosity and an insatiable appetite for learning about the world. They look at their surroundings with awe and wonder. Children continuously absorb sensory impressions of their environment, and reach out to gather more. All we have to do is present the world in ways they can understand and learn from. Their inner drive to explore and learn takes over and they eagerly pursue activities. Montessori called this ***Spontaneous Activity In Education***.

Kids love science. A 4 year old has no tests or assigned chapters to read, no arbitrary benchmarks to measure her learning. She explores the world like a true scientist, with a thirst for knowledge. To a young child, science is magic and secrets unfolding. A child experiences joy when he suddenly understands something in a way he did not just a moment earlier. Showing children how their world works is incredibly fun and rewarding. Teachers know this; I hope more parents experience the same rewards.

The activities are generally organized by type - the human body, weather, plants, animals, etc. Things jump around a bit, don't be surprised if something looks out of place. Everything in our world is connected. Science for young children need not be complicated or expensive. At this age children are exploring the world for the first time. The simplest experiences can be the most meaningful and fascinating. The important thing is that children **see things happen** and **participate**. **Science activities collection**

As you do these activities, **look for ways to introduce language, math, sensory experience, and practical life** skills. Extending and expanding activities can make them even more valuable as learning experiences. Young children have absorbent minds. Whatever you show them when their attention is focused goes right in.

There are many great science apps, especially in the Apple App Store, and lots of cool science videos. As with all early learning, **science for young children should mostly involve hands-on, real world experience**. Images on a screen cannot substitute for the feel of earth, touching a living thing, hearing your own body working, and seeing things firsthand. Tablet apps, You Tube videos, and computer games have great value for teaching and inspiring children to discover more about their world, but should not be a child's only resources. **Getting out in nature** is number one.

Inspiring kids to connect with nature

25 Nature activities for kids



Plants

Can a plant grow without soil?



This simple experiment teaches a number of science concepts. Kids really enjoy it. Talk about how seeds and beans become plants and how they grow in gardens. Check out this cool [video of tomato plants sprouting](#). Take a look at other plant growth videos. Ask your child if he thinks a bean could ever grow *out* of the ground, *without* soil.

Materials

- A small clear glass bowl
- A cloth
- 2 each of dry beans like pinto, kidney, black or other beans. **Mung beans** (Chinese green beans) work very well.

What to do

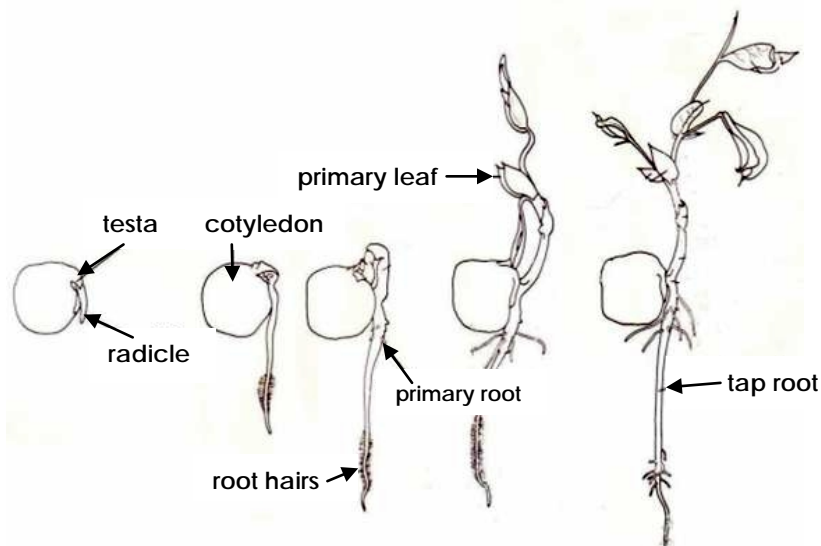
1. Let your child pour a few of each kind of bean into the bowl.
2. Have your child wash the beans and drain off the water a few times. Keeping any beans from falling out as the water is drained off adds a muscle skills challenge.
3. Let the beans soak overnight in enough water so that they won't soak all of it up.
4. In the morning, drain the water, cover the bowl with a clean cloth, and set it out of direct sunlight and direct heat. A high shelf inside a kitchen cabinet works well.
5. **Rinse the beans with water and drain 1-2 times a day for 2-3 days, keeping the beans in the same dark or semi-dark spot.**



In a couple of days, you should see the beans sprouting. Let your child taste a few. The sprouts will continue to grow until they get pretty large.

Videos: [A seedling time lapse](#) [Radishes time lapse](#)

Extending the Activity



- Language: *germinate, sprout, nourish, root, shoots, stem, leaves* (more at left)
- Plant sprouts outside or in a germination pot with potting soil.
- Try drawing seedlings and labeling their parts. You could make a lapbook (p.91)

Sprouting instructions and identifying bean sprout parts

Label the Sprouting Bean Diagram

Many more great, free plant printables

Get into gardening



Gardening is one of the best possible science experiences for children. They can help prepare the soil, plant seeds, and water and care for their own flowers, vegetables, and beans. You can create a garden plot or just use pots on a patio.

Top: [Chasing Cheerios](#) [Composting at home](#) [Planting seeds](#)

Plants in pots can become self-contained Practical Life activities (top photo). Add a small spray bottle of water and cotton balls and your child can wash the leaves. Show her how to **use her finger** to see if it is dry. Dead leaves can be pruned. The health of the leaves and stem can be checked.

Gardening is a fantastic opportunity for cooperative family projects. Shopping for supplies; preparing plots, pots, and soil; watering and caring for plants and flowers, learning about insects, making flower arrangements, eating vegetables - the opportunities for early learning are endless.

Bottom: [Discovery Days & Montessori Moments](#)



The Children's Garden at Chasing Cheerios

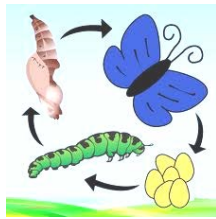
Gardening with Children - Colorado State University

Gardening with Children - Earth Easy

Gardening with Small Children - Renee's Garden

Family Gardening at KidsGardening.org

Photo: *Chasing Cheerios*

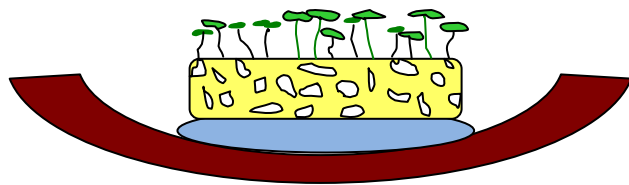


Left to right: Good plant apps. **Parts of Plants** (iPad). **Gazzili Science** (iPad) has a fun plant interactive. **Life Cycles** (iPad, **android**) is an 'edutainment' app, suited for 5-6 year olds who will listen to a presentation. **Seed Cycle** (iPad) is a nice interactive. **Parts of a Plant** (iPad) is a good app a younger child can use alone or with a parent.

Sponge Salad

Materials

- A new, rough textured sponge
- Cress seeds
- A dish



What to do

Rinse the sponge several times with clean water and lay it in the dish. Sprinkle cress seeds over the top of the sponge. Add some water to the dish. In about a day the seeds will crack open. They will start to root in about three days, and probably by the next day will have leaves. When they get big enough, trim them off with scissors and eat. Sponge farming!



How do plants drink water?



Talk about plants with your child, steering the conversation to how plants get water. “*How do plants get water from the ground all the way up to their leaves? Do you want to find out?*” If the interest is there, off you go! This is a simple experiment with fairly quick results.

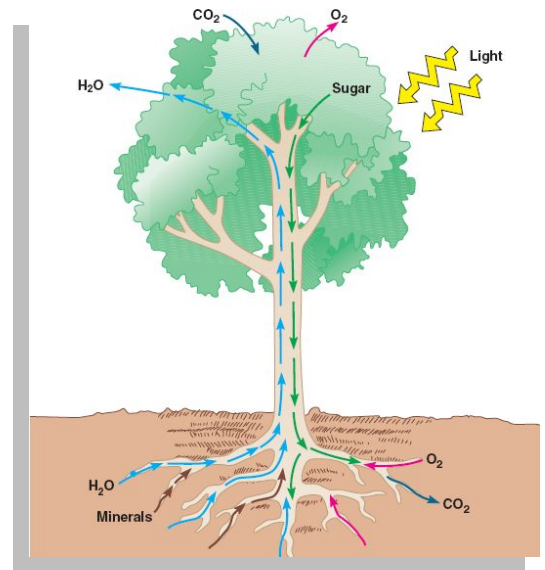
Materials

Celery stalks (some with leaves), cup, water, red or blue food coloring

What to do

Let your child fill the cup half full with water and put in a few drops of food coloring. If your child is cutting safely, she can cut about 5 pieces of celery about 5 inches long. Make nice clean cuts. Leave a few with the leaves on. Have your child put the pieces in the cup. Set the cup out of the way and wait a few hours.

When you return to the cups, examine the stalks. Can color dots be seen around the edges of the ends that are sticking up? Is the bottom of each piece stained with color? Wait another day. Now, the bottom ends will be all colored. The top ends should clearly show little dots of color at the end of each **vascular bundle** extending up the outside of the **stalk** just under the skin. The leaves should be dotted with color. Point out the lines on the outside of the celery and show your child how they are tubes going up inside the stalk. Explain that the water traveled up the celery by **capillary action**. That’s how plants get a drink.



L: A beautiful capillary action experiment using flowers at **Chasing Cheerios**.

Videos: [A tree drinking](#)

[Flower & food coloring time lapse](#)

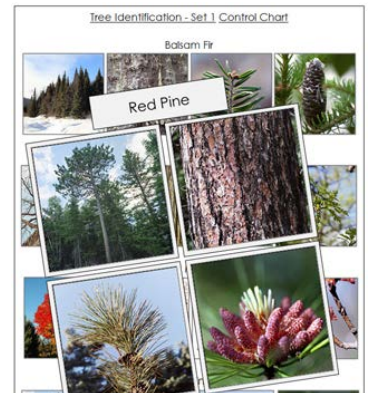
Extending the activity

- Try the experiment with flowers, like white carnations (see previous page).
- Let a houseplant get very dry and start to wilt. Take a picture of it while the leaves are drooping. Now water the plant and check on it in a few hours - it should be perking up! Take another picture for comparison. This teaches your child about **gathering factual data**.
- Pour a little water with food coloring into a dish. Have your child hold a **paper towel** above the water and dip one edge in. Watch the water rise into the towel. That is **capillary action**, and that is how plants drink.
- See pages 299-301 for activities related to the human body's circulatory system.

What tree is that?



Find a tree and find out what it is. At the **What Tree is It?** site, you can identify trees by leaf, fruit, or name. Follow the links and choose the characteristics of your tree until you find its name. At right is one of three sets of **Tree Identification Cards** from **Montessori Print Shop**. Check these out and find one with trees in your area, then go identify them. Field trip!



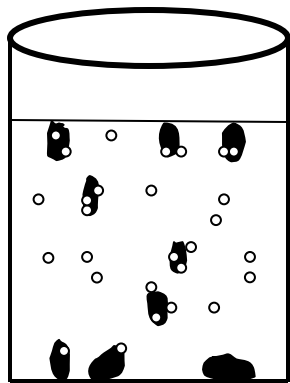
Growing carrot leaves



Cut about $\frac{1}{2}$ " off the top of a few carrots. Find a **shallow dish** and put $\frac{1}{2}$ " or so of **sand** in it. Add water until the sand is all wet but no water is visible on top. Push the carrot tops a little bit down into the sand. Let them sit in a well lit area and don't move them. Add water if the sand dries out. In a couple of weeks, you should have leaves. They will continue to grow as long as you water them.

Sprout a potato indoors

Dancing Raisins



Make raisins dance in this fun activity that is also a chemistry experiment. Learn about gases and buoyancy.

Materials

Fresh raisins, a clear glass, 7-Up or Sprite soda, baking soda, white vinegar, measuring spoon

What to do

Try this with 7-Up first. Have your child fill the glass about 2-3 full. Let him drop in some raisins. Wait awhile. You will see bubbles build up on the raisins, and then they will rise to the top of the soda and fall back down.

Another method is to pour **1 cup** - let your child measure it out - of water into the glass. Then let her add **1 tablespoon** of baking soda and stir until it is dissolved. Where did the baking soda go? Now he can add raisins. Next, have him **very slowly** pour the white vinegar in. The reaction should produce bubbles and dancing raisins.

What happened?

- The bubbles in the soda are *carbon dioxide gas* that is trapped in the soda and gives the soda its 'fizz' when it escapes.
- The bubbles attach to the raisins and make them lighter and more *buoyant*, carry them to the surface, and then *evaporate* away, leaving the raisins to sink back down.
- *Baking soda* is a *base*, and *vinegar* is an *acid*. Acids and bases *react* when they meet. These two create *carbon dioxide gas*, just like the gas in the soda.

Extending the activity


Try using other small objects - popcorn kernels, beans, paper clips, etc. See which ones the bubbles can lift and which are too heavy. Rough surfaces help. Enough bubbles must attach to create the buoyancy required to lift the object.

Try using half soda and half water. Do fewer bubbles work as well?

Photo: ***Chasing Cheerios***

[Make a kid-friendly terrarium](#) [Making miniature terrariums](#) [Plant seeds in eggshells](#)
[Terrariums for kids](#) [Grow a miniature garden - National Geographic Kids](#)
Terrarium videos: [Laying a foundation](#) [Adding plants](#) [Caring for your terrarium](#)


Plant



garden







seed

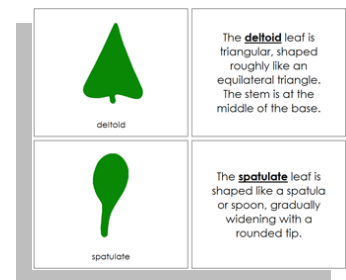
Animal



parrot

snake

Plants We Eat					
roots	stem	leaves	flowers	fruit	seed
					
carrot	celery	spinach	broccoli	tomato	lentils
					
potato	potatoes		celery		
					
lettuce	lettuce		artichoke		
					
tomato	tomato		tomato		

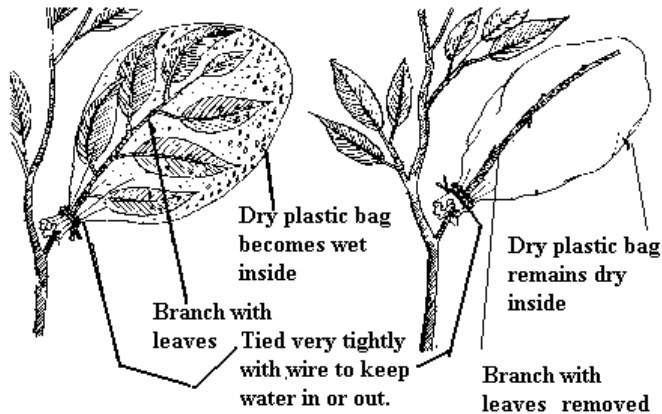


Make Transpiration Bags

9.194.1 Transpiration in plastic bag

1. Branch with leaves

2. Branch with leaves removed



Transpiration is the **loss of water** from the parts of a plant, especially the leaves. Choose a plant branch with healthy leaves, and remove the leaves from another branch. Tie a clear plastic bag *securely* around each with light wire. Wait a day or two and check the bags. The bag over the leaves should have water in it. Why is the bag over the other branch dry?

Food, light, and water make a difference

Plant two similar size, young plants of the same type, each in its own pot, using the same soil. Water both plants regularly. Add **Miracle Gro**® or another high quality plant food to just **one** of the plants. Watch them grow. Did the fertilized plant get larger and look healthier? Food makes a difference for plants, just as it does with people.

You can try the same experiment with water and light. Grow two identical plants, watering one properly and the other only occasionally. To see the effect of light, try growing one plant in a dark room, another under only artificial light, and the third outdoors.

These experiments can introduce your child in a basic way to the concept of **isolating a variable** in an experiment. One factor is manipulated to see its effect.

Plant sites & more activities

[Photosynthesis leaf experiment](#)

[A game to make a plant grow](#)

[Great plant and animal games and videos](#)

[Effects of light and water on seedling growth](#)

[Plant life cycle sequencing cards](#)

[More plant life cycle sequence cards](#)

Videos: [Plant Life Cycle](#)

[Bean plant life cycle](#)

[A plant that eats insects!](#)

Take a hike, check out your habitat

Getting out in nature is the best activity. Visit parks, forests, and other natural areas regularly. Your child will see the plants and animals, and observe seasonal changes. See what **habitats** are near you. Get books showing the habitats, birds and other animals, insects, and plants found in your area. See how many you can find on your trips.

[BBC Nature: Habitats](#)

[Habitats at National Geographic](#)

[Habitat facts at About.com](#)

Videos: [Forest habitat](#)

[Wetlands](#)

[Desert habitat](#)

[Tundra Biome](#)

[The Ocean](#)

[The Antarctic](#)



Good apps about habitats. Left to right: [Scholastic First Discovery: The Forest for iPad](#), is a beautiful app for children. [Amazing Ocean](#) (Android) has many features about ocean habitats. The [Magic School Bus - Oceans](#) (iPad) is expensive, but worth it. [Ecosystems HD](#) (iPad) is best suited to older children who are reading. [Animal Habitats](#) (android) is a nice book type app, as is its companion app, [Animals Under The Sea](#) (android).

What living things need to survive in all habitats:

Shelter

Protection from predators or weather.

Air

Oxygen from the air or dissolved in water is required for respiration.

Water

All living things require liquid water.

Food

All living things need food (for energy) to grow and reproduce. Some organisms (such as plants) make their own food from air, water, and sunlight. Other organisms must eat plants or other living things to get their energy.

Space

Animals require different amounts of space to find food, water, shelter and a mate. Some animals defend a large territory or roam over a large range. Other animals only need a small amount of space and can tolerate close neighbors.

What habitat(s) do you live in and what animals and plants are found there? Are the essentials for life present in your habitat? What do the animals, insects, and plants eat? What dangers are threatening the plants and animals in the habitats near you?

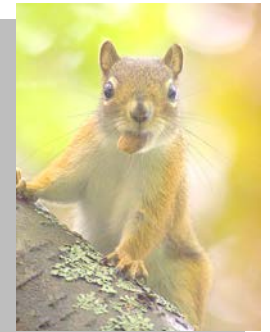
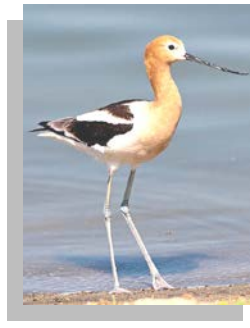
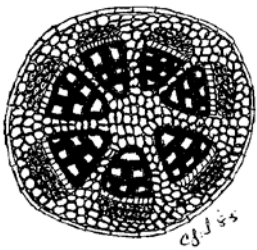
Get up close



A good quality **magnifying glass** can help your child explore a whole new world of things too small to see with the naked eye. Encourage your child to examine leaves to see the veins and structure. Examine flower petals and the inner parts of flowers. Cut a plant stem in half and examine the cross section. Is it moist inside? Can your child find the vascular tubules? Catch insects in a jar with a stem and leaves in it and let your child examine them.



A pair of **binoculars** will also add a lot to your child's nature explorations. Look at birds without scaring them and see things up in the trees and across the lake. These simple tools can open up an entirely new perspective on nature for your child. You just may spark a lifelong interest.



A **bug viewer** (**left**, and **right**) is nice to have along on field trips. Insects, small rocks, and bits of plants can be examined closely.

Animals

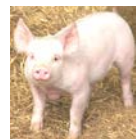
Most children raised in cities only know animals as pets, residents of the zoo, or the native birds and insects. These experiences are valuable, especially caring for the family pet(s). It is also great to take your child to farm petting zoos, the county fair, or make friends with a **local family farmer** who has pigs, horses, chickens, and cows, and doesn't mind if you guys hang out now and then. Local **4H clubs** can also be sources of animal experiences for your child. Nothing beats firsthand experience, however you can arrange it.

Pet shops can be wonderful for observing animals. Some have mammals, fish, reptiles, birds, insects, mollusks, crustaceans, and amphibians. If you have a good pet store near you, make it a routine stop. Just be clear that you are not giving a home to every animal your child likes. Having a pet is a huge responsibility when a child is ready to help.

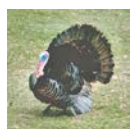
So many kinds of animals!

On pages 465-467 in the printouts you will find an **animal sorting** activity. Cut everything out and do this with your child, showing her the different types of animals. Talk about how each kind of animal is different and where they all live. Sort into their groups.

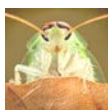
Mammals



Birds



Insects



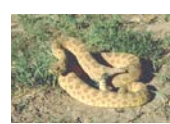
Fish



Crustaceans



Reptiles



[Identifying animals and other online games](#)

[Free animal sorting printable](#)

[Free farm animals printables](#)

[Animals memory games printables](#)

[Sorting living things into groups](#)

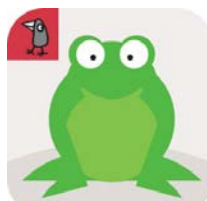
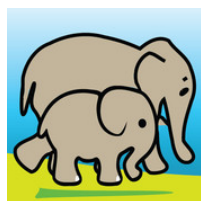
[Animal facts at National Geographic](#)

[Basic animal groups](#)

[Animal videos at National Geographic Kids](#)

[Wild animals A to Z on Animal Planet](#)

[Animal videos a National Geographic Little Kids](#)



Animal apps. Left to right: [Find Them All - Looking For Animals](#) (iPad) is a fun app for younger children. [Montessori Approach to Zoology - Parts of Animals \(vertebrates\)](#) (iPad) is an excellent app. [Preschool - Animals and Their Young](#) (iPad) shows all kinds of animals and their little ones. [Rounds: Franklin Frog](#) (iPad) is a superb app showing the life cycle of a frog. Their [Parker Penguin](#) app is also wonderful. [Montessori Animal Kingdom](#) (iPad) is a great app for 4-6 year olds. [Mini Adventures - Animals](#) (iPad) is a marvelous app, with images, spellings, and videos of over 200 animals, arranged alphabetically. A great example of using videos in an educational app.

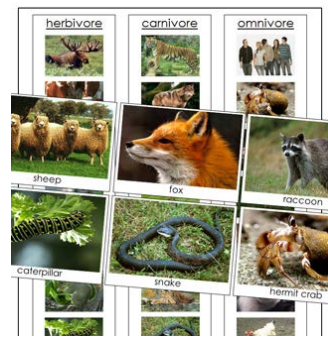
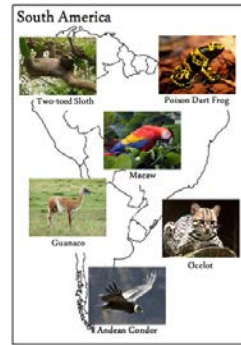


More good animal apps. Left to right: [Photo Touch - Zoo](#) (iPad), and [Photo Touch - Farm Animals](#) (iPad) are simple apps for younger children. [Zoola Animals](#) (iPad, [android](#)) for has animals, sounds, and photos of a male, female, a young animal, and animals showing affection. [Animal Sounds - Fun Toddler Game](#) (iPad) has a clean interface for younger children, [WWF Together](#) (iPad) has wonderfully presented photos and information about endangered animals. [Animals Under The Sea](#) (android) is a nice book app. Its companion [Animal Habitats](#) (android) is also good. These are two of the best android educational animal apps at present; I hope more like this appear on the android app stores.



Left: [Ansel & Clair's Adventures in Africa](#) (iPad) is a fun educational app. Right: [Bats! Furry Fliers of the Night](#) (iPad) is a wonderful book about these fascinating little creatures.





A few of the beautiful animal printables from Montessori Print Shop.

Left to right: [Animal Stripes, spots, or solids?](#), [Animal Coverings](#),
[Animals of the Continents](#), [Herbivores-Carnivores-Omnivores](#)

Videos

[Fish species](#)

[Herbivores escape carnivores](#)

[Amazing Animal Facts](#)

[Crustaceans on the reef](#)

[Reptiles on Discovery Channel](#)

[30 Bird Species](#)

[Lemur studies](#)

[How to tell herbivores, Carnivores, and Omnivores by their teeth](#)

Set up a goldfish bowl



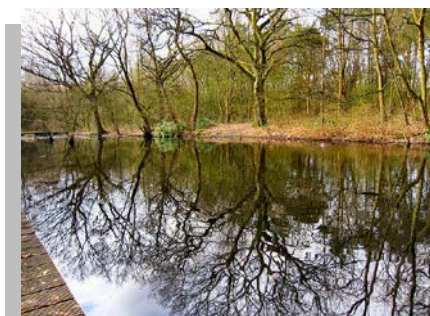
A goldfish bowl makes a great first experience in caring for a pet. Choosing and setting up the bowl is an activity in itself. Feeding the fish and regularly cleaning their bowl teaches responsibility. Have your aquarium store teach you how to set up and maintain your child's fish bowl.

Photo: *Lerdsuwa*

[Setting up a goldfish bowl](#)

[Setting up a fish bowl without an under gravel filter](#)

[The Dirt Magnet filter for small aquariums](#)



Ponds and small lakes are fantastic for **closely supervised** exploration. Minnows, insects, frogs, worms, and other creatures roam the shallows. Birds are usually around. A child can explore a small pond for hours. When she is older, a microscope will reveal even more forms of life.

Photo: *Ronald Saunders*

Ants (and other insects)



Ants are one of the best subjects for learning about living things, and especially about insects. They are incredible creatures. Ants have highly developed social skills, create very interesting underground homes, and do all kinds of fascinating things. They are easily found for observing, both in nature or in your child's very own ant farm.

Photo: Luke Elstad



Check out [The Strange and Wonderful World of Ants](#) (iPad). This is a superb educational app for children. I hope we see many more like this.

Resources

[Ant anatomy](#)

[Make your own ant farm](#)

[A cool plastic ant farm](#)

[Ant experiments](#)

[Insect body parts](#)

[Parts of a mosquito](#)

[Simple insect anatomy](#)

[Praying Mantis project](#)

Videos:

[Ant life raft](#)

[Time lapse tunneling](#)

[An underground home](#)

[Exploring at low tide](#)

[Ants build a bridge](#)

[Ants: Nature's secret power](#)

[The life of insects](#)

[Inside the hive](#)

[Honey bees](#)

[Amazing insects](#)

Don't get stung!



Show your child how to make your yard safer by hanging up a [reusable yellow jacket trap](#). You can also make your own [homemade yellow jacket trap](#) pretty easily with a plastic 2 liter soda bottle.

Bagel bird feeder



With **half of a bagel, some string, peanut butter, and bird seed**, your child can create a bird feeder. Let half a bagel harden overnight. Tie enough string through the hole to leave some for hanging the bagel outside. Have your child spread peanut butter on the bagel, then dip it into bird seed and hang it up. Sit by the window. This is for the birds!

Photo: [Mama nirvana](#)

[Identify birds with the National Geographic Backyard Bird Identifier online tool](#)

[Make a bird house or feeder with a milk carton - a nice, easy project](#)

[Help birds to build their nests](#)

[Bird matching worksheet printable](#)

[Identify any bird](#)

[Bird Preschool Pack - Bird Printables](#)

[A page of bird downloads and printables](#)

[Great example of a home bird watching project](#)

[Bird activities](#)



If your child gets into birds, and you live somewhere in North America, the [Peterson Birds of North America](#) (iPad) app will really interest her, and help you both to identify and learn more about birds.

Dinosaurs!



No doubt about it, kids love dinosaurs. It would be a different story if they still roamed the earth! Children are in awe of the power and size of dinosaurs. It is amazing to think that scientists now believe that many of our modern day birds evolved from these amazing creatures.

Photo: *Triceratops, Tyrrell Museum*

Thankfully, you won't run into dinosaurs on nature outings. We'll have to make do with plastic models, movie animations, apps, books, and a few cool projects. If you have access to a museum with dinosaur skeletons and exhibits, by all means, go. If not, take a virtual tour of the [Melbourne Museum Dinosaur Walk](#).



Dinosaur apps. Left to right: [Scholastic First Discovery: Dinosaurs](#) (iPad) is a very nice app. Scholastic makes excellent materials. [Britannica Kids: Dinosaurs](#) (iPad, **android**) has a wealth of information. [The Magic School Bus: Dinosaurs](#) (iPad) is part of an expensive, but wonderful, series of book apps. [My First Puzzles: Dinosaurs](#) (iPad, **android**) is a puzzle app for younger children. [Journey With Dinosaurs](#) (iPad) has great images and a book format. [Fossil by Claire Ewart](#) (iPad) is a nice fossil story. [Fantastic Dinosaurs](#) (iPad), is a catalog type app with many photos of dinosaurs organized by period and type.

Good Books about dinosaurs

[Magic School Bus In the Time of the Dinosaurs](#)

[Magic Tree House #1: Dinosaurs Before Dark](#)

[The Dinosaur Museum - an Unforgettable Virtual Tour](#)

[Berenstain Bears' Dinosaur Dig](#)

[Oh My, Oh My, Oh Dinosaurs!](#)

[Dinosaur Encyclopedia](#)

[Dinosaur Roar!](#)

[Digging Up Dinosaurs](#)

[The Lost Dinosaur Bone](#)

[How do Dinosaurs say Goodnight?](#)

Movies & Videos

[Dino Tribute](#)

[Last Day of the Dinosaurs](#)

[Little Das's Hunt](#)

[Ice Age](#)

[Tyrannosaurus Rex](#)

[The Land Before Time](#)

[Tarbosaurus and a plant eater](#)



A set of plastic dinosaurs is always welcome. The [Jumbo Plastic Dinosaurs](#) at left were \$10.95 on Amazon at the time of this writing. Just as cool, especially for fossil projects, is the collection of 12 [Dinosaur Fossil Skeletons](#) at right, \$7.50.



Make Fossils



Fossils are how we get in touch with creatures from long ago, so why not make some? A [Safari Ancient Fossils TOOB](#) (top, left), an [Insect Lore Big Bunch O' Bugs 15 pack](#) (top, right), or a pack of plastic bugs from a discount or toy store, plus some **Play Doh®** will get your child's fossil explorations started.



Hide the insects or play fossils in a bowl of beans for your budding paleontologist to find, as in the photo at left. Later, you can do more elaborate digs outside in a tub full of dirt or sand.

Photo: [Chasing Cheerios](#)



Press plastic insects down into Play Doh sheets, cut into separate 'fossils', and let the impressions harden overnight. Try different colors of Play Doh. Make **name cards** for the insects to add language. You could make a hole in each and make a string of fossils.

Photo: [The Education of Ours](#)



Fossil cookies are always a big hit. At [Chasing Cheerios](#) (photo), they used a simple cookie recipe and **Play Doh stampers**. You could also use well washed sea shells, plastic dinosaurs, or plastic insects.

Photo: [Chasing Cheerios](#)

[More fossil cookies at Homemade Mamas](#)



The [Dig it Up Excavation Kit - Tyrannosaurus Rex](#) can be fun for a child who is seriously into dinosaurs. \$12.95 on Amazon.

[Dig out a virtual fossil online](#)

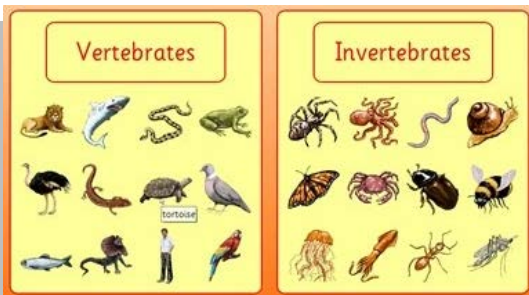
[Bake a fossil cake](#)



Montessori style, self-contained dinosaur materials from [Counting Coconuts](#). Left: Free **Dinosaur information cards** from [Montessori Print Shop](#). Middle: Punching dinosaur outlines with a pushpin. Your child can cut these with scissors if she is ready. Get free dinosaur, and other, outlines at [Enchanted Learning](#). Right: Cleaning a dinosaur.

These are great examples of creating language, fine motor, and Practical Life materials around a theme. You can do the same with many themes - holidays, other animals, plants, family trips, almost any subject your child is interested in.

Vertebrate or Invertebrate?



Review with your child that our bodies have **backbones and a skeleton**. Tell her that animals that have these, including us, are called **vertebrates**. Animals that do not have a spine and a skeleton are called **invertebrates**. The word **vertebrae** refers to the bones that line up to make the spine.

Help your child feel the points of her spine, and yours, with her fingers. Print out either or both of the activities below and help your child as needed to sort the animals out as vertebrates or invertebrates. Google fish, dog, bird, horse, frog, and other skeletons to show your child examples of the similarities of their bone structures to ours. They have **heads, spines, ribs, and extremities with appendages**, like our fingers and toes.

[Vertebrate / Invertebrate sorting printable \(under Science\)](#)

[Vertebrate / Invertebrate sorting cards](#)

[Animal skeleton printables](#)

Video: [Vertebrates and Invertebrates 1](#)

[Montessori Print Shop sorting material](#)

The Human Body



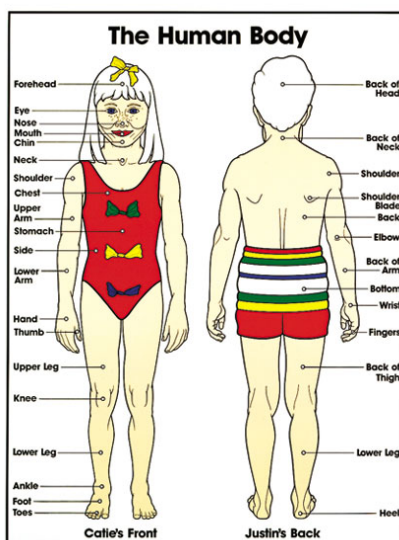
Our bodies are one of the best science materials you can find. They are handy (no pun intended), incredibly complex, and fascinating. A child can learn all kinds of important, very useful things about her body and how to take care of it. Many of these activities may spark *your* curiosity, too.

Photo: Shutterstock

[Visit the Incredible Bio-Digital Human](#)

As with all activities, **never shy away from using correct terms** for things when learning about the body. Young children are just absorbing it all. They learn correct terminology just as easily as simple words. The scientific names for parts of the body, animals, plants, and other things should be introduced to children as they learn. Learning all the names for things, and parts of things, is important for language development.

Learning the parts of the body

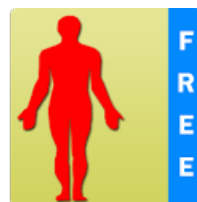
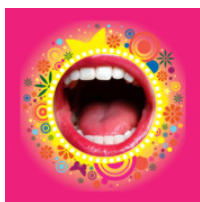
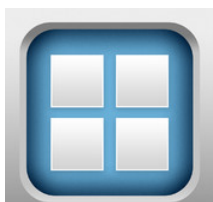


Learning the parts of the body is like learning to count. A child picks a lot of it up as you talk about your bodies when bathing and at other times. By the time you do these activities, your child may already know many of them. It is a good idea to be sure, though, because this is the starting point for all of our Human Body activities. Learning the names of the parts of the body is great preparation for mastering terminology later in school. Getting comfortable with anatomy names now is great experience.

[Fantastic free human body lapbook printable](#)

[Human Body Project at The Home Teacher](#)

[Human body coloring printables](#)

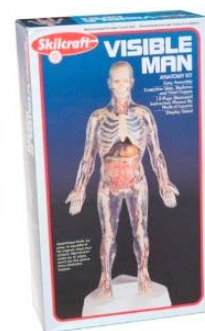


Left to right: **Bitsboard** (iPad) has board, matching, and naming activities for almost anything, including body parts. **Discover Your Body HD** (iPad), goes beyond body parts into exploring the systems of the body. **Parts of the Body for Kids** (iPad), is a colorful app with fun photos and a few simple games. **Body Parts for Kids** (android) is a simple, basic app. **This Is My Body** (iPad) has many great activities and covers a lot of information.



Left: At **Chasing Cheerios**, they made a parts sorting activity from a couple of **Mr. Potato Heads**. Right: The **Visible Man** and **Visible Woman**.

Human body tracing & drawing project



More Body Parts resources

[Body parts slide show](#)

[Body parts song](#)

[Body parts video](#)

[Body parts and words video](#)

[Body parts: The Bath Song](#)

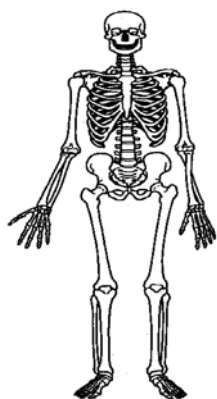
[Body parts lessons & games](#)

[Body parts pictures](#)

[Body printables and images](#)

[Talking about body parts when your child asks about genitals](#)

Bones

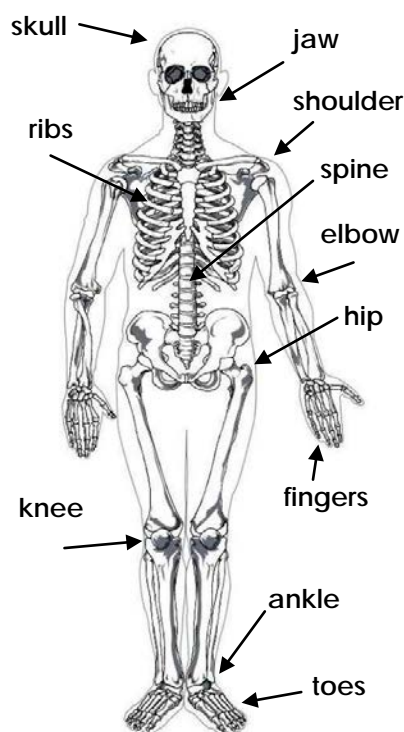


Mr. Skeleton does more than come out on Halloween. Without our **over 200 bones**, we'd be bags of skin! The **Skeletal System** is great for early learning. Bones are easily felt on many parts of our bodies. Chicken and other supermarket bones can be studied first hand. Your child can see what we have in common with other vertebrates. There are many great videos, good apps, free printables, and great web sites to visit.

[Doing The Skeleton Dance](#)

[See the skeleton at Bio-Digital Human](#)

These Bones of Mine



Bones of mine that I can feel

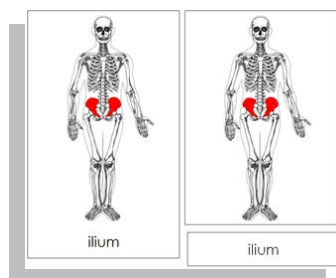
fingers	chin
knuckles	sternum
hand	ribs
wrist	hip
forearm	knee
elbow	ankle
shoulder	foot
jaw	toes
head	spine

All you need is a **picture of a human skeleton**. Title a sheet of paper '**Bones of mine that I can feel.**' Have your child start with the **fingertips** of one of hand. She can squeeze her fingers one by one, feeling for the **bones** under the skin. Some bones are easier to feel – like the **knuckles** where bone sections join. Have your child bend a finger and feel each knuckle. Repeat with other joints like the wrists, elbows, shoulders, hips, knees, and ankles.

Have him (or help) write the names on the sheet and draw an arrow to the bones he finds. Help your child as needed to find her **fingers, knuckle, wrist, forearm, upper arm, shoulder, chin, jaw, head, sternum, ribs, spine, hip, knee, ankle, foot, and toes**. Do the same bones on each side feel the same?

Have your child feel for bones down one side of her body and then the other. Include the same spots on each arm and leg, as well as the skull, jaw, sternum, and ribs

If your child is writing well now, have him write down a list of all the bones he can feel on the sheet of paper. Do this for her if she is not quite ready yet. Save this sheet and use the words as practice sight words when your child gets to that point in the Reading Sequence.



A great set of 25 **Skeleton Three Part Cards** (left) is available from **Montessori Print Shop**. See page 96 for directions on using these.

[Learning about the skeleton in Montessori school.](#)

[Get a free, large, printable skeleton here](#)

[Skeleton unit at Living Montessori Now](#)

[Online skeleton labeling game](#)

[Make a Q-tip skeleton](#)

[Cool paper skeleton to print out and assemble](#)

[Free printable skeleton](#)

Extending the activity



After a chicken dinner, save a leg and thigh bone, clean them well and let your child examine them. You can also use larger marrow bones or other large bones from the market. Feel how strong they are and how hard to bend, even though they are very light. Get a large, raw, **marrow bone** and examine the center. The middle is filled with **bone marrow**. This where our **blood cells** are made. Get some of the marrow out with a fork or toothpick, spread it thin, and examine it with a magnifying glass.

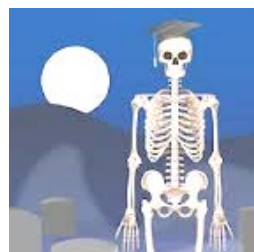


Top left: at [Chasing Cheerios](#), they found x-ray pictures on the internet, printed them out, and taped up a skeleton on a glass door. Middle: [Dem Dancing Bones](#) (iPad) is a fun app. Far right: The ladies at [Chasing Cheerios](#) made another skeleton using a [free printable](#).

[Using printed x-rays](#)

[Child size skeleton printout](#)

[The Skeletal System](#)



Left: [D. Bones](#) (iPad) is a nice bone app, with naming, 3-level puzzle, and quiz activities, best suited for 4-7 year old children. Right: [Discover Your Body HD](#) (iPad), has good skeleton activities.



[Good skeleton books](#)

[How the knee works](#)

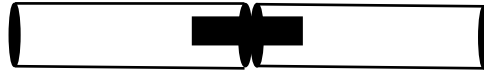
[Fun skeletal system video](#)

[How joints work](#)

[Check out the skeleton at Virtual Body](#)

[Move a virtual arm joint!](#)

Make a moveable joint



Tape two paper towel cardboard cores together as shown to make a bendable joint and illustrate how your arms bend at the elbow, and how your legs bend at the knees. The tape represents the **ligaments** that hold bones together, and the **tendons** that connect muscles to bones.

Animated Joint Videos:

[Elbow](#)

[Knee](#)

[Shoulder](#)

[Hip](#)

Protecting your bones



Keep your bones healthy by being **active** every day. When cycling, skateboarding, or playing sports, wear **protective equipment** like a helmet and protectors for your elbows, knees, and hands. Eat at least **3 servings of dairy products** like milk, yogurt, and cheese every day.

Photos: Shutterstock



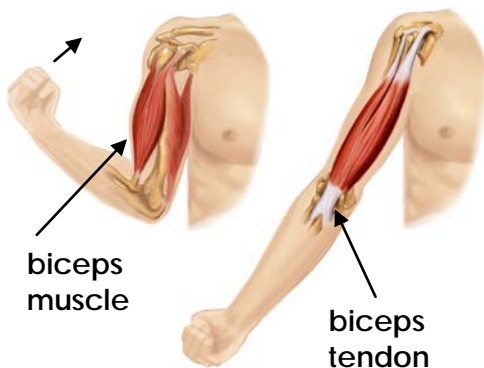
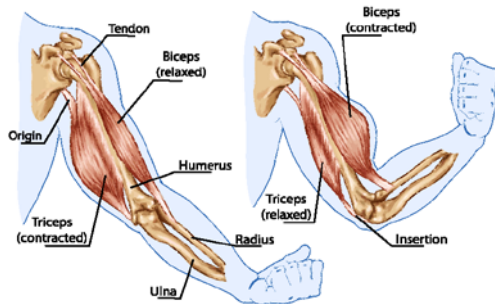
Muscles



Muscles make us move. They move our bones and our skin, allow us to breathe, and pump our blood. Without them, we would be statues! Muscles also protect our bones and internal organs from harm. We use our muscles every day, all the time, without thinking about what they do for us. Muscles have allowed humans to roam the earth, build great cities, play musical instruments and sports, pretty much everything we have accomplished throughout history.

Photo: Shutterstock

Find your muscles & tendons



Photos: Shutterstock

Videos

[How your arm bends](#)

[The muscular system](#)

[How muscles work](#)

[The muscles used to squat](#)

[Your heart is a muscle](#)

This activity requires just your body. Have your child stand feet flat, with one hand on a wall or chair for balance. Using her other hand, have her feel the **calf muscle** on the back of one of her lower legs. It should be soft. Have him **stand on tip toe** and feel the calf muscle again. Now it should be firm and tight. The calf muscles raised her heels off the floor.

Still on tip toe, have your child feel lower down where the calf muscle joins the back of her foot. She should feel a hard, rope-like thing joining the calf muscle and her foot. That is the **Achilles Tendon** (top photo). **Tendons are like ropes that connect our muscles to our bones so the muscles can move our bones.** Let your child feel *your* calf muscle and Achilles tendon while you do the same motion.

Repeat the activity with your child's arm. Have her hold her arm out straight. Have her feel the top of her upper arm. The muscle should be soft. **Press down slightly on her hand for resistance** so she has to work a little to **bend her arm**. Have her feel her upper arm again. The muscle should be tight and bunching up in a ball as she works to bend her arm. That is her **biceps muscle**. Have him feel that muscle **contract** as he bends his arm again against your light resistance. The biceps muscle is pulling the lower arm up.

Next, have your child bend her arm against resistance again, feeling this time just above the elbow. That hard, rope-like thing is the **biceps tendon**. It joins the biceps muscles to the bones of the lower arm. Let your child feel your biceps muscle and tendon as you lift a jug of milk or other heavy object.

How many other muscles and tendons can you find and feel?

Fun Muscle Facts

Our bodies have over **650** muscles! The **longest** muscle in our body is the **sartorius muscle** that connects the hip and the knee. The **strongest** muscle is the **masseter muscle** in our jaw, which helps us chew. The **smallest** muscle is the **stapedius muscle** inside our ear. It helps us hear. Of all the muscles, the **muscles that move our eyes** move the most every day.

Trick your muscles

This **classic trick** lets you fool your muscles. Stand in a narrow doorway. Lift your arms out to the sides so the backs of your hands press against the sides of the doorway. Press outward pretty hard for at least a minute. Now step into the room. Your arms should raise upward to your sides by themselves, as if they had balloons attached to them! Why? It takes your muscles a few moments to realize the door is no longer there.

Muscles get tired

Have your child squeeze a clothespin quickly as many times as she can in two minutes. Write down how many times she could do it. Let her rest one minute and repeat the exercise. Could she squeeze as many times the second time? Muscles get tired!

Muscle Resources

[Muscles with and without name labels](#)

[Muscle coloring and labeling printables](#)

[Muscular System at Bio-Digital Human](#)

Video: [The Muscular System](#)



Left: [Discover Your Body](#) (iPad) has a couple of nice muscle activities. Right: [This is My Body - Anatomy For Kids](#) (iPad) is a more complete app with more to do and learn.

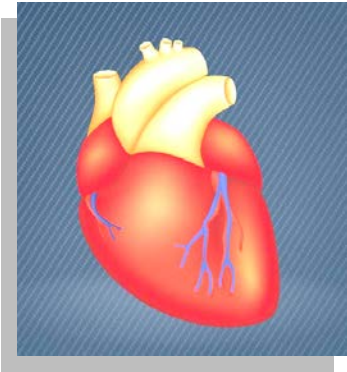


Left: The [Fit Deck Junior](#) (iPad) app has fun exercises to help your preschooler - and you! - stay in shape and build strong muscles. Right: The [Fit Deck Junior](#) has exercises on a cool deck of cards.



[Healthy Muscles Matter - The National Institutes of Health](#)

Heart and blood vessels



The **heart** is an **amazing pump**. It pumps **blood** to our body for our entire life, through tubes called **arteries, capillaries, and veins**. This is our **Circulatory System**. A child has over **60,000 miles** of blood vessels - enough to go around the earth about 2 1/2 times! The heart beats up to **3 billion** times during our lives.



Photos: Shutterstock

Videos:

Bill Nye on the Heart 3D Animations of the Working Heart Types of blood vessels
What is Blood? The Circulatory System Schoolhouse Rock - Do The Circulation

How much blood is inside me?

A child has about **3 liters** (3.2 quarts) of blood. Show your child how much this is by letting her fill water or soda bottles with 3 liters of water, and adding red food coloring. A large soda container is usually a 2 liter container. An average adult has 5.6 liters of blood.

Take your pulse



You can feel your heartbeats, called the **pulse**, in many places. With your child, locate the **radial artery pulse point** (top). Move a little closer to the thumb if you can't quite feel it with two fingers pressing lightly at the point shown. Next, locate two pulse points on each foot - the **dorsalis pedis**, and **posterior tibial**.

Count yours or your child's pulse for **60 seconds**, or do **30 seconds and double it**, to find your **pulse rate**.

The normal range for the resting pulse for an **adult is 60-90 beats / minute**, and **70-100 beats / minute for a child**. If you have been exercising, your pulse rate will be higher. See the next activity.



Make your heart beat faster

	Rest	Active	After 3 min. rest
Me	82	138	84
Dad	68	132	76
Mom	72	128	80

What happens to the heart rate when we exercise? Find out with this simple test, most suited for older children. **Take your heart rate for one minute at rest.** Now, **run in place rapidly for 3-5 minutes** and then stop and take it again. **Sit down for 3 minutes** and take your pulse again. Fill in the results as shown at left. What do these numbers tell you about your hearts?

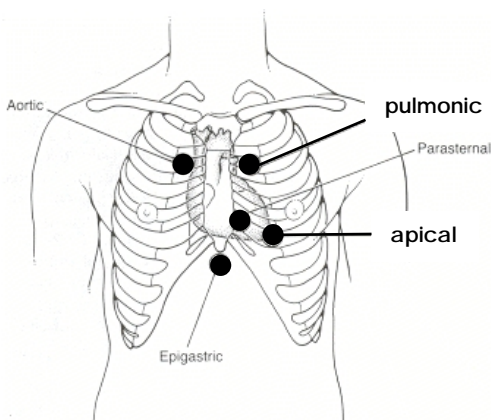
First, each resting heart rate above was in the normal 60-90 range. Five minutes of vigorous activity raised everyone's pulse - why? When you exercise, your body uses more oxygen. Oxygen is carried to your body in your blood, so the heart has to pump faster, and your breathing has to increase, to get more oxygen into your body. After you rest, your body's need for oxygen goes down again, and so does your heart rate and breathing.

Note: How rapidly your heart returns to its resting heart rate after exercise is one good indication of whether you are in good shape.

Listen to your heart



Doctors and nurses use a **stethoscope** to hear what is going on inside people's bodies. With an **inexpensive stethoscope** like the one at left, you can listen, too. Before **using the stethoscope**, always **bend the earpieces slightly forward**, toward your face, before inserting them in your ears. Tap on the large face of the stethoscope to be sure it is working properly. Nurses uniform shops also have stethoscopes.



Take turns listening to your hearts by placing the **large face of your stethoscope over bare skin** at any of the points shown at left. The **Pulmonic and Apical (or apex)** points will probably work the best. Make sure the room is quiet and don't talk. Press the face of the stethoscope pretty firmly on the skin between the ribs at the points shown and find the point where you hear the heart beats most clearly.

A normal beating heart has a sound called '*Lub Dub*'. Listen to normal hearts beating at the You Tube sites below. **Use headphones.**

[Normal Heart Sounds #1](#)

[Normal Heart Sounds #2](#)

[Normal Heart Sounds #3](#)

Do your hearts sound like this? If there are extra beats, an irregular rhythm, or swooshing or clicking sounds, you may want to check with your Doctor. Don't get worried, though. It is easy to hear other things through a stethoscope if you are not trained in using one. Abnormal heart sounds can also be very hard to identify accurately.

How the heart beats



Blow up a small balloon. Squeeze the top half, then the bottom half, back and forth. The heart beats this way - first the upper chambers, the **atria**, and then the lower chambers, the **ventricles**.

[Heart animation #1](#)

[Heart animation #2](#)

Test your capillary refill

Do the **Capillary Refill Test**. Press a fingertip firmly and release. The skin will be white at first when the pressure is released. It should return to its normal color in 2-3 seconds if blood flow to the area is normal. **Capillaries** are the **smallest blood vessels**. When you press on a finger, the blood is pushed out of the capillaries and the skin loses its color. As soon as the pressure is off, the capillaries quickly refill and the color returns. Doctors and Nurses use this test to see how well their patient's blood is circulating.

Resources

[Montessori inspired heart activities](#)

[Video: Heart beat animation](#)

[Video: What is blood?](#)

[Human body coloring sheets](#)

[Human body organs coloring page](#)

[Label a circulatory system diagram](#)

[Video: Types of blood vessels](#)

[Beating heart animation](#)

[Human heart free coloring page](#)

[Human body printables](#)

Calling 911

Young children can do amazing things in emergencies, like calling 911. Check out the videos below. Here are things you can do to prepare your child:

- **Unplug the phone and let your child practice dialing 911.** Always refer to it as "**Nine-one-one**", not "nine eleven". Otherwise, in an emergency, your child may get stuck looking for an '11' button on the phone.
- **Reinforce that 911 is only for real emergencies.** These include a person who cannot talk, won't wake up, can't speak, or has a severe injury; a fire, or someone trying to force their way into your home, or who is in the home, who is not supposed to be.
- **Practice what to say.** Tell your child it is okay to be scared, but they must be able to answer questions that the person on the phone will ask. **Do mock emergency situation response drills at least monthly** and cover how to respond to questions from the 911 operator. These include:

Where are you calling from? Your child should memorize your address and be able to repeat it. Practice this regularly during a monthly safety review in your home that covers calling 911, what to do in case of a fire, and how to stop bleeding.

What kind of emergency do you have? Cover the possibilities: fire, someone trying to break into your home, a family member down who cannot talk, a severe injury.

Who needs help? Practice: Mom, Dad, Grandmother, brother / sister, visitor.

Is the person awake and breathing? Practice how to check and what to say.

- **Make it clear that you are not to hang up until the person on the phone says it is okay.**

How to use 911

How to teach your child to dial 911

Video: [Teach kids when to call 911](#)

Video: [A 5 year old calls 911](#)

Video: [Three year old calls 911, saves Grandma](#)

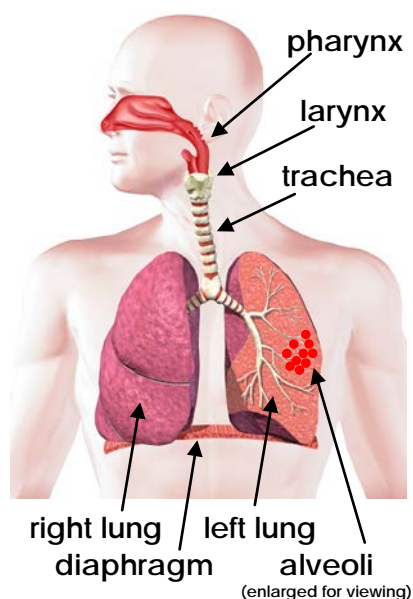
Breathing



We breathe to live. We breathe in fresh air and oxygen, and exhale carbon dioxide, which eliminates waste and helps maintain our acid-base balance. A few simple breathing activities will help your child learn more about this body system which is so essential to our lives. Photo: Shutterstock

[See the Respiratory System at the Bio-Digital Human](#)

Video: [Respiratory System and Animation](#)



The **Respiratory System** starts at our nose, and then becomes a tube called the **pharynx**. This ends in the **larynx**, also called the **voice box**, where we make sounds like talking. Below that is the **trachea**, which branches into our **right lung and left lung**. As the branches go into the lungs they get smaller and are called **bronchioles**. These end in little sacs that look like grapes, called **alveoli**. These sacs are where oxygen goes into our blood and carbon dioxide comes out. This is called **air exchange**. The **diaphragm** is a large muscle under our lungs that makes them larger and smaller to push air in and out. [Check out the Respiratory unit at The Home Teacher.](#)

Feel your lungs

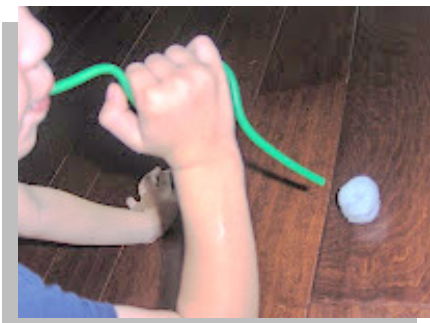
Have your child hold her hands flat against the sides of her chest. As she breathes in and out, she will feel her chest get bigger and smaller. Her lungs are inflating and deflating like balloons as the air goes in and out, making her chest larger and smaller.



Alveoli (al-vee-oh-lie) look like grapes

Hold up a nice bunch of grapes. This is what the **alveoli sacs** in your lungs look like; only they are pink and *much* smaller. Adults have over 4 million alveoli in their lungs. These sacs get bigger when we **inhale** and fill them with air, and smaller as we **exhale** the air out.

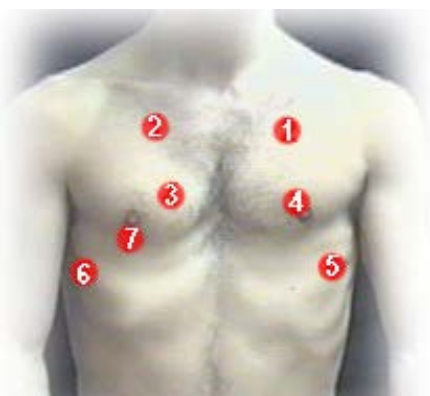




Cotton ball race

A fun activity from [The Activity Mom](#). Get a few cotton balls and straws of different shapes. Practice blowing a cotton ball across a table. Tape lines to make lanes and start / finish lines, and have cotton ball races. Which straws work best?

Photo: [The Activity Mom](#)



Listen to your lungs breathe

Get the [stethoscope](#) you used to listen to your heart. Take **deep breaths through your mouth** as you listen at the points shown at left on your chest. Listen on both sides of the chest. You should hear air swooshing in and out of your lungs. This is how your Doctor finds out if your lungs are working properly. Listen to everyone in your family. Do your lungs all sound the same?

Photo: [Reocities.com](#)

How much air is in your lungs?

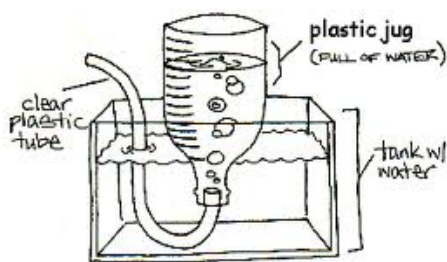
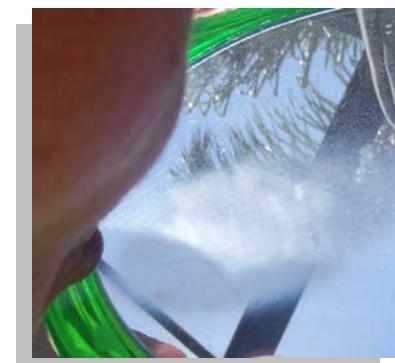


Image: [ScienceBuddies.org](#)

For this you need your **sink**, a **clear plastic soda bottle**, and **12-18" of clean aquarium tubing**. Get 4 inches of water in the sink. Fill the bottle with water, cover the top with your hand, and turn it upside down and under the water in the sink so no water leaks out. Run the tubing up into the bottle a little ways. Take a deep breath and blow all the air in your lungs out into the tubing. The water in the bottle will bubble and go down. **The amount of air in the bottle is how much air your lungs hold.** Test your family members and draw lines on the bottle to compare your lung volumes.

Is there water in your breath?

Get a hand mirror, or use a wall mirror in a bathroom, get your mouth close to it and exhale. You should see a mist of moisture appear and quickly evaporate on the mirror. The air we breathe in and out has water in it.



12 Ways to keep your lungs strong and healthy

Speed up your breathing

	rest	active
Me	20	36
Mom	18	32
Dad	16	28

Your heart beats faster when you exercise. Does your breathing do the same thing? Try it and find out. Watch the clock and count how many breaths you take in **one minute when you are resting**. Write the number down. Now, run in place or do jumping jacks for 3-5 minutes. Stop and count your breaths for one minute again. Are you breathing faster? Your heart and your breathing both get faster when your body needs more oxygen - like when you are exercising or working hard with your muscles.

Calm down, learn abdominal breathing

Wouldn't it help to have a way to calm down when we get anxious, angry, or nervous? There is a way, and it is always with you. The next time you are stressed out, observe your breathing. You will probably be **expanding your chest** as you breathe rapid, shallow breaths. Try this: sit or stand up straight, and **breathe deeply by first expanding your belly outward**, then filling up with air upwards to the very top of your chest. As you exhale, your chest goes down in size first, working down to your belly, which goes back in last. This is deep **abdominal breathing**. Teach your child to try this whenever she feels stressed out, afraid, or angry. It really works to help calm us down.

Video: [Abdominal Breathing](#)

[The Health Benefits of Belly Breathing](#)

[Abdominal Breathing](#)

Feel Mom's voice

The **Adam's Apple** just below your chin is where your **larynx, or voice box**, is. Touch it with a finger and hum or make other sounds. You will feel your larynx vibrating. This happens because your vocal chords vibrate to enable us to make sounds. Your child won't develop an Adam's Apple until puberty, so for now let her feel yours. Try making alternating high pitched and low pitched sounds and she will feel your larynx go up and down.

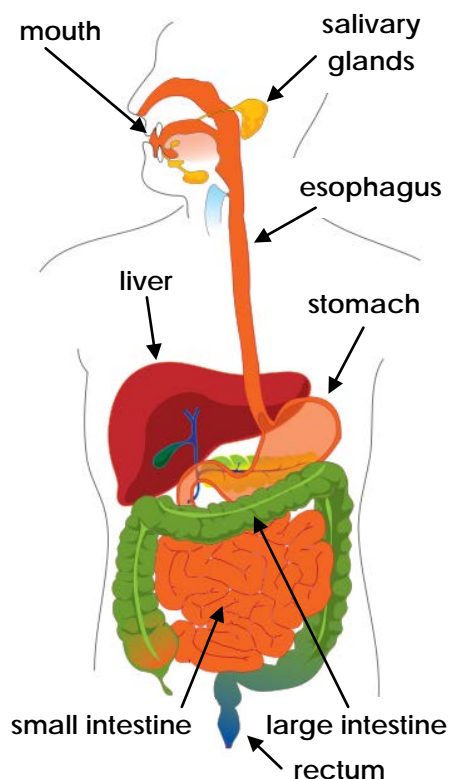
Make a lung



At **The Home Teacher**, they made an artificial lung!
[Read how here.](#)

[Label the Respiratory System](#)

Digestion



Our **Digestive System** turns food into fuel to give us energy and keep our bodies working well. It also allows us to stay hydrated by drinking fluids like water. **Digestion** starts in the **mouth** with chewing. Food travels down the **esophagus** to our **stomach**, where it is mixed up and digested more. It then passes into the **small intestine**, a tube usually over 20 feet long. Most of the nutrients in our food are absorbed into the blood from the small intestine. Almost all this blood travels to the **liver** before it is distributed throughout our bodies. Food that continues on goes into the **large intestine**, or **colon**, where it is eventually passed out as feces through our **rectum**, a kind of pouch. Our bodies absorb a lot of the water we need to live from the food in our colon before we pass it out. This entire passage from our mouths to our anus is the **gastrointestinal tract**.

Image: Ck12.com

[Simple ways to demonstrate digestion](#)

Listen to your belly

Using your **stethoscope**, listen to your belly all around your belly button. Move to the sides, above, and below. You should hear gurgles, bubbling, pops, and other odd noises. These are all signs that your gastrointestinal tract is doing its thing, which is moving food through your body. These sounds will usually be louder after you eat.

Videos

[Your Digestive System](#)

[The Digestive System](#)

[Digestive System Animation](#)

[Bill Nye - Digestion](#)

[Bill Nye - Nutrition](#)

[Once Upon a Time Life - the Digestion](#)

Digestive system resources

[Free printable for labeling](#)

[Great digestive system animation](#)

[Help this poor guy get together](#)

[Nice digestive system printout](#)

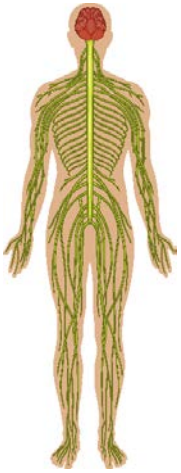
[Cool idea: Digestive System apron](#)

[Two digestive system experiments](#)

[Activity: how food gets to the stomach](#)

[Online drag & drop labeling activity](#)

Brain and nerves



Our **brain**, a network of **nerves**, and our **sense organs**: the eyes, ears, nose, mouth, tongue, and skin, make up our **Nervous System**. This complex system sends messages to our brains, where we interpret them as information about our environment. Without our nervous system, we would be in a void of nothingness! We also use our nerves to send messages to our muscles to move, digest our food, breathe, and do all kinds of other things essential to keeping us alive.

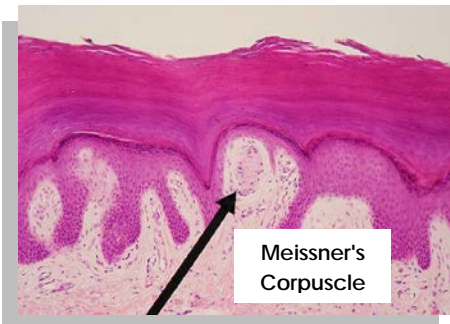
[Kids health: Your Nervous System](#)

[Neuroscience coloring sheets](#)

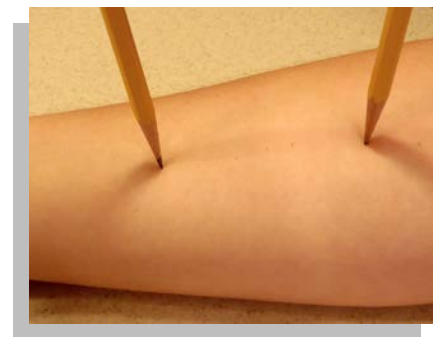
[The Big Neuroscience Coloring Book](#)

[Video: Nervous System for kids](#)

How far can you feel?



The **Sensorial** section (p.173) has activities for exploring the sense of touch. Under our skin are different **sensors** that sense pressure, vibration, and temperature signals and send them to our brain so we know what is touching our skin. The arrow is pointing to a **Meissner's Corpuscle**, which senses **light touch and pressure**.



Messiner's Corpuscles are all over our bodies, but there are more of them, and they are bunched closer together, in some places. How can you find out where we have more or less of these little guys? You can do the **Two Point Touch** experiment.

You will need **your body, two sharp pencils, paper, and a blindfold**. Have your child put on the blindfold. Start on her forearm. Press **one** pencil down lightly until she says she feels it. Now, position the second pencil **within 1/4" of the first and press down with both at the same time**. Ask your child how many points he feels. He should say one. **Move the second pencil a little farther away** and repeat, pressing both down and asking how many points he feels. Repeat, moving the second pencil a little farther away each time until he feels two points. Measure the distance between the pencils and write it down. Now move to her hands, back, legs, neck, etc. Test other family members. **Where the distance is less between the points, you have more Meissner's Corpuscles under your skin.**

How many can you remember?

1 3 7

4 6 2 9

5 8 2 4 6

4 7 1 3 9 5

Information in our brain first goes into **short term memory**. To test how much your child's short term memory can hold, make up a few cards with random numbers, like those at left. Add one number more to each card. Starting with the card with 3 numbers, show it to your child for 3-5 seconds. How many can she name correctly going left to right? Continue until you find the card with more numbers on it than her short term memory holds. Now you try it!

If your child has not learned all her numerals well enough for this yet, you can do use **circles with different colors** in a line, or a **series of shapes** that he knows well.



Left: Let your child look at objects for 3-5 seconds. Take them away and see how many she can name. Add one object and repeat. See how many objects she can remember before it gets too difficult. Try it yourself. Right: **Simon** (iPad, **android**), is a classic memory game. Can you find ways to help you remember?



Most adult's short term memory can hold around 7 distinct items. If items can be grouped, each group is one item. This is a neat way to increase the size of your short term memory. For instance, instead of remembering 194112361543, you could remember the years 1941 - 1236 - 1543. This makes three distinct items to remember instead of 12.

Improve your child's observation & memory skills



Observation and **memory** are skills that we can improve with practice. One way is to show your child **different printed or internet photographs** for 5-10 seconds; longer if the images have a lot of detail. Remove the image and ask your child how many individual things in the image can be remembered. Let your child have another look and see if he can remember even more next time. Make a game of it and have family contests.

Does smell affect taste?



Why would our nose make a difference in how things taste? We smell with our nose and taste with our tongue, right? Get a **blindfold**, a **food grater**, and an **apple**, a **potato**, an **onion**, and a **carrot**. Grate up some apple and potato separately. Have your child put on the blindfold. Let her taste apple, and then potato, and tell you what each one is. Now, close her nostrils firmly with your fingers and have her taste them again. Can she tell which is which this time? Have her try it again with her nose open. Try doing the test with the blindfold off and so your child cannot see the food items before tasting them. Can he tell which is which with the blindfold off? Now you try it. You probably had a much harder time telling which was which with your noses closed tightly, even with the blindfold off. Our sense of smell and taste work together to help us enjoy our food. Try this with the other food items which have a similar texture.

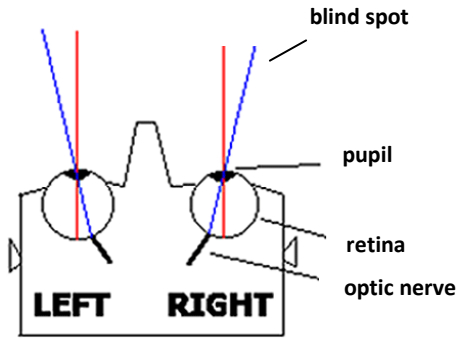
Mask that smell

The next time you have an awful smell about - such as in the bathroom - try this: pour unused, dry, ground coffee into a shallow, wide bowl or onto a plate and set it near the source of the smell. In just a few minutes, all you should smell is the coffee. Try the same thing with a few drops of peppermint oil dripped onto cotton balls. These substances work differently to mask smells. The coffee has a large surface area (even though you can't see it on each piece) for the smell molecules to adhere to. Peppermint overwhelms other smells by its strength.

Your eyes can fool you!



Close our right eye or hold your hand over it. Look at the square with your left eye, and slowly bring your face closer to the screen. At some point, the dot will disappear. Where our optic nerves enter our eyes, there is a **blind spot** on the retina. When the image hits the **blind spot**, we don't see it.



Where the optic nerve enters the retina, there is an area of the retina that does not react to visual stimuli.

Image: Doobybrain.com

[More optical illusions](#)

[Popular optical illusions](#)

[More fun optical illusions](#)

Largest and smallest

Take your child out in your yard, a forest, or a park. First, identify all the **largest** things in the area. Write them down. If you have a camera, take photos of these objects. Now, look for all the **smallest** things you can find in the same area and write them down and take photos, with your camera set for close-ups. This experience will exercise your child's perceptions. When you get home, make a little book titled "Largest and Smallest" or something similar, print out the photos, and paste them in.

Reflection: fun with mirrors

Have your child stand at a bathroom countertop in front of a mirror. Put a toy or puzzle requiring building, like a Lego toy, on the countertop. Hold a towel up in front of your child so he cannot see his hands when he reaches around the towel to reach the toy. Have her try to take it apart and build it again just by looking in the mirror. A challenge, eh?

[More fun mirror activities](#)

Refraction



Set up a glass of water and straw as shown. Why does the straw appear in two pieces when you look from the side through the glass? Why does it not do this if you hold it straight up and down and look from directly above the glass? In the photo, you are seeing light that has *entered and left* the glass and traveled to your eye. Traveling through the water and glass, the light **refracts**, or changes direction. Looking straight down, the light has not passed out through the glass.

My Amazing Hands

This activity includes different ways your child can measure using her hands, to introduce different types of measurement with one activity.

Materials

- A sheet of graph paper for each hand you want to measure
- Two nesting bowls
- Dry beans in a bowl (like kidney, pinto, or lima)
- A measuring cup with an 'ml' (milliliter) scale
- A tape measure
- Water
- Paper and pencil



What to do

Make lines to divide the sheet of blank paper into 4 equal sections. Label these:

How long is my hand? This measures **length**.

How big is my hand? This measures **surface area**.

How much does my hand hold? This measures **capacity**.

How much water does my hand move? This measures **volume**.

These measurements are stated in their most direct, simple form at first. When you have made each measurement and are writing it on the sheet, you can introduce the formal terms **length**, **area**, **capacity**, and **volume**. You can write these at the bottom of each square.

How long is my hand?	How big is my hand?
4 inches	88 squares
How much does my hand hold?	How much water does my hand move?
28 beans	115 ml

Length

Have your child spread his hand out on the table. Measure the length from the wrist to the end of the longest finger. Record it on the chart.

Area

Lay down the graph paper sheet. Have your child spread his hand out on it. Trace his hand. Now, count all the squares inside the hand tracing. Count even partially covered squares as 1 square for simplicity. Record the result on the chart in number of squares under: *How big is my hand?*

Capacity

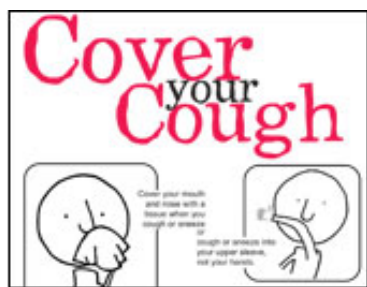
Have your child pick up as many beans as he can hold without dropping any and drop them into an empty bowl. Now he counts how many beans he picked up. Record the result.

Volume

Fill up the smaller of the two nesting bowls with water right to the rim. Set it inside the larger bowl. Have your child make a fist and slowly lower it up to the wrist into the water. Watch the water spill over into the larger bowl. Remove the smaller bowl carefully. Now, pour the water from the larger bowl into the measuring cup. Record the result. *"My hand pushed _____ ml of water out of the bowl."*

Now do this activity with other family member's hands and compare them all.

Wash your hands, cover your cough



Growing bacteria in petri dishes can wait, but every child can learn to help prevent illness by **washing their hands** properly and **covering their coughs**. Sprinkle a little ground pepper in some flour. You can also use glitter. Explain that the flour, pepper, or glitter represents **bacteria** that are really too small to see but can make us sick if they get inside our bodies. Get some flour on your hands and shake hands with your child. Now you *both* have bacteria on your hands. Show your child how to hand wash properly in warm, soapy water, rubbing the hands and fingers with good friction, for as long as it takes to sing the 'Happy Birthday' song.

Show your child how to use a kleenex and how to cough into her elbow. Explain that if we cough into the air we send bacteria out where other people can breathe them in and get sick.

Teaching Kids About Germs at Carrots Are Orange

Print a reminder for the wall

Hand washing guidelines

Videos: **The Scrub Squad** **Teaching children about germs and hand washing**

Extending the activity

Take a small, closed food container that floats and fill it with more and more coins to find out how many coins it takes to overcome the buoyancy of the air in the container so it will sink.

Surface Tension



Drop a small paper clip in the water and watch it sink. Now, **bend up the inside loop at a right angle** to the other loop, making a handle. Carefully set the clip down on the water and let it sit on top of the water's 'skin'. Let your child try it. It takes a steady hand and a light touch. Drop a few drops of liquid soap on the water and watch the paper clip sink. The soap breaks up the water's skin. Another surface tension demonstration: shake black pepper onto the water. Drop a few drops of liquid soap near the pepper and watch it move away. The soap broke up the water's skin, and the skin around it pulled the pepper away. Try other objects - a leaf, a penny, a straw, etc., and see which ones you can get to take a ride on the water's surface tension 'skin'.

Photo: JJ Harrison

Magnetic & Non-magnetic



As in the last activity, your child will be sorting objects based on a common characteristic - whether or not they can be picked up with a magnet.

Materials

Gather a collection of *metallic objects* such as coins, paper clips, eating utensils, a pen with a metal barrel, metal jar lids, screws, bolts, washers, nuts, keys, etc. Also gather *non-metallic objects*, like small plastic objects, plastic eating utensils, a pencil, rubber ball, foam, glass knick knacks, cardboard, paper, a playing card, etc. – as many different types of objects as possible. Make two cards that say magnetic and non-magnetic.

Buy a fairly strong **magnet**. Home improvement stores sell magnets that look like a pen for holding small screws and bolts. Arts and crafts stores usually have **horseshoe magnets**. Put the objects, name cards, and magnet in a bowl or nice box.

What to do

Have your child get out a floor rug or table mat and bring the bowl to it. Set out the bowl and name cards as shown in the photo.

Show your child the magnet. Explain that the magnet will pick up some things, but not others.

*“Things the magnet will pick up are called ‘**magnetic**’.”* Show your child the magnetic name card and say, *“This says magnetic.”* Have your child say it.

*“Things the magnet will not pick up are called ‘**non-magnetic**’.”* Show your child the non-magnetic card and say, *“This says, non-magnetic.”* Have your child say it.

Ask your child, *“Would you like to find out which things in the bowl are magnetic and which are non-magnetic?”* Assuming you get a positive response, have your child get out one object at a time, **predict** whether it is magnetic or non-magnetic, and then test her prediction by trying to pick it up with the magnet. After testing each object, your child puts it under the correct sign.

At some point, ask your child if she sees something that is the same about all the magnetic objects. You can show her that each one is made of metal. Help her identify metallic and non-metallic objects around the house. Test them with the magnet.

Extending the activity

Do more activities like the last two, using objects and photos printed from the google 'images' searches. Criteria for sorting can include:

Living & Non-living

Straight & Curved

Plastic, metal, glass, wood

Large & Small

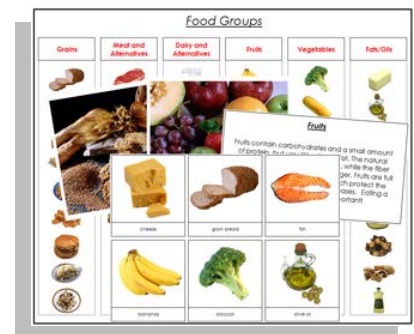
Plant or Animal

Solid and hollow



Left: Land, Water, & Air picture sorting material at [The Learning Ark](#).

Right: This and more sorting printables, like the Food Groups material, are at Montessori Print Shop.



Which ice cube melts first?



An easy experiment. You need two pieces of card stock, **one black** (you can color it black), **one white**, a couple of **ice cubes**, a **watch**, and **sunlight**. Lay both cards out in the sun for a few minutes. Put a cube of ice on each and time how long it takes each to melt. The cube on the black card should melt faster because **black absorbs sunlight, while white reflects it**.

[Video: ice melting](#)

[Another black & white project](#)

Salt & sugar magic

Watching a solid dissolve and then reappear after the liquid evaporates looks like magic to a young child. How can it do that? Depending on your child's age this simple activity can involve the experiment itself and a few new words, or a Google search about molecules and solutions. As always, follow your child's lead and current knowledge level.

Materials

- Salt & sugar
- A spoon
- Two microwave safe glass cups about 1/4 filled with water (too much will take too long)

What to do

"Did you know we can make salt and sugar disappear and come back again?" If that generates interest, continue. Get out the materials, and let your child taste the *salt* and the *sugar*. Have her pour a little salt into one cup, and a little sugar into the other. Have her look to verify that she can see each material in the water.

Now have your child stir each cup until the material in each dissolves. *"Where did the salt and sugar go?"* Get your child's ideas and maybe discuss a bit. *"They dissolved into the water."* Have your child taste each solution to be sure she understands that the salt and sugar are still in the water. *"How can we get them back?"* Again, get your child's ideas. *"We'll need to make the water go away, to evaporate, first."*

Tell your child you can do that two ways: you can wait for the water to evaporate, which will take maybe a couple of days (depending on how much water is in the cups); or you can heat the cups up and boil the water off.

Assuming your child does not want to wait, put the salt solution in the microwave and boil the water off. Let the cup cool, and then show your child the salt clinging to the cup, and let him taste it. Repeat with the sugar solution. You brought the salt and sugar back again!

Make dull pennies shine

Show your child some dull pennies and some bright ones. Ask her, “*What could we do to make the dull pennies bright again?*” She may suggest washing them with soap or brushing them off, both logical choices. Give them a try. Could just sitting in a liquid make them bright? Invite her to find out. This activity introduces the concept of acids and bases, has a language component, and can even be extended to include biology and a safety lesson.

Materials

- Dull pennies
- 4 small plastic or glass cups
- Lemon juice, lime juice
- Baking soda
- Cloth or paper towels
- A black marker
- An index card



What to do

Write, or have your child write if she is writing now, lemon juice on one cup, lime juice on the second, baking soda on the third, water on the fourth.

Fold the index card in half to make a tent card that stands by itself. Help your child as needed to write Making dull pennies shine again, or something similar that you both decide on, on the card so you now have a name card for your experiment – and a language activity.

Get some dull pennies. Divide them into two groups, those to drop in the liquids and some similarly discolored pennies for comparison. Have your child drop 3 pennies into each fluid. Make sure the pennies are covered. Wait 10 -15 minutes. Remove the pennies and rub them dry with a rough towel. Keep the groups from each cup separate.

The pennies from the lemon and lime juice cups should be noticeably shinier. If not, try different pennies. Not all discoloration comes off with an acid bath, but most pennies will clean up noticeably in lemon and lime juice. Which liquid cleaned up the pennies best? Which did the worst job?

You can point out to your child that the lemon and lime juices are **acids**, while the baking soda is a **base**. Explain that acids are better at eating away dirt and grime than bases. The plain water is in between an acid and a base, so it did not do anything except get the pennies wet.

Extending the Activity

Here is a quick safety conversation you can have based on this experiment:

Ask your child, *“If the lemon and lime juices were strong enough to clean dull pennies, why don’t they hurt our skin or eat it off?”* Listen to your child’s explanations. Explain it this way, *“Some acids are even stronger than the juices. These liquids would damage our skin or even eat it away and hurt us badly.”*

Ask your child, *“Can you think of somewhere on your body where the lemon and lime juices might sting if they touched there?”* Listen to your child’s thoughts. *“If the juices got into our eyes, do you think they would sting?”* Your child will probably agree they would.

“Let’s not find out, ok? When we do not know what something is, we need to keep it off our bodies and especially out of our eyes.” You can point out that when scientists work with acids, they wear gloves and face masks. Google ‘**acid**’ and click ‘images’ to find acid danger warning signs from laboratories.

Here is a quick **biology conversation**: *“Do you know our bodies make strong acid inside us?” “Our stomachs make acid that digests our food so our bodies can use it.”*

*“Why doesn’t that strong acid in our stomachs eat away our stomach?” “Our stomachs have a coating on the inside called **mucous** that protects the skin.”*

*“We also have mucous inside our mouths. Feel the inside of your mouth with your finger. The wet stuff you feel is **mucous**. It protects your mouth.”*

Cleaning pennies at The Home Teacher

Quickie Science: Float a ping pong ball in the air!

Baking soda & vinegar



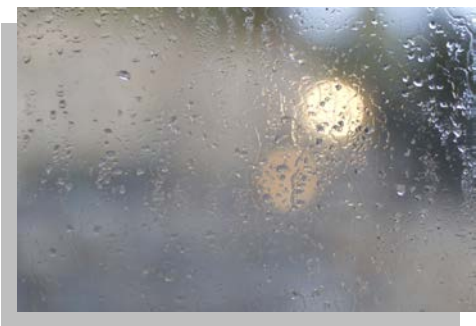
The Activity Mom describes this fizzy chemistry experience:

Sprinkle baking soda onto a plate. Use a medicine dropper to drop vinegar onto the baking soda. Watch the fizzy reaction. B thought this was so cool! He didn't ask me why it was happening which I'm happy about because I wasn't prepared to answer that. I think my go to response for something like

that in the future will be "Great question! Where do you think we could look to find that answer?"

A scientific answer is that baking soda is an **alkali**, and vinegar is an **acid**. When an alkali and an acid mix, they cause a **chemical reaction**. In this case the fizz is caused by water and carbon dioxide - the same gas we breathe out in our breath. As with all explanations like this, your preschooler will not understand everything you are saying, but she will absorb the experience and new language, which is valuable in itself.

Condensation & evaporation



The next time you take a shower, leave the exhaust fan off and let the mirror over the sink get foggy. Ask your child why she thinks the *mirror* got wet when all the water was in the *shower*. Explain that the hot water became **steam**, or **water vapor**, and floated in the air until it hit the cool mirror and turned back into water. This is called **condensation**.

Photo: Shutterstock

Now, get your hair dryer out, turn it on, and blow on the condensation on the mirror until it disappears. The heat turned the water back into vapor again! That is called **evaporation**.

To demonstrate **condensation** again, fill a glass with ice cubes and water, set it on the counter, and wait 20 minutes. There should be water on the outside of the glass. Where did that water come from? It was already in the air. When the air hit the cool sides of the glass, the water **condensed** back into water on the outside of the glass.

Solid, liquid, gas

There are many activities for this, but simplest is usually best at first with preschoolers, especially 3-4 year olds.

Video: [Solid, Liquid, Gas](#)

Set an ice cube on a plate. Water as ice is a **solid**. **It has its own shape** and takes up space. The ice feels solid to touch and does not change shape in our hands. Show your child a spoon, a cup, the countertop, etc, and point out that these are all solid materials. Get a small jar and fill it to the rim with beans or uncooked rice. Tell your child this shows how the **molecules** that make the ice are tightly packed together in the ice. Don't worry about explaining everything in detail, your child is just absorbing information.

Let the ice melt. Water as a **liquid has no shape of its own, but takes on the shape of its container**. Liquid spreads out flat on the plate. Pour the water (add if needed from the faucet) into a cup and show your child how the water now has the shape of the cup. Remove about half the beans or rice from the jar and show your child that in a liquid, the molecules are able to move about more because there is more space between them.

Boil the water on the stove until it is gone. Under close supervision, let your child pour a little water into a small pan. Keeping your child at a safe distance, boil the water until it is gone, watching the **steam** that rises. Tell your child the water is turning into a **gas**. A gas is **matter we cannot see and that spreads freely everywhere in the air**. Remove all the beans or rice pieces from the jar and point out that the jar is not really empty - it is still filled with the air we breathe, which is a gas.

What changed in each case to make the water change? The temperature.

Liquid densities



At **Tot School**, they mixed liquids with different densities. They filled a gravy separator (you can also use a clear bottle) half full with water and added some food coloring. Then, Sweet Pea poured in a few tbsp of cooking oil and tried to mix the liquids. The oil rose right to the top when she finished, demonstrating nicely that liquids that are more dense stay on the bottom. Trying to mix them may occupy your child awhile.

Photo: **Tot School**

Instant ice



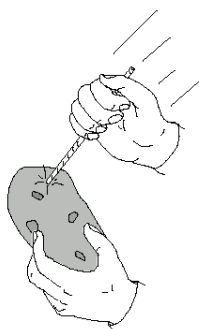
This experiment is super cool. Get a few plastic bottles of **Dasani®** or another **reverse osmosis filtered drinking water** and a plastic water bottle filled with tap water. Place all the bottles in the freezer for about 2 hours. Check and see if the tap water is frozen yet. You want to take the bottles out when the **tap water has frozen but the filtered water is not**. This usually takes 2-2 1/2 hrs. depending on the temperature of your freezer. At this point, the filtered water will be **supercooled**, which means cooled past the normal freezing point for water of 32 degrees F. Without handling it too roughly, take a filtered water bottle out and show your child that it is still liquid.

Now for the fun. Hold the bottle firmly and slam it down pretty hard on the countertop, leave it there, and watch it. Starting at the top, **the water will all turn to ice in a few seconds!** If it doesn't, the water was not supercooled. Leave the other filtered water bottles in the freezer a bit longer and try again.

Try this, too: **pour supercooled water *slowly* onto an ice cube placed in a bowl.**

[Supercooling water](#) [The supercooling experiment](#) **Video:** [Supercooling experiment](#)

Stab that potato!



Your child may not believe what she is seeing when you do this experiment - until she tries it. Get a potato and a straw. Hold the straw by the sides and try to stick it into the potato. Show your child how the straw bends easily. Try to stab the potato with it and watch the straw bend harmlessly. Ask your child, "*I wonder if there is a way we could push the straw right into the potato?*"

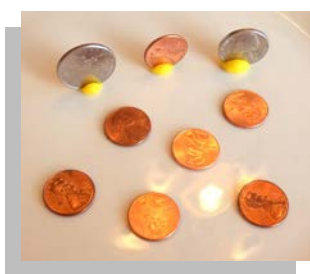
Hold the straw with your thumb firmly over the end. Stab the straw quickly into the potato. How could it do that? Your finger kept the air inside the straw. When you brought the straw down, the air compressed inside the straw and made it much stronger - strong enough to stab a potato. Let your child give it a try. Be sure he keeps his thumb firmly over the end of the straw.

Video: [Stab a potato](#)

Move a straw without touching it

Get a **straw** and a **water bottle with the cap on**. Rub the straw vigorously on a piece of cloth, like your T-shirt. Lay it down on top of the water bottle, balancing it evenly on the cap. Hold your finger close to one end of the straw and move your finger to rotate the straw around in circles one way and the other. **The electrical charges on your finger and the straw are opposite, so the objects attract.**

How many coins?



An excellent experience in **estimation** and **critical thinking**. Set three tiny blobs of PlayDoh on a plate. Press a quarter, penny, and nickel into them so they stand on edge. Lay 6 or so pennies out on the plate (**top**). Ask your child, "*How many pennies will it take to make a stack as high as the penny that is standing up?*" Let your child guess. Stack pennies to make a stack as high as the penny that is on edge (**bottom**). It will take 12 pennies. Your child probably said 5 or 6, because that is how many pennies were on the plate. This teaches that our **thinking can be influenced by appearances**. Repeat using quarters and nickels, again laying 5 or 6 out each time. See if your child learns to ignore how many are there when estimating how many coins it will take - **critical thinking**.

Science magic

Video: [Climb through a sheet of paper](#)

Video: [How to win a coin toss every time](#)

Video: [Try this pencil trick](#)

Video: [Get the dime into the bottle](#)

[Egg in a bottle \(use method #2\)](#)

[Spread the pepper](#)

Paper can fly!

Paper airplanes hold endless fascination for children. Taking a piece of paper and making a plane that actually flies is a thing of wonder. Many good web sites will guide you in making planes from the simple to very complicated. Perhaps your child will develop a new hobby. Experiment with different kinds and weights of paper, and slightly pushing the wings of your planes up and down.

Check out these sites:

[funpaperairplanes](#)

[10paperairplanes](#)

[ehow](#)

[tvlesson](#)

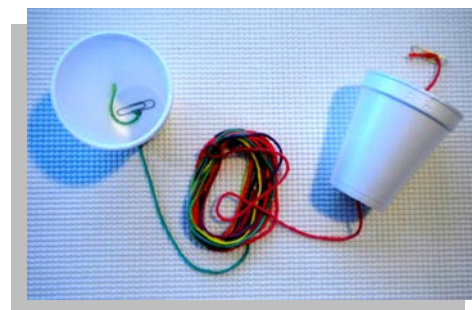


Good vibrations

Ever try this when you were young? It is just as interesting to kids today. A simple, fun activity that teaches about **vibration** and **sound transmission**.

Materials

- A ball of string
- A skein of yarn
- A couple of toothpicks or small paper clips
- Two cups, they can be Styrofoam, paper, or plastic
- A pencil or pen



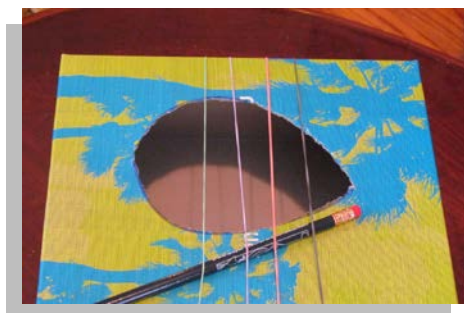
What to do

1. Choose two cups of the same material. Punch a small hole – just large enough for the string to go through - in the center of the bottom of each cup from the outside of the cup.
2. Cut a 15-20' length of string.
3. Push one end of the string through one cup from the outside of the cup. Repeat for the other end & cup.
4. Tie a toothpick or paper clip onto each end of the string.

You and your child each grab a cup and move away from each other until the string is very tight - but don't break it! One of you holds your cup tight against your ear while

the other talks softly into their cup. Can you hear the other talking? Now you talk while your child listens. Keep that string tight.

Next, change out the string for the yarn. See if you think the yarn works better. Feel the yarn for vibration while one of you talks. Can you feel it *vibrating*? The next time you see a music store, take your child in and go to the guitars. Let your child pluck a guitar string and watch it vibrate. That is the same way your voices traveled down the string and yarn – by vibrating them.

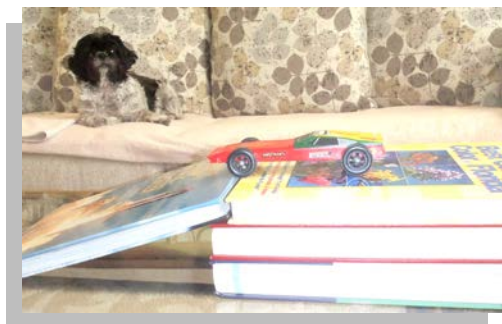


Making a **box harp** is another fun way to learn about vibration and sound transmission. Cut a hole, stretch rubber bands of varying thickness around the box, and include a pencil for a bridge. Your child will be able to see the bands vibrating as they make sounds. Try different size bands so some are loose, some pretty tight.

Photo: [DIY.org](#)

[Make a clothes hanger violin](#)

Newton's Laws: physics for preschoolers



Stack a few books and lay another book against them to form a **ramp**. Let your child try rolling toy cars and trucks down the ramp. Now, try some experiments:

Make the ramp steeper and then almost flat. Does the angle affect how fast things roll down the ramp?

Compare how fast a toy with wheels and a ball roll down the ramp. Does one roll faster? Why? How about one wheel by itself and a marble?

Lay a fluffy, textured rug over the ramp and roll objects down. What happens & why? (More *friction*) Try it with a sheet of sandpaper.

Compare rolling a styrofoam crafts ball and a marble. Does one roll faster?

[Fun with friction](#)

[Get revved up about preschool physics](#)

[Ramps in the science center](#) Do a rolls / does not roll object sorting activity



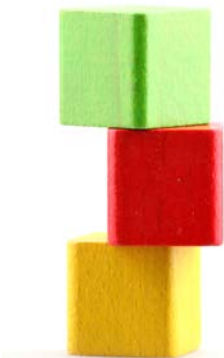
At [The Home Teacher](#), Boo tested her predictions about how fast objects fall. Sit your child safely off the floor. Have her predict how fast a feather, a flat sheet of paper, crumpled paper, a tissue, and heavier objects will fall. Let her test her predictions. Make up a paper listing the objects from fastest to slowest based on how fast they fall. Photo: [The Home Teacher](#)

More gravity experiments



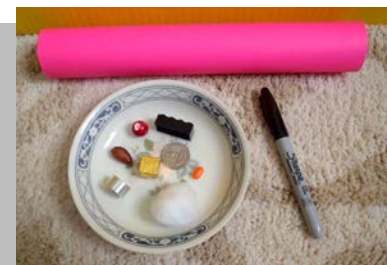
Left: For a cool **propulsion** project, make a **balloon powered car**. Kabob sticks with cardboard wheels (make them really round) support a folded & glued on paper plate. Get a short length of aquarium tubing and a cork to fit. Insert into the balloon, blow it up, and insert the cork. Slip the tube into the rear opening and tape it down. Remove the cork when you're ready to roll. Photo: [brookiecookie, DIY.org](#)

Video: [Another balloon powered car](#)



Building blocks are great for exploring **balance**. Stand a block on end and experiment with how far blocks laid on it can overhang before they fall. Make a T stand and balance the weight of blocks placed on either end so the horizontal part stays balanced.

Make a Penny Playground

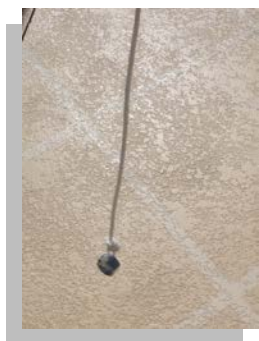


Left: Tape a sheet of paper to a wall. Collect objects - a bean, cotton ball, marble, a lego, a tic tac mint, etc. Get a cardboard core from a paper towel roll. (I covered mine with colored paper). Hold the tube against the paper and put an object in one end. Lift that end until the object falls down the tube. Draw a line along the bottom of the tube in that position. Try the other objects and compare the angles at which the objects rolled. Write the objects name along their lines. Why are they different?

What you can learn from a cardboard tube



Left : A **gyroscope** is a cool tool for demonstrating the properties of spinning objects. Right: To truly amaze your child, do this classic trick of balancing two forks suspended from a toothpick. [Read how here.](#)



Drop objects and watch them fall. Tell your child they fall because **gravity** pulls them down. Ask your child if she thinks we can beat gravity and make an object rise up off the floor without touching it with your hands. Tie an object without sharp edges to a string. Spin the object *slowly* in a circle. Gradually speed up the spin, and you will see the object rise as it spins around. **The power of your spinning is stronger than gravity**, so the object stays high as long as you keep spinning it fast.

What is it made of?

Talk to your child about different materials by finding an example of each in your home. Find things made of **plastic, fabric (textiles), wood, metal, glass, ceramic, organic material (plants), water, wax (candle), rubber, earth, stone, and paper**. Talk about each material and where it comes from. Do internet searches for photos. Now, make a sheet listing all the materials, and see how many items made of each material you can find in and around your home.

Why do some things bounce?

Get a rigid object that won't break if you drop it, like a shoe, and a rubber ball. Have your child drop both on a solid surface. What happened differently? Why did the ball bounce? Have your child squeeze the ball and let go. Just as the ball pushed back against her hand, it also squishes and pushes back against the solid surface.

Videos: [Slow motion tennis ball](#) [Slow motion golf ball](#)

Electricity without wires

Static electricity makes for all kinds of fun. Do the activities and learn new words. When your child is a little older, she can learn about positive and negative charges and how they interact.

Materials

- A few balloons
- Plastic Comb
- Tissue paper
- Your own hair or a wool or nylon sweater
- Water faucet
- An aluminum can



What to do

1. Lay the can on its side. Rub the balloon 20-30 times on your hair or a carpet. Hold the balloon a little ways from the can. the can should roll toward it.
2. Turn on the water faucet so it has the smallest stream of water that keeps its shape as a single stream. Comb your hair 20-30 times. Put the comb up close to the water at right angles to the stream and watch the water bend toward the comb.
3. Tear off a few very small pieces of tissue paper and lay them on the countertop. Comb your hair 20-30 times. Place the comb above the paper pieces and watch them jump up to the comb.
4. Inflate a balloon. Rub it up and down against your hair, a wool sweater, or a carpet. Hold it a few inches from your hair. Did your hair stand out straight? Do it again and stick the balloon against a wall - it should stick to the wall.
5. If you have carpet in your house, put on socks and walk while rubbing your feet against the carpet, then touch a metal doorknob. Did you get a spark?

Video: [bending water with static electricity.](#)

For more information on why these things happened, here are some good web sites:

[kids-science-experiments](#)
[science made simple](#)

[enchanted learning](#)



Helping hot & cold travel

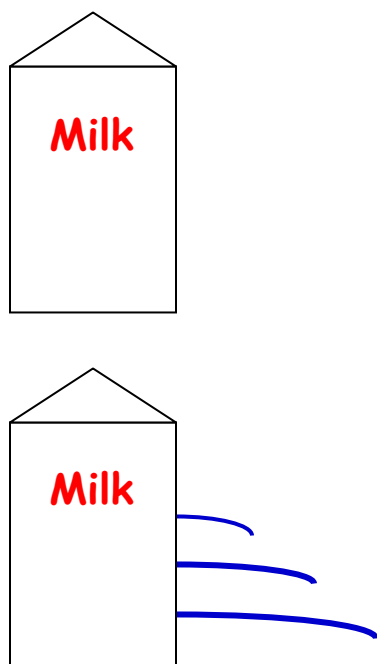
Good Conductors	Poor Conductors
Thin metal	Wood
Thin glass	Thick glass
Thin plastic	Thick plastic
Paper cup	Flower pot

Get a variety of **containers made of different materials**. Choose some that **conduct heat and cold well**, like a thin metal cup or a thin glass, and some that **do not conduct well**, like wood or a thick sided ceramic coffee cup. Try a variety. Make up a pitcher of ice water. Get a sheet of paper and a pencil to write down the results.

With each container, first fill it with ice water, wait a few minutes, and then touch the sides and see how cold the container is. If it is very cold to the touch, then that material is a **good conductor** of cold. Heat the water-filled container in the microwave long enough to get it pretty hot but not to scalding or a temperature that could hurt. Note whether the container also conducts heat about the same way it did cold.

Continue testing other materials. Make headings on your paper saying something like: Good Conductors / Poor Conductors, and write each material down in the correct column after testing.

Water pressure



If your child would like to make a **water fountain**, get a milk carton and a pushpin. Make three holes in line with each other vertically on one side, the first hole about 1" up from the bottom, the next 3" up, and the last about 5" up the carton. Experiment. Let your child measure, mark, and punch the holes. Cover all three with a single strip of masking tape. Have your child fill up the carton with water. Aim the carton so the side with the holes is facing a sink. Let your child pull the tape off quickly. The bottom stream should be the longest, and the top one the shortest. Why? There is more water above the bottom hole and the weight of it presses water out the bottom hole with more force. The middle hole has more water over it than the top hole, so the streams get progressively shorter.

Geography & Earth Science

There are hands-on activities for introducing preschoolers to the earth; but it is rare that a child can travel enough to see a lot of our planet firsthand. Fortunately, we now have wonderful tools that let children do just that. With **Google Earth** and a few web sites and tablet apps, your child can explore the entire world, starting at your front door.

Where in the world am I?



Take a trip with your child from your house to outer space. This activity is probably better for 5-6 yr. olds, but even younger children can have fun using **Google Earth**.

Photo: "**Where I Live**", a project at **MontessoriMOMents**

Materials

Internet computer with **Google Earth free download**. This is a program you will use and love, it is amazing.

Google Maps or paper maps of your city, state, and country.

A world globe. There are great **interactive, talking globes**.



What to do

1. Start by walking to the end of your street and reading the **name of your street**. Have your child say it.
2. Walk back to your house, and read the number on your house. Write down your **house number address and street name**. Have your child do it if she is writing now.
3. Find your street and the location of your house on Google maps, Google Earth, or your paper city map. Add the **name of your city** under your house address.

4. Zoom out to your state map, or use a paper state map, and get your globe out, and find your city. Have your child mark it on the map and say your state's name. Add your **state name** to the sheet under the city name.
5. Zoom out to show the U.S. (or wherever you live) map, and look at the globe if you have one, and find your state on it. Have your child mark your state and city, and repeat the name of your state. Add, **U.S.A.** to your sheet.
6. Zoom out to show the entire planet. Get out the world globe and find the U.S. and the approximate location of your state and city. Add '**Planet Earth**' to your sheet.
7. Still using Google Earth, type in your address and 'fly' to your house. Then gradually zoom out again to see your city, state, the U.S., and our earth from space. You can add '**Our Solar System**' to the sheet.

Explore Google Earth

Google Earth can occupy many hours of exploration. Explore everything this wonderful program has to offer. It is an amazing resource. Visit the [Google Earth Tutorials](#).

- Find and name the continents, oceans, and the world's great rivers.
- Travel to the world's great cities. Zoom in on cities around the world and see how people live in Egypt, China, South America, anywhere.
- Use [Panoramio](#) and check out the many photos from all over the world.
- Use [Street View](#) and tour more than streets, cities, and neighborhoods. You can also discover natural wonders, Antarctica, the Grand Canyon, and the Swiss Alps!
- Explore the great mountain ranges, rain forests, oceans, deserts, and mountains. [Earth View](#) is also available in Google Maps
- Look at the topography of the earth under the oceans.
- Use [Google Earth Sky](#), visit galaxies, and see amazing astronomical sights.

Google Earth Resources

Don't worry if some of these are more for older kids. Prepare now.

[Google Earth for educators](#)

[6 Sites to get kids excited about Google Maps](#)

[Google Earth Showcase](#)

[Google Earth Moon](#)

[Google Sky](#)

[Google Street View](#)

[Google Earth Tutorials Links](#)

[Use Google Earth to teach culture & geography](#)



The **Google Earth** app (iPad, **android**) should be on every parent's and child's tablet. There are other very good continent and geography apps for the iPad. For Android users, Google Earth is your best bet.

Video: [Google Earth tour of the continents and oceans](#)

Learn the continents & oceans



One of the basic geography lessons in every Montessori school is **learning the continents and oceans**. You can do this at home with a globe, great apps, printables, a paper map, or any combination of these. It is always good with preschoolers to have something three dimensional, so a **traditional desktop globe** or an **inflatable globe** is a nice start. Supplement this with online games, tablet apps, and printables, and your child will know his way around the world in no time. You can also simply save images of the continents from a **Google search of 'learning the continents'**, and enlarge and print those for home use for the cost of the paper and ink. Here are more great resources:

[World wall map](#)

[World wall poster](#)

[World interactive map](#)

[16" inflatable globe](#)

[World placemat for kids](#)

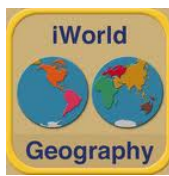
[Melissa & Doug World Map floor puzzle](#)

[16" inflatable Earth Ball](#)

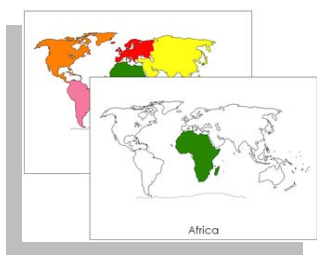
[Continent Work at Living Montessori Now](#)

[12" inflatable globe](#)

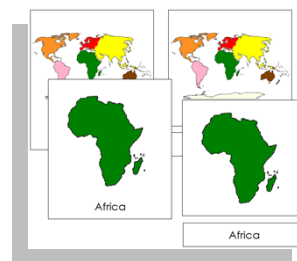
Simply tell your child the continent and ocean names and work on helping her remember them. It also helps to search each continent on Google and see different photos, animals, cities, etc.



Left to right: **National Geographic World Atlas** (iPad) is a wonderful app, with many display and information options. **iLearn Continents** (iPad) is a simple, effective app for learning the continents. **iWorld Geography: Continents** (iPad) has naming, puzzle, and labeling options. **Montessori Approach to Geography** (ipad) is a nice app. **Globe for iPad** is a basic globe showing the continents and major countries in colors with their names.



Montessori Print Shop has many wonderful geography printables, including the **World Flash Cards** (left), and the **Continents Three Part Cards** (right).



The **Printable Montessori Geography Materials** page at Montessori Print Shop has many materials for the flags and countries of each continent. Montessori classroom geography materials are generally too expensive for home use. Children doing activities at home who are learning to read will do fine with a globe, printables, paper maps, and tablet apps.

[Read about a Montessori World Map Project at Carrots Are Orange.](#)

Land & water forms

There are many ways to introduce your child to land and water forms, some easier than others. One great, simple way is to **google the various terms and click the 'images' link at the top**. You will see all kinds of examples and can visit many pages with great photos and information. Each term below is a link to an example.

[bay](#)

[island](#)

[waterfall](#)

[strait](#)

[isthmus](#)

[peninsula](#)

[fiord](#)

[gulf](#)

[lake](#)

[pond](#)

[mountain](#)

[cliff](#)

[volcano](#)

[desert](#)

[grassland](#)

[cave](#)

[river](#)

[creek](#)

[lagoon](#)

[bluff](#)

[glacier](#)

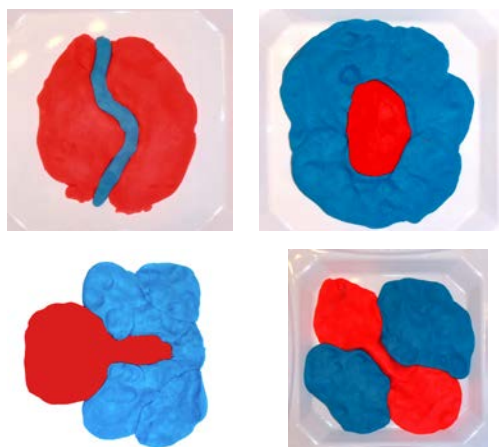
[marsh](#)

[swamp](#)

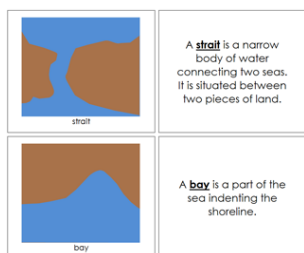
[mesa](#)

[channel](#)

Play Doh land & water forms



Forget the plastic molds and plaster of paris. Working at home, **brown (or red) and blue play doh** is all you need to make land and water forms. Get a tub or two of each and make as many forms as you can, like those shown at left - **river, island, peninsula, and isthmus**. You can also use colored water for the water. Be sure to make name cards to match to each form, and do google image searches for each.



Left: **Montessori Print Shop Land & Water Form Book**. Right: **Montessori Approach to Geography - Land & Water Forms** (iPad), is a good app. Also, check out **land forms at the beach at Chasing Cheerios**.



Make a volcano

Make a **volcano** with a baking soda & vinegar '**eruption**'. First, do your child a big favor and visit kids.discovery.com. This site has wonderful interactive videos of volcanoes. You can even build your own virtual volcano!

What to do

Get a deep tray or tub. Find a small bottle, like an empty juice bottle, put it in the middle of a piece of cardboard, and build up a nice Play Doh volcano cone around it. Make the top of the cone even with the top of the bottle. Put the cap on until the cone is built.

Your child may want to surround the cone with blue Play Doh 'water' to make it a volcanic island; and perhaps add orange or red 'lava' coming down the sides.



Photo: Homeschoolblogger.com

Use a funnel if needed to put about a tbsp. of baking soda, a few drops of red food coloring, a tbsp. of dishwashing liquid, and a tbsp. of water into the bottle. Get the video camera ready. Get some newspaper and take the volcano outside for the eruption. Pour about a tbsp. of vinegar into the bottle and watch the volcano erupt.

Check out these volcano videos

Iceland volcano. Call your child in when the intro ad is over, as it has scenes of violence. The volcano footage is worth it, though.

Kilauea

Another Hawaiian volcano



Ocean waves in a Bottle

Easy & fun. All you need is:

A big water bottle or a 2 liter soda bottle

Water & a funnel

Cooking oil

Food coloring

Glue or duct tape



Fill the bottle about 1/3 full with water, add a few drops of food coloring, and fill the rest of the bottle with cooking oil. I suggest you **glue or tape the cap on tight**. Hold the bottle horizontally and tip the ends up and down to create a **wave-like motion** in the liquid. You can swirl the bottle rapidly in a circle to make a **whirlpool**. Why this works: because **oil and water do not mix**.

[Blog post account](#)

[Video: The Beach Boys: Let's Go Surfing Now](#)

Disaster!

Your goal with these experiences is, of course, not to scare your child, but simply make him aware of the awesome power of nature in all its forms.

Sites & Videos

[Toowoomba flood](#)

[Floods 101](#)

[Dust storm in Phoenix, AZ](#)

[Tornados.net](#)

[Video Montage of natural Disasters](#)

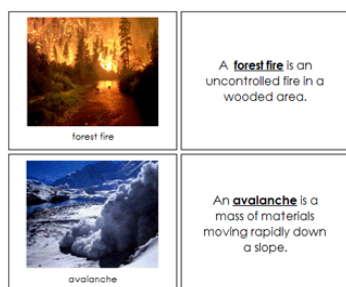
[Powerful Ocean Waves](#)

[Hurricane Irene – View From Space](#)

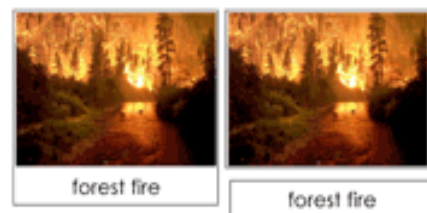
[FEMA Ready Kids Disaster Preparedness Site](#)

[Wildfire!](#)

Natural Disaster Printables



Left: [The Natural Disaster Book](#), and right: [Natural Disaster Three Part Cards](#) are great materials from [Montessori Print Shop](#).



Clouds

You can help your child learn about clouds pretty easily, as they are always available for viewing. Just look up. Start with the basic cloud formations:



Cirrus clouds are thin, wispy, high clouds, blown into long strips by high winds aloft. These clouds often mean that a weather change will be happening in the next day or so.

[Clouds at Weather Whiz Kids](#)

[Cloud project at Carrots Are Orange](#)



Alto clouds usually cover most of the sky. They can be almost uniform sheets of grey or white, or can be organized into rows like those in the photo.

Altostratus clouds

Altostratus clouds

Video: [What are clouds made of?](#)



Stratus clouds usually cover most or all of the sky, and can look puffy, or gray like sheets of fog. Drizzle and rain often accompanies these clouds.

[Cloud Facts for Kids](#)

Video: [Cloud Types](#)

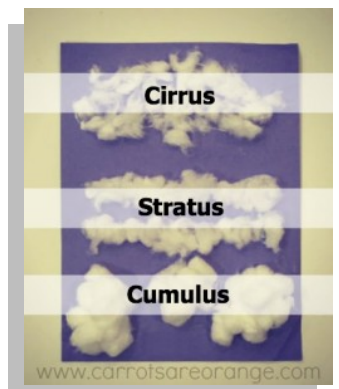


L: Cumulus clouds look like widely separated cotton balls floating in the sky. **R:** Check out this clouds project at [Carrots Are Orange](#).

Video: [Types of clouds](#)

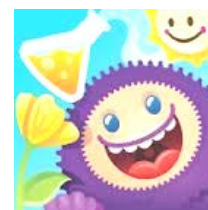
[Clouds photo gallery at National Geographic](#)

Photo right: [Carrots Are Orange](#)



Measure the rain

Make a simple **rain gauge** using a sturdy glass jar that won't tip over in the wind. Let your child help hold a ruler against the side of the jar, and mark it at 1/2" increments with a black permanent marker. Set the jar outside when it starts to rain and see how much rain has fallen when it stops. You could record the amounts on your child's wall calendar.



Good weather apps. These can be informative and fun to consult about local and worldwide weather and other events. **The Weather Channel** (iPad, **android**) is a fantastic app. You can check out weather anywhere, and see all kinds of maps, including animated radar maps. **Hurricane Tracker** (iPad) is essential if you live in an area prone to hurricanes. It can be interesting to follow hurricanes even if they won't come near you. **Quakefeed** (iPad) shows earthquakes all over the world as they happen each day. The maps show how earthquakes tend to happen along the fault lines between the tectonic plates forming the earth's surface. **Kid Weather** (iPad, **android**) is a very nice app to check every day. **Gazzili Science** (iPad) has nice activities about the water cycle and the seasons.

Make an iceberg



Photo: Ansgar Walk

Do a Google images search for **icebergs**, then ask your child if he would like to make one. If so, fill a **one gallon zip-lock bag** nearly full with water, close it tight, and put it in the freezer until the water is frozen solid. Prop the bag up between items in the freezer so that you get an irregularly shaped chunk of ice, like an iceberg. When it is fully frozen, fill the sink pretty full with water, take or cut the ice out of the bag, and put it in the water. Now you have an iceberg! Notice how the iceberg is mostly underwater, just like a real iceberg.

Video: [Iceberg flipping over](#)

Travel the world with videos



Watching an African dancing video
Discovery Days & Montessori Moments

Use **You Tube** to explore all parts of the Earth. Search continents and countries, land and water forms, weather events, our solar system, and anything else on You Tube and find all kinds of videos. **Video learning will be a primary teaching tool for our children's generation** - get them ready for it by using videos now. Always screen each video all the way through yourself before your child sees it. Save videos to your Favorites and Playlists to create collections.

Start by creating a free account. The easiest way is to set up a **free Google account**. this will automatically link when you sign in and open up You Tube. In You Tube, go to **Video Manager**, then **Playlists**. Add as many playlists as you like to categorize and organize your child's videos.

Do a culture swap, get a pen pal



The world is shrinking as people instantly communicate across geographic and national boundaries. Prepare your child for this by contacting parents and children in other parts of your country and across the world. Exchange letters, samples of money, brochures, photos, little flags, magnets, and other items with other families. These are some of the best cultural experiences imaginable. Here are great resources and two examples:

Worldwide Culture Swap

Blue Aglet

Students of the World

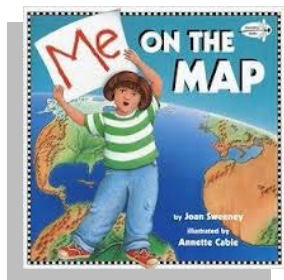
Worldwide culture swap: Bermuda, at Counting Coconuts

Cultural exchange at Chasing Cheerios

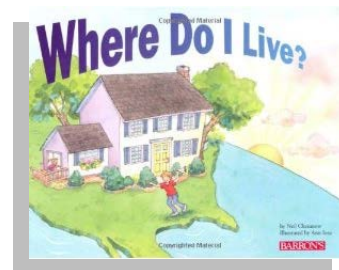
Photos: *Counting Coconuts*

Mapping

Maps are wonderful tools for helping young children learn to express concrete experience in abstract ways. You can start with your child's room, then do your home and street. There are many great resources for mapping, here are a few:



Left: In the book **Me On The Map**, by Joan Sweeney, a girl takes you on a tour of her world. Right: **Where Do I Live**, by Neil Chesanow, is another wonderful look at figuring out where you are.



Left: If you live in the USA, **50 States With Flat Stanley** (iPad) is a fun app, as is, right: **Montessori Approach to Geography** (iPad).



Plan your route

Using Google Maps on your smart phone or tablet, or a paper city map, sit down with your child and plan out your route before you go shopping. Write down which streets you will travel on and when to turn. Let your child learn to become the navigator on your trips. Smart phone apps that let you see the road in front of you and where to turn are especially cool for this.

Making maps

Show your child how to draw a graphic representation of the objects in her room from above. Let her try. Label the bed, dresser, shelves, closet, and other objects. Stand on a stepstool or chair and take a picture of your child's room, then let him try to replicate it in a drawing. Do the same activities for other rooms in your home. Start by going all the way around the room along the wall, drawing the wall on your paper to match. Next, add in the objects in the room in their approximate locations.

Zoom in pretty close on your house on Google Earth and print out a screenshot. Let your child use this and tracing paper to trace a map of your street from the Google Earth image, and then label the houses, trees, and other objects.

Wind

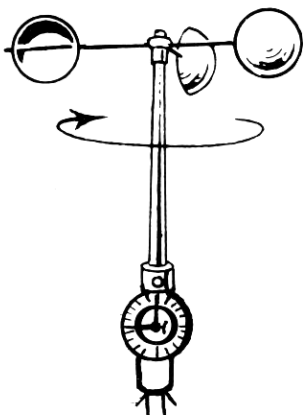


A **paper plate spinner** is a simple way to make your child more aware of the forces of nature and harness the power of the wind. Watch how it spins faster when the wind is stronger. The photo is from a tutorial for this project at **Tracy's Fun Stuff**.

Video: [Kid's Crafts: Wind Spinners](#)



At **Training Happy Hearts**, they lifted a book with just the power of **air pressure**. A zip-lock bag with a straw taped into one corner and sealed tight is laid under a book and inflated by blowing into it. They did a number of other fun things during their mini-unit on the wind, check it out.



Meteorologists use an **anemometer** to measure wind speed. Learn how to make a great one using just paper cups, straws, cardboard, and a pencil at the sites below. Try to count how many revolutions the special marked cup makes to measure and compare wind speeds and see how the wind varies in speed all the time.

Paper cup anemometer

Video: [How to build an anemometer](#)



Of course, you can always get comfortable and run to catch the wind in a pillowcase.

Photo: **Training Happy Hearts**

The visible spectrum



View the colors of the **visible spectrum** using a CD. Hold the side without printing up and move it around a little to watch the rainbows. Reflect sunlight or the light from a flashlight off the CD onto a piece of white paper and experiment with making rainbows.

Photo: Yann Droneaud

The Rainbow Colors Song

The names for the rainbow colors can be remembered by the name **ROY G. BIV**: red, orange, yellow, green, blue, indigo, violet. An **inexpensive prism** like the one at left is an excellent tool for exploring the visible spectrum.



Make a water glass prism

Video: [Make a rainbow color mixing activity](#)

Photo: Visit [1+1+1=1](#) for a wonderful, **free rainbow lapbook printable project**.

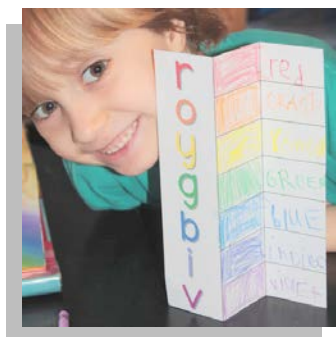


Photo: **1+1+1=1**

How good is your sunscreen?



Arbor Scientific

When you're 5, it's hard to see why sunscreen is important. There is a neat way to demonstrate the power of the UV - ultraviolet - rays in sunlight. Get a pack of **UV Beads**, like those shown at left. You can often find these at crafts stores also. They are colorless or white inside, but change colors in sunlight. Get a couple of sunscreens with different SPF numbers, like 30 and 75. Working inside, put beads in two zip lock bags. Spread sunscreen on the outside of one side of the

bag and write the SPF number on the bag. Lay the bags out in the sun. After an hour or so, check to see if the beads have all changed identically. If the sunscreens are working, they should be different.

Our Solar System & Outer Space

Young children look up in the heavens at night and are often filled with awe, especially when they start to learn about what they are seeing. A few neat activities, videos, and apps will get things going.



Left to right: **Montessori: Planets of the Solar System HD** (iPad) has information about each planet, their sizes and orbits, and a Montessori style card matching activity. **Interactive Minds: Solar System** (iPad) has a wealth of information organized into attractive screens, with nice videos and interactive elements. **Solar System Explorer** (android) has extensive information about the planets as well as various robotic devices we have sent to explore and photograph them, plus surface imagery. **Solar Walk: 3D Solar System Model** (iPad) is an extensive app with many cool elements. Definitely a bargain and one of the best science apps. **Britannica Kids: Solar System** (android) is a nice app for android users.

Solar system resources online

[Solar system unit at Living Montessori Now](#)

[Planets coloring printable](#)

[Space themed crafts and books](#)

[Solar system model and resources at Enchanted Learning](#)

[Solar system 3D animation video](#)

[Interactive with planet information](#)

[Solar system animation](#)

[Kids Astronomy](#)

[Video: How the solar system formed](#)

[Solar system ideas: Montessori Print Shop](#)

[Space lapbook resources](#)

[Unpainted foam solar system kit](#)

[How to make a solar system model using the foam kit above](#)

[Solar system animation video](#)

[A tour of the solar system](#)

[3D solar system animation](#)

[Video: Stars and constellations](#)

[Space School: Earth](#)

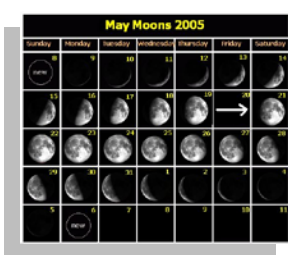


Left: **Planisphere** (iPad, **android**) simulates a map of the night sky from any location. Right: A classic **Planisphere** will let you and your child do the same thing. These may take awhile to get the hang of, but stick with it.



[Download a printable Planisphere](#)

Why is the moon changing?



Watching the phases of the moon is a great science experience. The web site shown below has a moon phase calendar for every month of the year. Check to see if the moon looks like what the calendar says it will each night. When your child is ready, you can explain why the moon changes. This activity also gives a child practice with using the internet, a calendar, counting, and many new words.

Materials

- A moon phase calendar for the current month. You can find this at [Moonconnection](#).
- A few cloudless nights so you can go outside and see the moon

What to do

Print out a moon phase calendar for the current month from the web site above.

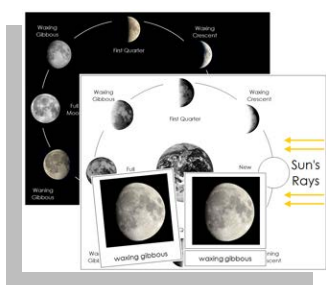
Go out tonight and take a look at the moon. Does it look like the calendar says it should on today's date?

Match how the moon looks with the moon phase on the calendar that looks closest to it.

Continue following the phases of the moon at night this way. If you miss a night or two, no worries, the moon changes rather slowly! You could schedule your moon observations on your child's calendar in her room (p. 221).

Extending the activity

On [moonconnection](#) you will find a graphic on why the moon changes its appearance due to its position related to the earth and the sun. This page also has all the names of the moon phases for your child to learn. Help your child name the correct current moon phases during the month.



Left: A nice **Moon Phase Chart** for your child's room, shown at left, is available from **Montessori Print Shop**.

Videos: [The Phases of the Moon](#) [The Moon for Kids](#)

[Another online moon phase calendar](#)



Left: **MoonPhase** (iPad), has all the moon phase and other information you could want.

Right: **Moon Phase Pro** (android) is another great moon app your child can use for years.



Study the moon

With a **simple pair of binoculars**, you and your child can look at the moon and see quite a bit of detail. You will see craters, mountains, and light and dark colored places. Your viewing sessions can generate some good questions, like those below. Ask your child and see what she says. Be ready with the answers if she is interested.

What are craters and what makes them?

Moon craters are formed by the impact of all sizes of asteroids and meteorites as they crash into the moon. The moon does not have an atmosphere like Earth, which is where almost all the objects coming toward Earth burn up before they hit.

Why are some parts of the moon's surface light and other areas dark?

The moon looks bright and white when the sun shines on it against the black backdrop of space. The entire moon is actually dark gray in color.

Why isn't the moon multi-colored like the Earth is in photos?

There are no oceans of water, plants, snow covered mountains, or clouds on the moon.

Is the moon as large as the Earth, or is it bigger or smaller?

If the Earth was hollow, about 50 moons would fit inside.

How long does it take for the moon to go around the Earth once?

A little over 27 days.

Cool Astronomy Videos

[Our solar system](#)

[Space School – Earth](#)

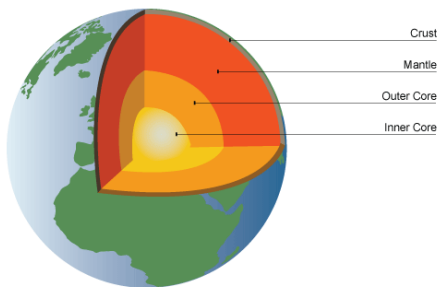
[Solar System HD](#)

[The Solar System – Space School](#)

[Planet Earth – a great video](#)

[Our amazing solar system](#)

Planet Earth, our home



eternalexploration

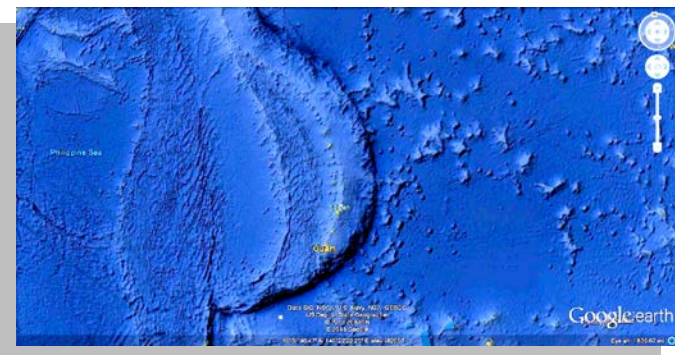
Our planet has an **inner core**, an **outer core**, a large **mantle** and a thin **crust** on top, which is what we live on. From space, Earth is a bright, multicolored ball.



How salty are the oceans?

If you don't live near the **ocean**, your child probably has never tasted saltwater. To make some, dissolve about a **half tablespoon of salt in 8 ounces of water**. Let your child taste it. This is about how salty ocean water tastes. Why is ocean water salty? **Rivers** on land carry salts and minerals dissolved from rocks into the oceans, and **hydrothermal vents** on the ocean floor shoot out dissolved salts. As the oceans evaporate, the salt gets more concentrated. See the salt and sugar experiment on page 316.

Is the ocean floor flat?



Using **Google Earth**, zoom in on various areas of the ocean floor, looking for trenches, mountains, ridges, and valleys. Show your child that the ocean floor has all kinds of features. Much of it is fairly flat, but there are tall mountains and deep canyons, just like there are on land.

How did people travel between continents before airplanes?



They sailed. Make simple sailboats with empty milk or juice cartons. Stand the straw mast up straight by inserting the bottom into a chunk of playdough. Cut sails from construction paper and punch holes in the middle at the top and bottom. Bend a little and insert over the straw. Let your child decorate as desired and do some ocean sailing in the bathtub.

Photo: [Nini Makes](#)

Why should we recycle?



Much of the trash we throw away ends up in the ocean. There is a [mass of floating trash in the Pacific Ocean](#) the size of the state of Texas. Show your child Texas on Google Earth to get an idea. The plastics from this trash pile are causing incredible damage to the ocean.

[The Great Pacific Garbage Patch](#)

Why is water so important?



[Tomas Castelazo](#)

For one thing, because our bodies are mostly water. To demonstrate this for your child, squeeze a few juicy grapes to see how much water they contain. Set them on a cookie sheet in the sun for 4-5 days, turning them over daily. They will turn into small, shriveled up raisins. Without water, we would do the same thing!



[FotoosVanRobin](#)

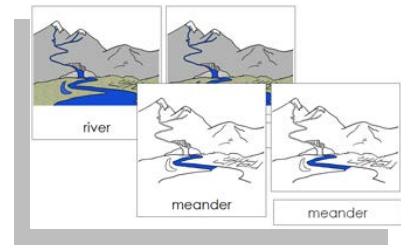
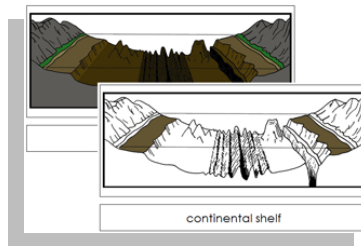
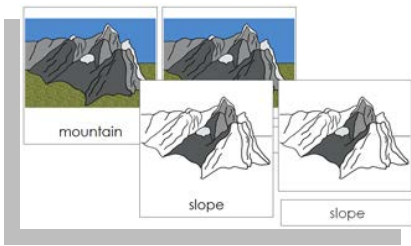
Ocean videos

[Keep the ocean clean](#)

[Children's: Continents & Oceans](#)

[All about Frogfish](#)

[The ocean sing along](#)



L to R: **Mountain 3 Part Cards**, **Oceanic Landforms 3 Part Cards**, and **River 3 Part Cards** from Montessori Print Shop will teach your child about these ocean and land formations.

Layers of air



The air we breathe stays around our planet because it is held there by the Earth's **gravity**, the same force that causes a ball to fall when we let go of it, and that keeps us from flying up off the ground. Our **atmosphere** has layers. We live in the lowest layer, called the **Troposphere**. This is also where most weather happens.

Photo: Shutterstock

Search the Earth

To see many of the land and water forms on Earth, use Google and search the terms below. Check out the images and videos for each:

mountain	desert	forest	plain
grassland	marsh	butte	bluff
canyon	badlands	geysers	lake
pond	river	creek	waterfall
stream	hills	cliff	valley
mesa	cove	channel	tundra
meadow	delta	plateau	stalagmite
outcrop	oasis	estuary	spring

Also, see the Land and Water Forms activity on page 332.

Earth Videos

[How the Earth was formed](#)

[NASA: Water, water, everywhere!](#)

[Planet Earth](#)

[Earth: official movie trailer](#)

[Inside the Earth](#)

[Planet Earth seen from space](#)

Get Out There!

Children need to spend time outdoors, and not just in their yard or at city parks. Find the closest places to really get out in nature and make regular visits a habit. Montessori believed that nature talks to children. Learn about the habitats, animals and vegetation, and other features of natural areas near you. Let your child just explore. Knowing the outdoors is out there waiting can be a great stress reliever for city-bound kids.

Did you know that June 29th is [International Mud Day](#)? Me neither. Playing in the dirt is fun anytime, and mud is even better. Check out these [30+ Dirty Kid Activities at Hands On As We Grow](#). There are [more fun mud activities at Preschool Express](#).

[Get inspired to Be Out There at the National Wildlife Federation](#)

[25 nature activities with kids](#)

[Find a place to go with the L.L. Bean Park Finder](#)



The free [Oh, Ranger!](#) app (iPad, [android](#)), has information on over 50,000 local, state, and national parks to help you plan your outdoor adventures.

[The Nature Conservancy is helping parents get kids outside](#)

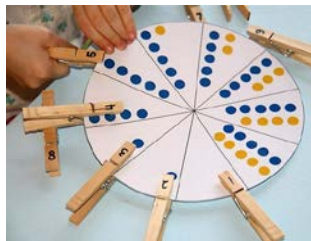
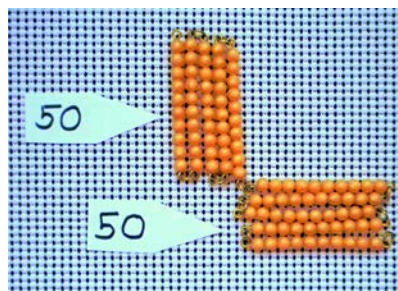
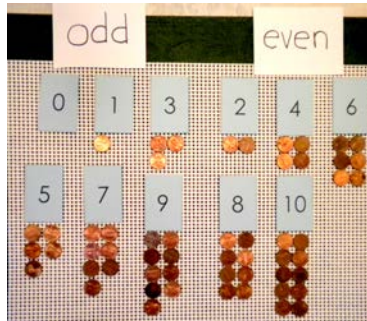
[A Pediatrician talks about getting kids outdoors](#)

[30 Ways to get your kid to play outside](#)

[Visit Get Children Outdoors!](#)

[Outdoor Parents, Outdoor Kids](#)

Mathematics



" Children of three years already know how to count as far as two or three when they enter our schools. They therefore very easily learn numeration, which consists in counting objects. A dozen different ways may serve toward this end, and daily life presents many opportunities; when the mother says, for instance, "There are two buttons missing from your apron," or "We need three more plates at the table."

Maria Montessori, The Montessori Method



Children usually enter a **Sensitive Period for Math** - a time of **increased interest in numbers** - at around 4 years of age. With some children you never really see it, so there is no need to worry or expectantly wait for it. Children who do many **Practical Life** and **Sensorial** activities, which have opportunities for **counting**, are prepared to learn about numbers when the time comes. If your child has not done much of this work, start there. When your child is ready, Montessori math makes learning about numbers logical, easy, and fun.

Photo: **Julie Josey**

Video: [Introduction to Montessori Math](#)

When you see a preschooler spontaneously counting things, pointing out numbers, asking how many there are in groups of things, and talking about numbers, that is your cue to start the **Math Sequence**. What if your child never shows these signs of interest? No worries, present the first math activities and see if she is enthusiastic. If so, continue. If not, wait awhile, keep counting things, and try again in a couple of months. No pressure, and always make things fun.

If you search blogs and web sites for Montessori math activities you will see an incredible variety of interesting materials. Rest assured, your preschooler does not need all of these to master basic math. Most are variations of a few basic materials, and those are all you need. With the few simple materials shown here, you will be able to give your child a firm math foundation for a lifetime.

Mathematics in Montessori follows the same sequence a 3-6 year old child takes in general with everything. **Experiences with quantities, using real objects**, comes first. **Numerals** - abstract line symbols - are introduced next, followed by **abstract graphic depictions and tablet apps**. When a child can work with amounts and numerals mentally, the **transition to abstract thought** is nearly complete.

Math lends itself beautifully to a **sequential, logical series of activities**. Each new skill builds on those mastered before. Montessori math gives a child a true understanding of math, a wonderful skill set, and feelings of **confidence and competence with numbers**. This translates into early success in school, which can propel a child right on through to adulthood.

The next page gives you an idea of how the Montessori Math Sequence presented here proceeds for most children. Your child may be ready sooner or later than the ages shown, so don't worry at all if she varies from this general guide.

Guide to the Montessori At Home! Math Sequence

Age	Amounts & Numerals 0-100	Operations with Numbers	Other Math Activities
2 - 3	Build gradually to counting 1-10 objects during Practical Life and Sensorial activities		
3	Identifying amounts of from 0-10 objects in a group		
4	Start using Sandpaper Numerals		
5	Match Amounts & Numerals 0-10	Making 10 activities	Exchanging coins, making change
	Writing Numerals	Addition & Multiplication	Fractions
	Learn amounts and numerals 11-100	Subtraction	Telling Time
6	The Hundred Board	Division	Weights & Measures
	The Decimal System		

Children may be ready earlier or later than shown for the various activities. This chart assumes that a parent is doing activities regularly with their child and makes the activities available for independent work. Follow the sequence of activities and give your child **plenty of time to practice and really master each step** - that is the key to success in math. **Avoid any pressure, criticism, or negativity** when doing these activities. Early learning should always be a fun process of discovery and self-accomplishment. Let your child **progress at her pace**. It is the perfect speed for her.

Preparing your child for Math

Counting & Groups

The best preparation for math is **counting groups of objects**. How many fingers and toes? How many cars are in the parking lot? How many people in line? Pepperoni slices on the pizza, socks in the drawer, grapes in the bowl, books on a shelf; encourage your child to **practice counting often**.

The **Practical Life** and **Sensorial** activities are the foundation of Montessori for children under six. They encourage **counting** and **grouping objects**. Pieces of food are organized into a group on the plate. Objects are sorted into groups based on their characteristics. The **Three Dimensional Shapes** activities use groups of objects that change in size as they are manipulated. All these offer many great opportunities for counting.



1:1 Correspondence & Careful Counting

When your child counts, help as needed to get her to **slow down** and **say each number right at the moment her finger touches each object**. Children often get their verbal counting and touching of the objects out of synch. **One to one association** of a single spoken number with each object is a very important math concept. **Be sure your child has mastered careful, accurate counting before proceeding with the Math Sequence.**



Materials like the **Marbles & Golf Tees** (left, p.139), and the **Marbles to Soap Holder Transfer** (right, p.127) help a child learn about **1:1 Correspondence**



The importance of 10



It is not an accident that the Montessori Cylinders, Pink Tower, Red Rods, and Brown Stair each have **10 objects**. We use a **ten-based number system**, so early experiences with this important number are essential. Children first need many experiences with **counting up to 10 real objects**. Put 10 of each color bead in your sorting activity. Make groups of no more than 10 objects whenever you can and help your child gradually learn to count up to 10 objects. **Memorizing and reciting the numbers 1-10 is cute, but counting groups of up to 10 objects is how your child learns math at first.**

Using Coins



"No form of instruction is more practical than... to make children familiar with the coins in common use, and no exercise is more useful than that of making change. It is so closely related to daily life that it interests all children intensely."

Maria Montessori, *The Montessori Method*



Coins are great for teaching young children math. Start by counting groups of 1-5 pennies and gradually increase up to 10. Show your child that 5 pennies = 1 nickel, and 2 nickels = 1 dime. Play back and forth exchanging these coins. Give your child a nickel and ask for the right amount of pennies back. Exchange dimes for nickels and pennies.

Practice every possible exchange. Apps like **Splash Money** (left, iPad) are available for practicing with coins on a tablet. Find more coin activities on p. 368 and 379.

Starting with a 5-6 year old child

It is ideal to start a 2-3 year old with **Practical Life** and **Sensorial** materials and move into Math, Reading, Writing, and other areas when the child is ready. **If you start when your child is 5-6, Practical Life and Sensorial activities are still very necessary**, so do all of them your child shows interest in. They prepare a child for math and reading, and your child will fill in any gaps in his skills and understanding.

Learning math with tablet apps & worksheets

A young child's first experiences with amounts and numerals should be hands-on, with real objects. A video screen cannot replicate handling and counting real objects, putting them into and changing their groupings, and seeing the numerical relationships between groups of objects. Sandpaper numerals are multi-sensory tools. **Tablet apps are useful to reinforce your child's hands-on activities, but should not be a child's first or only tools for learning about numbers.**

Worksheets are also **abstract** materials that should not be used at first when teaching a young child about math. Worksheets can wait until your child has mastered recognizing and matching amounts and numerals using real objects, and is writing numerals on paper.

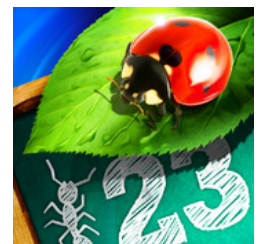
Many children's math apps fail to sequence experiences properly. They jump to larger numbers, addition, multiplication, and later skills, before a child has mastered the basics. Many leave out critical steps. **Here are some good tablet apps to reinforce a child's early math experiences with real objects:**



Left to right: **Montessori Numberland HD** (iPad). **Montessori Numbers** (iPad) has a number of good activities. Use the gold bead counters to make amounts easier to recognize. **Farm 123** (iPad, Android) is a pop-up storybook that teaches amounts in a fun way. **Splash Money: Counting Coins and Bills** (iPad) teaches coin values and how to exchange money. **Abacus in Augmented Reality** (iPad), can be used with a young child starting out in math if you **limit it to one bar** of beads for early counting. **Learn To Count Numbers 1 - 10** (iPad) has a clean and simple interface, and isolates images of objects and numerals for counting.



Count 123 (left, iPad) is a nice first numbers app. Even though it goes up to 20, the interface is good for younger children. **Bugs and Numbers** (right, iPad) is a superb app, highly recommended.

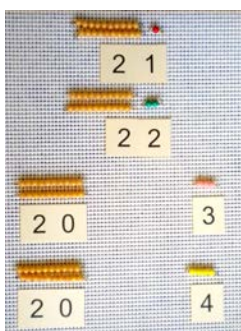


Amounts & Numerals 0-100

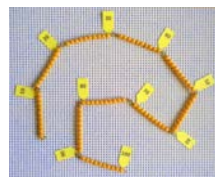
The Math Sequence starts by getting your child thoroughly familiar with amounts and numerals from zero to one hundred. This is done using a sequence of hands-on materials in a logical pattern. A summary of this process is shown below. As you follow this sequence of activities, you will find **suggestions for branching off into other math materials** that teach writing numerals, operations with numbers, telling time, and other skills when your child is ready. This will allow you to do a variety of math activities at the same time and keep things interesting. The chart on page 351 shows how this works.



0-10. Using coins and straws, Three Step Lessons, and the Sandpaper Numerals, you will first teach your child to **recognize amounts from 0-10 and to match these amounts with their corresponding numerals.** Then you will move to:



11-100. With Montessori Bead Bars, coins, and cards for making numerals from 11-100, you will next teach your child to **recognize amounts from 11-100 and match them with their corresponding numerals.** Next comes:




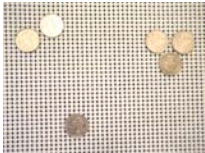





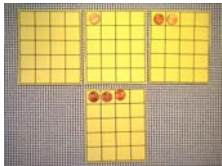

100 Practice. The 100 Golden Bead Chain, Hundred Board, and the 100 Golden Bead Square will provide your child with many experiences that reinforce the relationships between numbers up to 100. This is the perfect preparation for learning the Decimal System.

Amounts & Numerals 0-10

Welcome to the first step of the Math Sequence. These activities will give your child a thorough understanding of numbers and a firm foundation for everything that follows. Allow plenty of time for **repetition and practice** to be certain your child has fully mastered each step. We will do **amounts and numerals separately first, and then match the amounts and numerals.**

Amounts 1, 2, & 3

Teach your child to recognize amounts from 0-10 by using a series of Three Step Lessons (p. 85). Start with Three Step Lessons using amounts 1, 2, and 3:

Step 1: Identification	Step 2: Recognition	Step 3: Recall
 <p>"This is one." (child counts)</p>	 <p>"Show me the (three, one, two)." Switch positions</p>	 <p>"How many are there?"</p>
 <p>"This is two." (child counts)</p>	 <p>"Where are (two, one, three)?" Switch positions</p>	 <p>"How many is this?"</p>
 <p>"This is three." (child counts)</p>	 <p>"Where is the (one, three, two)?" Shown with Small Grids Boards (p.468)</p>	 <p>"How many are there here?"</p>

In **Step 1** you identify the amounts one at a time. In **Step 2** you lay out all three amounts and your child points to the amounts as you name them. In **Step 3** you again show the amounts one at a time and ask your child to identify them on her own. Counting is encouraged whenever needed.

Play a lot of games in Step 2. This is when the information goes into your child's long term memory. Have your child close his eyes while you move the amounts around to new positions and then ask him to point out each amount again. Set the amounts on a table across the room and ask your child to "*Bring the group of three*", "*Bring the one coin that is by itself*", "*Bring the group of two.*" Switch roles and have your child ask you to point out the different amounts. These games reinforce your child's ability to recognize the amounts. **Taking time in step two is the most helpful.**

Zero

During one of your early Three Step Lessons, leave an area empty and say, "*This is zero. Zero means nothing.*" Then do the lesson using an empty space to stand for zero. You can also play games like, "*Please bring me zero pillows*", "*Please pass me zero pieces of toast*", "*May I have zero pennies, please?*", etc., until your child firmly understands that zero means nothing.

NOTE: Before each Three Step Lesson, review the amounts learned in your last lesson.

"What if my child does not remember the amounts when we get to Step 3?"

No worries, keep things positive. Try **playing more games in Step 2**. This really helps children remember. You can also simply **start over in Step 1**, but keep things positive and **do not let your child feel she is failing or disappointing you. No pressure, frustration, or negativity allowed.** It may also help to **use just two amounts at a time** instead of three. You can also **do just steps one and two and try step three at another time**. If nothing helps, perhaps you started the math sequence a little early or your child just isn't into it on that day. Wait awhile, keep counting things, and try again in a few days.

Amounts 4, 5, & 6



When your child masters counting and identifying amounts 0, 1, 2, and 3, start **Three Step Lessons using amounts 4, 5, and 6**. Be sure she really has mastered 0-3. Take as much time as needed and use different objects to reinforce these amounts. Encourage counting to identify amounts. Mix up amounts 0-6.

Use other **identical objects** also: pennies; nickels; beads of the same size, shape, and color; identical jumbo paper clips; almonds; Hershey's Kisses (one makes a great prize at the end); etc. Using identical objects **isolates** and **highlights** the feature of these activities - the **amounts** in each group. If the objects are different in color, size, or other ways, the amounts will not stand out as clearly.

At this time, start the numeral activities on the next page.

Teach your child the numerals 0-10 while she is learning the amounts 0-10. This will get your child ready to match these amounts and numerals.

Amounts 7, 8, & 9



When your child has mastered counting and identifying amounts 4, 5, and 6, start **Three Step Lessons** using amounts 7, 8, and 9. **Encourage counting** to identify amounts. Use different kinds of identical objects for different lessons.

Ten



Take time to review 10 thoroughly. 10 is a really important number. Use ten coins, a gold bead ten bar (p.361), and different numeral depictions, as shown at left. Have your child count to ten frequently. Fingers and toes are perfect for this. You can use the amounts and the numeral 10 together, as shown in the photo.

Learning the numerals 0-10



As your child works on **amounts 0-10**, he can also learn the **numerals 0-10**. Soon, she will be ready to **match** the amounts and the numerals. For these activities, you will need a set of **Montessori Sandpaper Numerals** (\$7.95, Montessori Outlet).










To teach your child a numeral, **trace it carefully with your first two fingers while you look at it and say its name**. Then your child does the same. Encourage your child to trace (two fingers, tactile), look at (visual), and say (auditory) the numeral all at the same time.



If you will be using tablet apps to teach your child the numerals, then **Intro to Math** (iPad) is one of the best. It also has activities for identifying amounts and matching amounts and numerals.

Do **Three Step Lessons** with the numerals, three at a time. Encourage practice.

Video: [Sandpaper Numerals Three Step lesson.](#)

Step 1: Identification	Step 2: Recognition	Step 3: Recall
 <p>"This says one." Trace and say "One"</p>	 <p>"Show me the (three, one, two)." Switch positions</p>	 <p>"What number is this?"</p>
 <p>"This says two." Trace and say "Two"</p>	 <p>"Which one is (two, one, three)?" Switch positions</p>	 <p>"What does this say?"</p>
 <p>"This says three." Trace and say "Three"</p>	 <p>"Where is the (one, three, two)?"</p>	 <p>"What numeral is this?"</p>

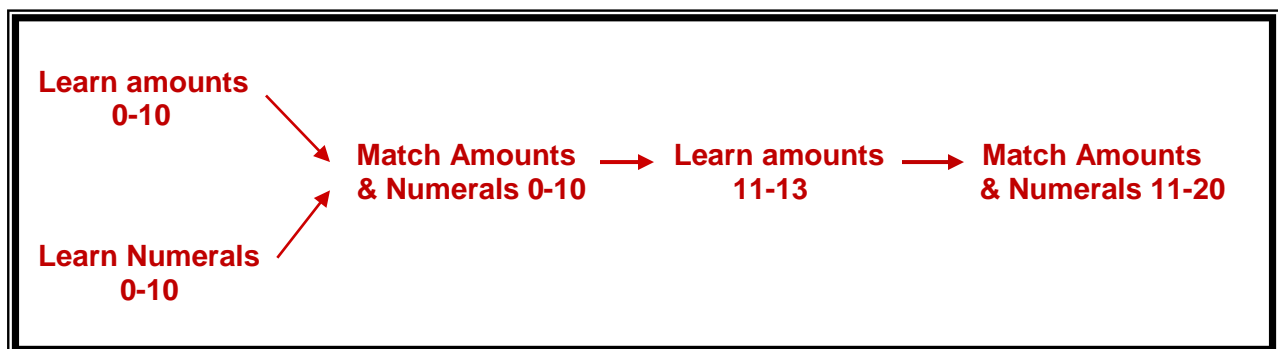
When your child masters 1-3, do 4, 5, & 6. When she masters those numerals, do 7, 8, & 9. Do 10 by itself.

Writing Numerals



It will probably take multiple lessons and up to a few weeks to learn all these numerals. A shallow pan with a thin layer of cornmeal makes a great numeral and letter writing practice tool. The tray here was used to trace the letter C. Numerals work the same way. Your child can use all the resources on pages 405 - 408 for numeral writing practice. Worksheets and practice writing the numerals is what it takes.

Here is a graphic representation of the process your child is working through:



Matching Amounts & Numerals 0-10

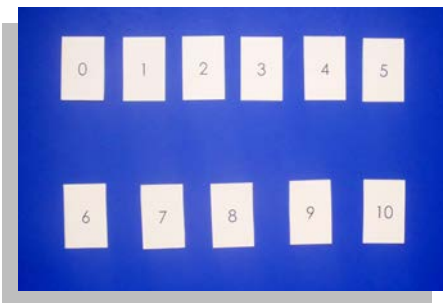


When your child has mastered amounts and numerals 0-10, it is time to match them up. This may seem like a long process, especially with so many tablet apps that appear to offer instant, easy results. It is really important that your child has a **thorough understanding** of these first steps. This is the all-important foundation for everything else. It pays to take time and make

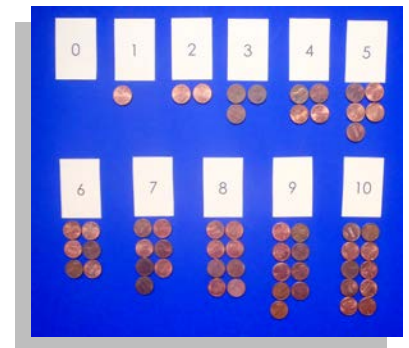
sure your child really masters 0-10. Once your child has these numbers down, all the rest will come easier. This process is why Montessori math works so well.

Cards & Counters

For this activity you use a set of **numeral cards** and **55 pennies**. There is a **0-10 numeral cards printable** on p. 469. You can also use the sandpaper numerals, or easily make your own set just by writing the numerals on small cards with a marker, one numeral to each card. Put the cards and pennies in a nice tray.



Have your child lay out the numeral cards as shown at left. Then he can lay the correct number of pennies under each card, as at right. A layout like the one shown clearly shows the even and odd numbers. The even numbers have all pairs.



Free Cards & Counters Template at Montessori For Everyone (third down on the left)

Take pictures and make a big deal out of this accomplishment! Now we'll do the same activity a different way to reinforce what your child has learned. At least two different layouts will insure that your child truly understands these concepts. There are obviously many ways you can match amounts and numerals. You can do candy corn at Halloween, little turkeys at Thanksgiving, etc. Our goal here is to master the concept and move on.

It helps to do the above activity the first few times using **identical items** like other identical coins, beans, identical beads, etc. Using objects that are all the same **isolates quantity** as the feature of the experience. In the next activity you will introduce the concept that **objects that are different can still belong to the same group**. The final step in this process is to make groups of objects that differ greatly from one another.

Straws and cups



You will need 12 small cups, 55 pennies, 55 colored straws cut in half, and a small tray. **Multi-colored straws introduce the idea that objects in a group can differ from each other**, in this case by their color. Attach labels with the numerals 0-10 on the cups, or just write the numerals on with a marker.

Have your child lay out the cups in one or two lines, from 1-10 or 0-10, just as with the numeral cards. he can then count out the correct number of straws into each cup. When she is done, have her check her work by removing groups of straws and counting them out. When your child has done the activity with the straws, she can use the pennies.

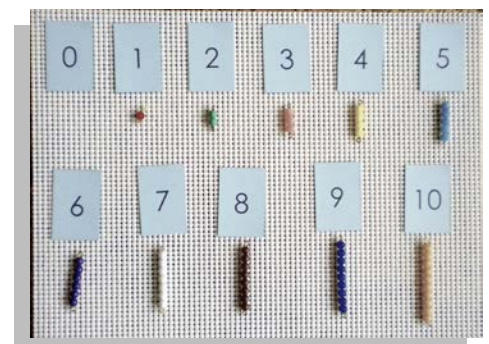


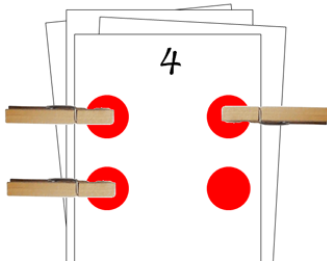
Intro to Math (left, iPad) has a number of good amount and numeral matching activities. **Kindergarten Kids Math** (middle, android) is a pretty good app for android users, with a number of matching, sequencing, and other activities. **Dominoes Easy Match** (right, iPad) requires careful counting of small dots, but is a decent amounts & numerals app.

Introduce the Montessori Bead Bars

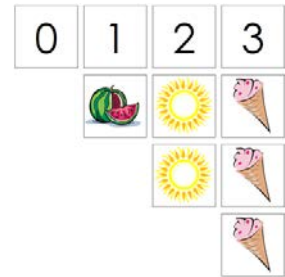


Get a **Montessori Teen Bead Bar Box**, around \$7. These are a must-have item for doing Montessori math at home. At right: a **0-10 amounts & numerals matching activity** using the 1-9 beads.





The **1-10 Counting Cards**, (left) and the free **0-10 Number Cards & Counters** (right) from **Montessori Print Shop** are used to match amounts and numerals 0-10 in different, interesting ways.



Number Matching Printables at 1+1+1=1

Amounts & Numerals 11-20

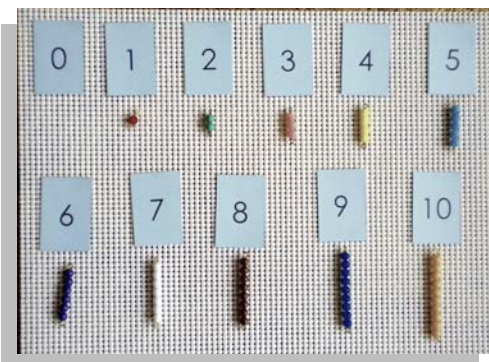
In the next step of the Math Sequence, we do the same sequence of activities we just finished, but with amounts and numerals from 11-20. The number eleven and the 'teens' have unique names that are not used anywhere else in our ten based number system, so we make learning them a separate step. Once we are past 20 it gets quicker up to 100.

From now on, the **Montessori Bead Bars** shine:



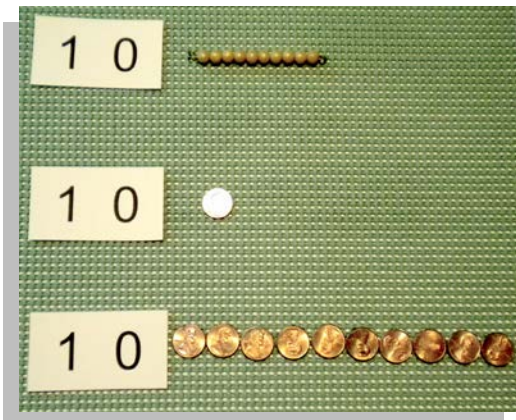
A 10 bar + a 4 bar = 14

Try doing this with pennies and you will see why Montessori created bead bars! When you first introduce the bead bars, let your child practice counting the beads and identifying each bar. Let her use a **pencil or other pointed object as a pointer** to carefully count each bead. **Make sure he can accurately count the beads** before you continue. She will have it down pretty soon.



When you introduce your child to the bead bars, let her do another 0-10 amounts and numerals matching layout with them so that she gets very familiar with each bar.

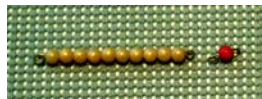
Video: [Matching amounts & numerals 1-10](#)



If you will be using coins for the 11-20 activities, take time to show your child the equivalent amounts at left: **10 pennies = 1 dime = one gold ten bead bar**. If your child practices exchanging ten pennies for a dime and a ten bead bar and **really understands** that they are all the same, you may be able to teach the larger numbers using dimes and pennies. **The bead bars are best because the beads are separate objects.**

When your child is familiar with the bead bars, start Three Step Lessons using amounts 11, 12, & 13:

Step 1: Identification



"This is eleven"
(child counts)



"This is twelve"
(child counts)



"This is thirteen"
(child counts)

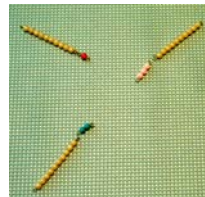
Step 2: Recognition



"Where is eleven?"
(then 12,13)

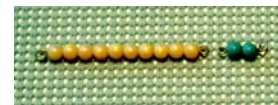


"Where is thirteen?"
(then 11,12)

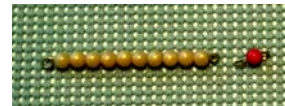


"Where is twelve?"
(then 11,13)

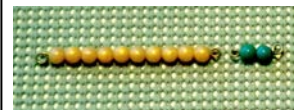
Step 3: Recall



"How many are there?"



"How many is this?"



"How many are there here?"

When your child masters these, do lessons with 14, 15, & 16; and then 17, 18, & 19.

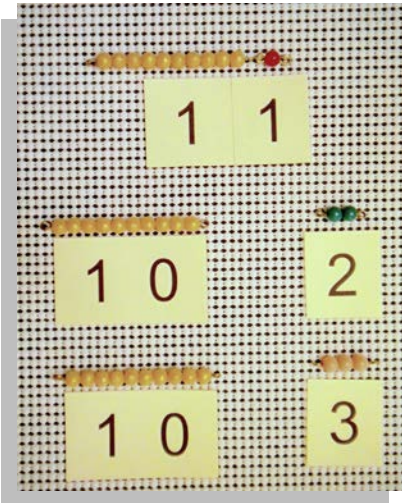
Video: [A Montessori School Teen Bead Bar Presentation](#)

Matching Amounts & Numerals 11-20



Print the **numeral cards** on pages 470-471. The single numeral cards are laid over the zeros on the 10 cards to make the numerals 11-19. 20 has its own card.

Once your child knows the amounts 11, 12, & 13, you can match them right up with their numerals without a separate step of teaching just the numerals:

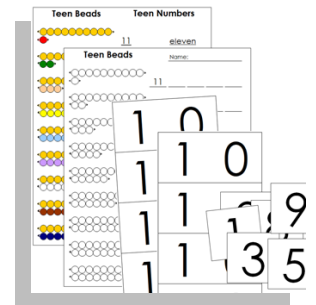


Lay out the ten bars above three 10 cards on the left, and the 1, 2, & 3 bars above their numeral cards on the right. Start with 11. Bring the bead bars together as you say, "*Ten and one makes eleven.*" Then move the 10 card to the middle and set the 1 card over the zero as you say, "*Ten and One says eleven.*" Now your board will look like the photo. Repeat with 12 & 13. Return the board to the original layout and have your child do it. Help as needed.

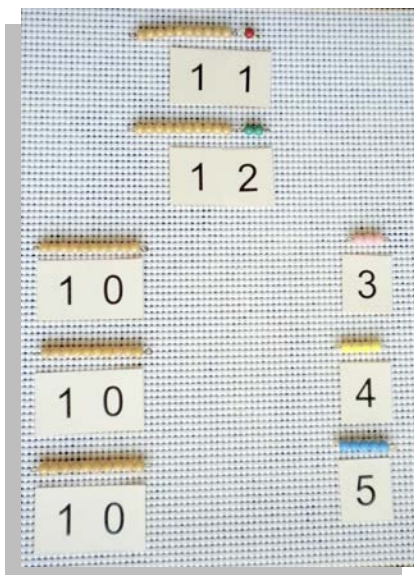


Left: If your child is very clear that one dime = 10 pennies, you can substitute coins for this activity.

Right: The [Teen Beads, Boards, and Worksheets](#) from **Montessori Print Shop** are nice, inexpensive printables for more abstract work with these numbers.



Video: [Doing this activity with the Montessori Teen Boards](#)



When your child knows 11, 12, & 13 well, add 14, & 15 (left). **Continue until your child has practiced amounts and numerals 11-19 enough to really understand them.** This takes time, so allow for lots of practice.



Bitsboard (iPad) has boards for counting 0-20 objects and learning numerals 0-100 and beyond. These boards are great for practice.



Pocket Chart Pro (iPad) has a board for counting up to 20 objects and matching the numerals, and many other boards as well.



Just as with the number 10, **we make extra fuss over 20**. Make twenty objects many different ways. Let your child make patterns with the pennies. If she really understands that one dime = 10 pennies, let her use 2 dimes to represent 20.

Amounts & Numerals 21-100

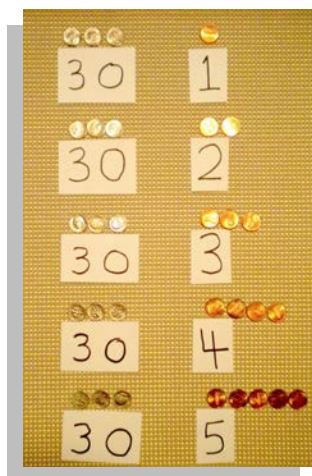
Have you guessed what we do from 21-100? That's right, more of the same activities we just finished. On pages 472-477 you will find the **printouts for the cards from 20 - 90 & 100**. Use your numeral cards with these to make all the rest of the numerals from 21-100. Do 21-30, then 31-40, 41-50, 51-60, 61-70, 71-80, 81-90, and 91-100.



As the amounts increase, you will run out of gold bead ten bars. No worries, get a box of 45 **Golden Bead Ten Bars**. You should also get the cool, \$3 **100 Golden Bead Chain**. Total for both is around \$16



Laying out all the amounts from 91-100, for example, takes 91 golden bead ten bars, still more than the 54 you will have after you buy the box above and add it to your other ten bars. If the box of bars above just isn't possible budget-wise, get the \$2.95 **100 Golden Bead Chain** and use it, along with your ten bars from the **Teen Bead Bar Box** and do as many numbers at a time as you can. It will all work out.



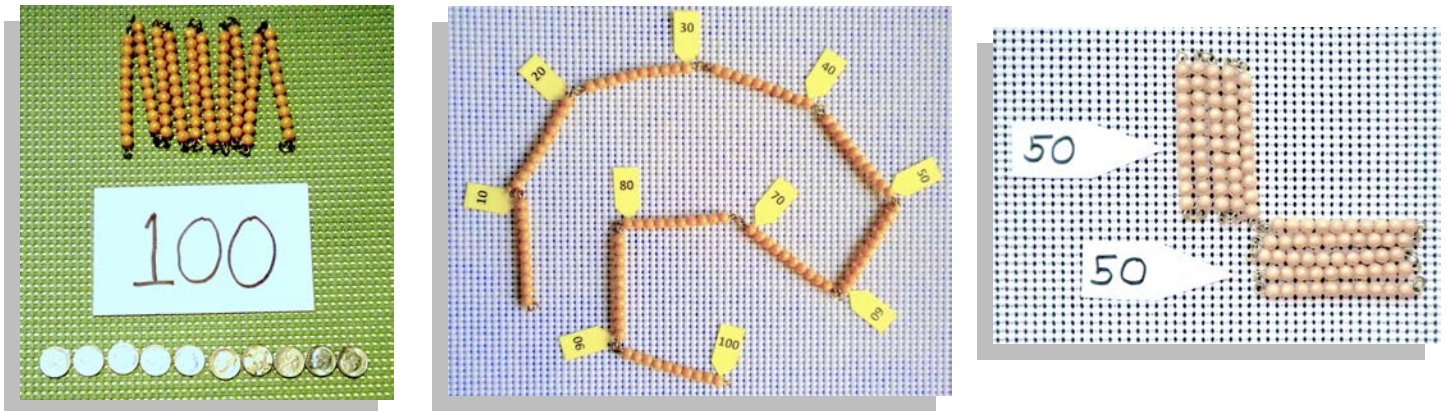
If your child truly understands that 1 dime = 10 pennies, you are in luck! You can do all the amounts and numerals from 21-100 using these coins, as shown at left with 31-35. You can also use the 1-9 bead bars instead of the pennies to make it easier. Be sure your child counts by counting the dimes as "*Ten, twenty, thirty*".

Do all the amounts and numerals in sequence up to 100. Make a special activity out of 20, 30, 40, 50, 60, 70, 80, and 90. Check before each activity to see if your child remembers the numbers she learned the last time you did math work.

Once your child is working on amounts and numerals 21-100, you can start doing Operations with Numbers (p. 373), Telling Time (p. 381), Money (p.385), and Fractions (p. 379). This will provide variety and reinforce what your child is learning about larger numbers.

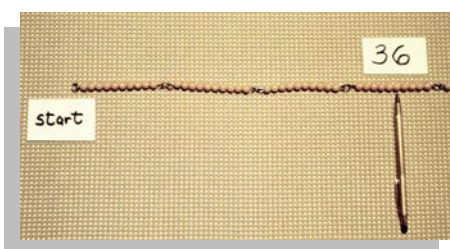
Working with 100

After probably a good length of time getting here, making it to 100 is a big deal! Your child has come a very long way. We now do activities to help your child reinforce her new understanding of numbers up to 100, including how they break into groups of ten, skip counting, and other activities. This is all leading up to learning about the **Decimal System**.

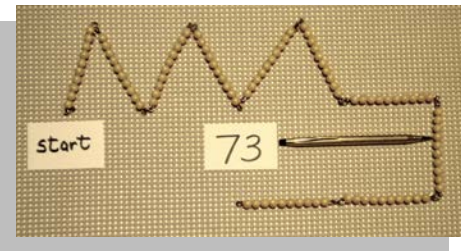


Left: Count to 100 using the **100 Golden Bead Chain**, and skip count to 100 by tens with the chain bars and with dimes (help as needed), Middle: Print out the **100 Golden Bead Chain Pointers** (another set is on p. 478), cut them out, and have your child count the 100 Golden Bead Chain, placing the 10,20,30,40,50,60,70,80, 90, and 100 pointers in their correct places as he goes. Right: Count the 100 Chain to 50, group those 5 bars together, and point a 50 pointer at them. Show your child how $50 + 50 = 100$.

Practicing 0-100



Now we do some work practicing with amounts and numerals 1-100, to reinforce your child's new skills. Lay out the **100 Golden Bead Chain**. Write a numeral on a small card and let your child count left to right that many beads. Do many different numbers.



When you do larger numbers, angle the sections until you get to the chain that has the number on it. Now your child can skip count the bent chains by tens - "*Ten, twenty, thirty...*" - until he gets to the last chain, and count that one by ones to get to the number.



Use 10 bars and 1-9 bars to make amounts for your child to identify. Make numerals and let your child put together the amounts. Then reverse and give your child amounts so he can make the numerals. Use the tens and unit numerals from the **printouts on pages 472-476**.

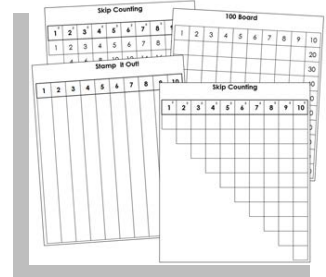
Work on amounts and numerals 0-100 this way until your child is very familiar with them, and can make and identify any number in this range.

The Hundred Board



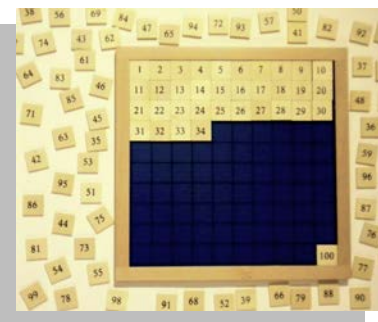
Left: The **Montessori Hundred Board**. Very nice, around \$26.

Right: The **1-100 Math Series** from **Montessori Print Shop** has a full set of charts, boards, number cards, and lessons, for only \$3.



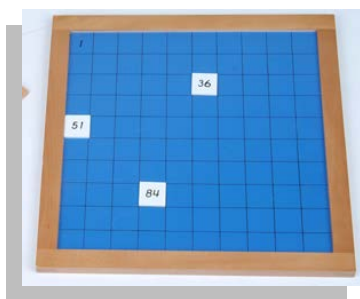
The **Hundred Board** is a classic math material. It shows relationships between numbers in our ten-based system very clearly. Children can learn **skip counting, addition and subtraction, multiplication, exchanging coins**, and other skills with this material. If you can afford the Montessori material, it is very nice. Printed materials will work at home if printed on heavy card stock and stored safely. On pages 479-480 you will find more **hundred board printables**.

Free Hundred Board printables at Donna Young



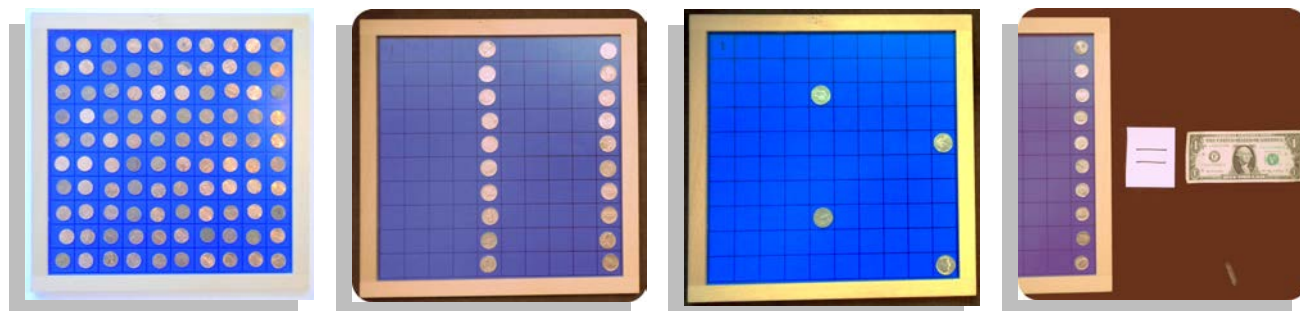
The usual first activity is to **start with 1 at the top left and build the board one number at a time to 100**. Points of interest:

- The vertical rows all end in the same number
- Skip counting down the tens row vertically from the top by tens (10, 20, 30, etc), and down the other rows.
- Skip counting by 2,3,4,5,etc. Lay out just the numerals for each amount (2,4,6,8.....5,10,15,20, etc)



For more challenge, give your child numeral tiles at random and have him figure out where they go on the board. Help only if needed. Remind your child that in each vertical row the numerals all end with the same number.

Exchanging Coins



Left to right: (1) Counting out 100 pennies to fill the board. (2) Placing a nickel on every 5th space as the board is counted. (3) Placing a quarter on every 25th space. (4) Placing dimes at the end of each row and showing that 10 dimes = 1 dollar.

- Have your child fill up the board with pennies. Show her that 100 pennies = 1 dollar.
- Have her pick up the pennies five at a time, placing a nickel on every 5th space, as in the second photo from left above. Show her that 5 pennies = 1 nickel.
- When all the nickels are placed, have her count them to see that 20 nickels = 100 pennies = 1 dollar.
- With the nickels still on the board, count from 1, emphasizing the count at each nickel to teach your child how to skip count by 5's ("*Five, ten, fifteen*", etc). At every 5th nickel, place a quarter, so the board looks like the third photo from left when you are done. Show your child how 5 nickels = 1 quarter.
- Count the board again, leaving a dime at each ten space on the ends of the rows. Remind your child that 1 dime = 10 pennies. When finished, have your child pick up the dimes, starting at the top, while skip counting by tens to 100 ("*10, 20, 30, etc*"). Show your child that 10 dimes = 1 dollar

Extend these activities to your shopping trips. Point out prices and talk about how much money different things cost. Give your child \$1-3 to spend at the small toys rack and require him to figure out how to stay within his 'budget'.

Online Hundred Board Games

Find and paint numerals on a Hundred Board

A good skip counting board

Say numbers, find, and 'splat' them

'Mend' the board by placing numerals correctly

Find the correct number from a verbal cue

Finding dog bones on the board

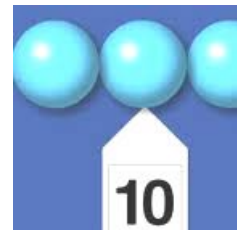
Type in numbers to fill in the blanks on the board

Hundred Board puzzles and worksheets



At **The Education of Ours**, They made a Hundred Board layout on kitchen floor tiles.

Hundred Board & Skip Counting Apps



Left to right: **Hundred Board** (iPad) is a decent app, but should offer more - like a free work option - for \$2.99, IMO. **100's Board** (iPad) is another basic hundred board app that provides good practice. **Skip Counting** (iPad) provides practice in this important number skill. **Montessori Bead Skip Counting** (iPad) offers another way to skip count.

Bonus Step: Going from 100 - 1000

The Hundred Square

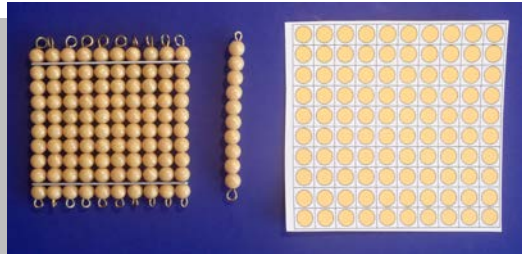


The **Hundred Square**, around \$3, is another great Montessori material to have at this point. It reinforces the relationship between 100 objects in a concrete way for moving beyond 100, and leads into Decimal System work. To move beyond 100, use the **100 Square**, your **Teen Bead Bar Box**, and **Hundred Squares** from the **printout** on page 481.

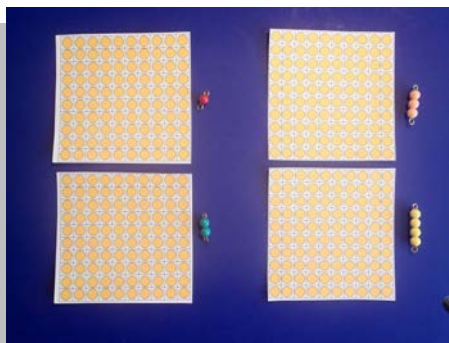
Now we will do amounts and numerals activities as we did to get to 100. This will probably be a faster process as your child continues and sees the sequences repeat.



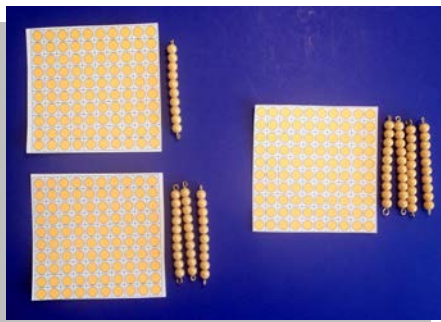
The **Hundred Board 101-200** (iPad) app can be used to help your child learn the *numerals* 101-200. **You still need to work with amounts first** for real understanding.



Review with your child that the **Hundred Square** and your **printed 100 squares** (p. 481) each have 100 on them. Lay a ten bar over successive vertical rows, going left to right, as your child counts, "*Ten, twenty, thirty*", etc., up to 100.



Lay a square and the 1 bar out. As you put them together, say, "*100 plus 1 makes one hundred and one.*" Repeat with the 2 - 9 bead bars to do 102 - 109.



Use a ten bead bar to do 110. "*100 plus ten makes one hundred and ten.*" Go right into using two ten bars to make 120, three to make 130 and so on, up to adding ten 10 bars to make 200, where you exchange the bead bars for a 100 Square.

Make a **101-200 Square** by laying out the numerals on a blank hundred square board. You will find a numerals printable for this on page 482.

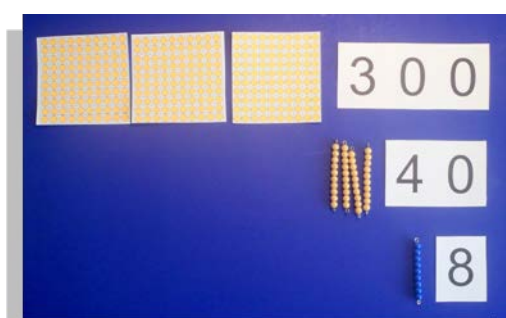
101	102	103	104	105	106	107	108	109	110
110	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Now, it is just a matter of doing the games and activities you did to reinforce numbers 1-100, and these layouts above, with numbers from 101-200. **This continues with 201-300, 301-400, 401-500, etc., all the way up to 1000** if your child shows the interest. Print out **Gold Hundred Squares** from the printout on page 481 as you need them. Staple 10 of them together to represent 1000. As you get higher, the process becomes quicker because your child gets used to seeing repeating number patterns.

Advanced work - the Decimal System

As your child moves up from 100 toward 1000, you can start introducing the Decimal System. Many parents do not get this far doing Montessori at home, so don't be worried if your child has not worked with these activities before she goes to school. You can always use them at home to reinforce her school activities later.

On pages 483-500 in the **printouts** are the **Decimal System Numeral Cards**. Print these out on white card stock as directed. **When your child has learned numbers up to 400 pretty well, introduce place values and the Decimal System like this:**



Lay out **3 printed hundred squares (p. 481)**, **four 10 bars**, the **8 bar**, and the **numeral cards** as shown.



Put the amounts together as you say, " $300 + 40 + 8$ **makes** 348". Lay the bars on the hundred squares. Now, lay the numeral cards on top of each other as you say, " $300 + 40 + 8$ **says** 348". Your layout should look like the photo.

Now it is a matter of **repeating the above steps with many different numbers** to reinforce these concepts and help your child learn. As your child learns larger and larger numbers heading toward 1000, include practice making larger numbers and their numerals.

- Give your child amounts and have him make the numeral for each amount. Reverse roles and have him give you the amounts.
- Give your child numerals and have her create those amounts. Reverse roles again.

Video: [Demonstrating the Montessori Bank Game](#)



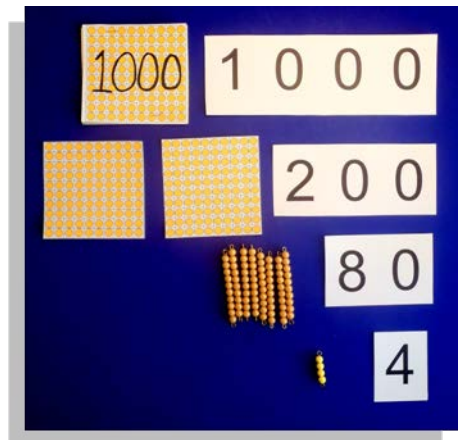
The **Montessori Place Value** (iPad) app can be incredibly helpful when your child is learning decimal system number placement. Start by setting the app to use just **3 places** (up to the hundreds). As your child gets into the thousands, whether at home or school, add on the fourth place in the settings.

Going from 1000 - 10,000!

Whew, you're getting up there! Very few parents go this far at home, but just in case you guys are overachievers or your child is showing a remarkable interest in math, or both, we'll go over it. All you need are more **Hundred Squares** from the printout on page 481.



Ten hundred squares are stapled together to make 1000. Do this with your child and count each hundred as you stack them up ("100,200,300"....). Staple ten together and write 1000 on top with a black marker. Make a few of these.



Lay out the squares, bead bars, and numerals as shown. Review with your child how many are in each row and what each numeral says.



Add the amounts together, saying: " $1000 + 200 + 80 + 4$ **makes** One thousand, two hundred, eighty four." Bring the numerals together, saying: " $1000 + 200 + 80 + 4$ **says** 1,284". Your layout should look like the photo.

When your child has done **many** different numbers like this, you can point out that the first place on the right is the **Units place**, the next is the **Tens place**, the next is the **Hundreds place**, and the fourth is the **Thousands place**.



The **Montessori Stamp Game** is the next step from here. **Stamp Game** (iPad) is a great app for this. You can also download the free **Printable Stamp Game & Instructions** from **Montessori Print Shop**.



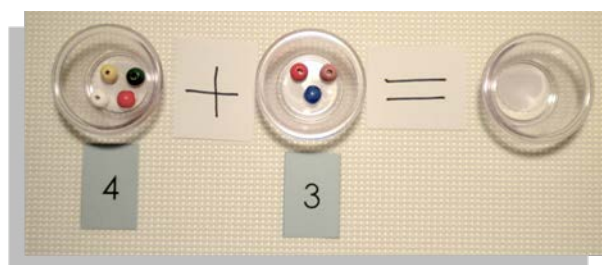
Operations with Numbers

Once your child is working with numbers from 20-100, you can start doing these activities, as well as **telling time** (p. 381), **fractions** (p. 379), and **money** (p. 385). Mixing in different activities offers variety and maintains enthusiasm.

Addition

Addition is the easiest operation to begin with. Start with small amounts and gradually increase the challenge.

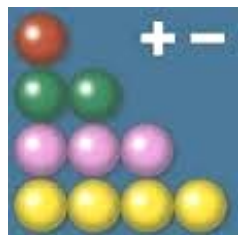
Video: [A first addition presentation](#)



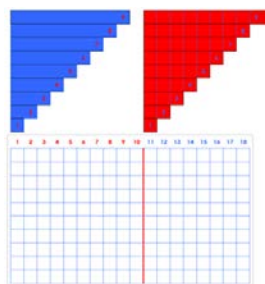
With clear cups and beads, set up an addition problem like the one shown. Start with sums 10 or less. Pour the contents into the final cup as you say, "*Four plus 3 equals...*", then your child counts the sum and places the correct numeral under the last cup. "*Plus means to add together.*"

2 + 5 =	_____
3 + 6 =	_____
7 + 1 =	_____
5 + 4 =	_____
9 + 1 =	_____
4 + 3 =	_____
2 + 2 =	_____
5 + 3 =	_____
4 + 4 =	_____

When your child is clear on the process, make up a sheet of addition problems for him and let him use the cups and beads to figure out the sums and then write them in.



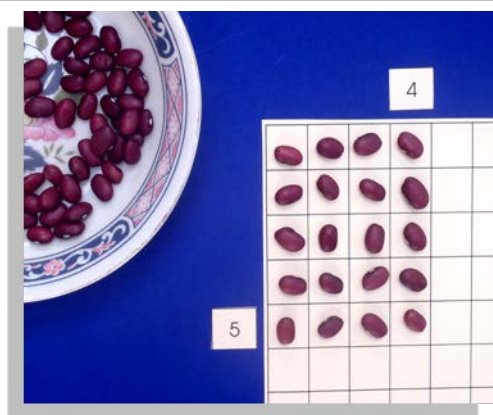
Bead Facts (left, iPad) is a nice addition app that clearly shows amounts and sums. The green arrow cues your child that the sum is correct. the fun app **Adding Apples HD** (right, iPad) has great graphics and requires careful counting.



The beautiful **Addition Strip Boards, Charts, and Instructions** from **Montessori Print Shop** reproduce a classic Montessori addition activity for home use. Numbered strips are laid end to end, with the sums clearly shown above. This activity takes addition one step further into abstraction by using squares drawn on the strips to signify amounts. Print on heavy card stock.

Multiplication

Multiplication is really a faster form of addition, so it is natural to do it next while your child is in 'adding mode'. **Video:** [Montessori multiplication in school](#)



Montessori schools have a special **Multiplication Board**. At home, you can use a **blank Hundred Board printout** just as well (cut out just the board). The problem shown is $4 \times 5 = \underline{\quad}$. Present the problem and say, "We're going to count to 4, five times." Have your child set the 4 card above the board as shown, and the 5 card five squares down as shown.

Show your child how to place counters (beans in this case) and count to 4 in each of the five rows from left to right, top down. You are **counting to 4, five times**. Count the counters to find the answer - **20**. Have your child write in the answer on the problem card. Now, write out a problem, like $3 \times 5 = \underline{\quad}$, and let her do it. Reverse and do $5 \times 3 = \underline{\quad}$. Point out that the answers are the same.

$1 \times 0 = \underline{\quad}$	$2 \times 0 = \underline{\quad}$	$3 \times 0 = \underline{\quad}$
$1 \times 1 = \underline{\quad}$	$2 \times 1 = \underline{\quad}$	$3 \times 1 = \underline{\quad}$
$1 \times 2 = \underline{\quad}$	$2 \times 2 = \underline{\quad}$	$3 \times 2 = \underline{\quad}$
$1 \times 3 = \underline{\quad}$	$2 \times 3 = \underline{\quad}$	$3 \times 3 = \underline{\quad}$
$1 \times 4 = \underline{\quad}$	$2 \times 4 = \underline{\quad}$	$3 \times 4 = \underline{\quad}$
$1 \times 5 = \underline{\quad}$	$2 \times 5 = \underline{\quad}$	$3 \times 5 = \underline{\quad}$
$1 \times 6 = \underline{\quad}$	$2 \times 6 = \underline{\quad}$	$3 \times 6 = \underline{\quad}$
$1 \times 7 = \underline{\quad}$	$2 \times 7 = \underline{\quad}$	$3 \times 7 = \underline{\quad}$
$1 \times 8 = \underline{\quad}$	$2 \times 8 = \underline{\quad}$	$3 \times 8 = \underline{\quad}$
$1 \times 9 = \underline{\quad}$	$2 \times 9 = \underline{\quad}$	$3 \times 9 = \underline{\quad}$
$1 \times 10 = \underline{\quad}$	$2 \times 10 = \underline{\quad}$	$3 \times 10 = \underline{\quad}$

Print out **Multiplication Problem Sheets** from pages 507-512 in the **printouts**. Completing these using the activity above, your child will start to see the progression of numbers. This work will help your child eventually **memorize the multiplication tables** - real old school stuff!

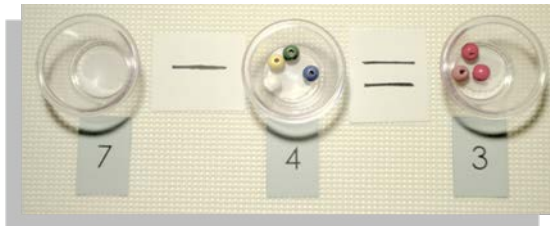
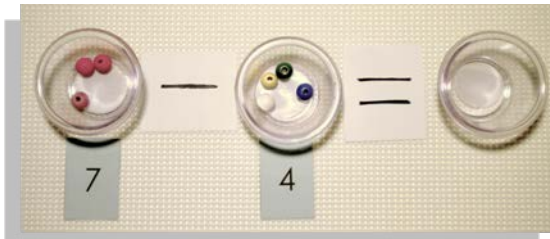
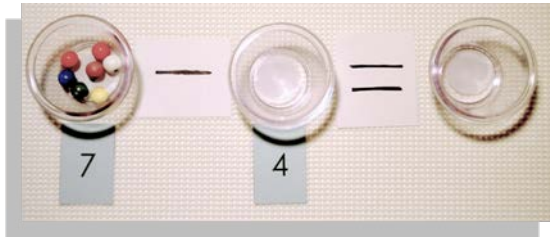


Multiplication HD (left, iPad) and **Skip Counting** (right, iPad) are useful once your child has done enough multiplying using the method above. They use numerals only, which can help your child memorize the multiplication tables when he is ready.



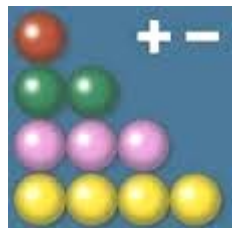
Subtraction

With subtraction, it is important again to **use groups of real objects first**. This is always the best way for young children to understand math. Once a child fully understands what is happening to groups of objects when we say $10 - 3 = 7$, she can start manipulating numerals based on their relationship to each other. This is a big step into abstraction, and without plenty of experience working with real objects, a child's understanding of math lacks a firm platform to build on.

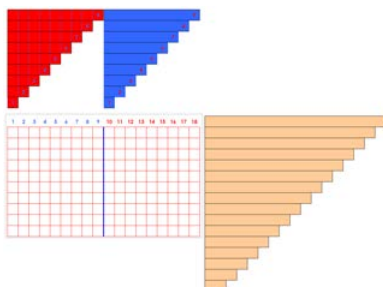


Get your addition materials together, make a minus sign, and you are good to go. Set up a problem like the one shown and demonstrate it for your child. As you read the problem, "*Seven minus four...*", take 4 beads from the first cup and put them in the second. Finally, empty the first cup into the last cup and say "*Equals three*", then place the numeral 3 under the last cup. "*Minus means to take away.*"

As a check, show your child how to **empty the contents of both cups back into the first cup, and count them to check that there are seven**. Preschoolers need this double check to really understand these changes in quantity.



The whimsical [Subtracting Sardines](#) (left, iPad) app is unique, with great graphics. Count the fish carefully! [Montessori Bead Facts Plus Minus](#) (iPad), is one of the better math apps, covering addition and subtraction.



[Subtraction Strip Boards, Charts, and Instructions](#) from **Montessori Print Shop** are a great way to help a child who has practiced enough with the cups to take her understanding of subtraction from real objects into relationships between numerals, a much more abstract concept.

Division

Be sure your child has practiced and has a firm understanding of addition, multiplication, and subtraction before attempting division. Division is a less intuitive operation, and requires a solid understanding of the other ways of manipulating amounts and numerals. These activities take your child into simple division with numbers that are **equally divisible** by other numbers, without remainders.



"We have 9 pennies to split between 3 children. We need to divide up the pennies between the 3 children. How many will each one get?" Have your child put **one penny in each cup**. Point out that there are more pennies left, and have your child do it again, and then again. **Each cup now has 3.**



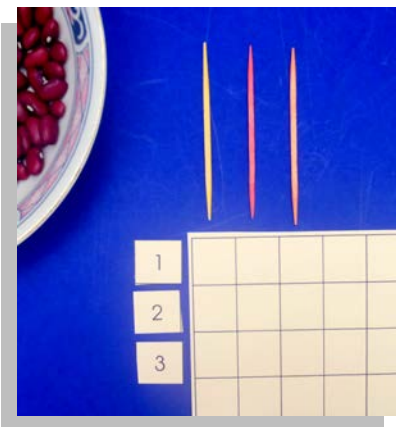
"Division means to separate into groups."

Write out the equation and say, "9, divided into 3 groups, equals 3 in each group."

$$9 \div 3 = 3$$

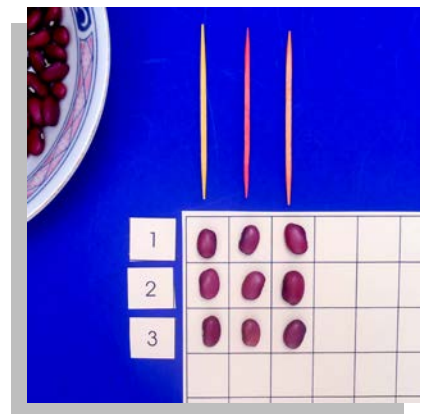
Repeat the above exercise with other **equally divisible amounts** of 10 or less beans: 4 cups and 8 beans; 2 cups and 4, 6, 8, or 10 beans; 3 cups and 6 beans. When your child is ready, introduce the **Division Board**.

Video: [The Montessori Division Board](#)

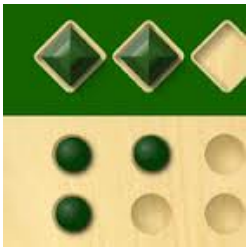


Use your blank hundred board. The toothpicks represent the children in the above activity. this time they are getting 9 beans to plant. **Your child counts out three beans for each 'child', top down in each column, until all the beans are divided between the children.**

$$9 \div 3 = 3$$



Repeat with the same combinations listed under the first activity.



The **Division Board** (iPad) app is a great app for practicing division using a virtual Montessori Division Board. Why buy the real board when this one costs \$2.99? By the time they get to this point, most children are very ready to use digital apps for math.

If you get to this point and your child wants more, you can always get into dividing with remainders, as in $25 \div 6 = 4$ with a remainder of 1. The final step in this process is to teach your child long division of larger numbers. For most children, this will be work they learn in school. In a book for 2-6 year olds, we have to stop somewhere!

Math resources

[Super Teacher Worksheets](#)

[Dad's Worksheets](#)

[Free Math Worksheets](#)

[Math Fact Cafe](#)

[PBS Parents Preschool & Kindergarten Math Games](#)

[Sheppard Software Free Math Games](#)

Montessori Math Resources

[MontessoriMaterials.org](#)

[MontessoriMom.com free downloads](#)

The Ordinal Value of Numbers

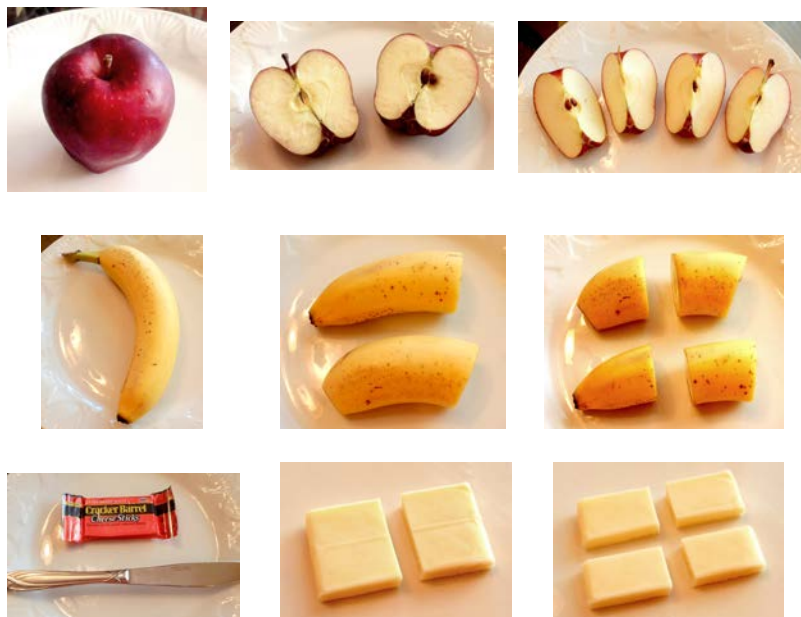
Ordinal value refers to the position or ‘place’ of an object in a sequence. The simplest way to do this is to line up a series of 10 objects. Say, “*We’re going to count these a new way.*” Point to the first one on the left and say, moving your finger down the row, “*First, second, third, fourth, fifth,*” up to the tenth. Now let your child count the same way, helping her as needed if she forgets one of the positions name.

- Line up different objects and let your child practice counting them by their ordinal value.
- Test your child’s understanding by asking him to point to the seventh, the second, the fifth, etc.
- The next time you are standing or parked in line somewhere with your child, ask her to figure out what place in the line you two are, helping as needed.

Fractions

And now for something totally different, we learn how to **divide one thing into smaller parts**. Fractions are placed here in the sequence, but children can usually start working with fractions once they are doing multiplication.

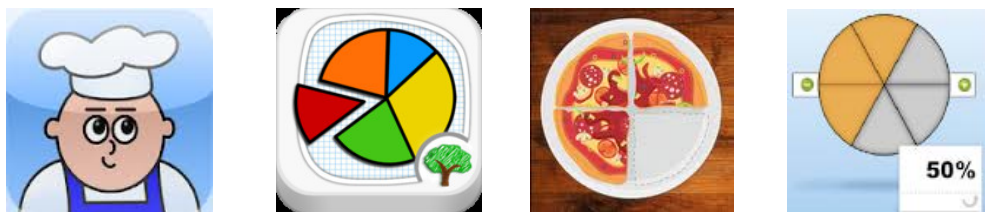
Food Fractions



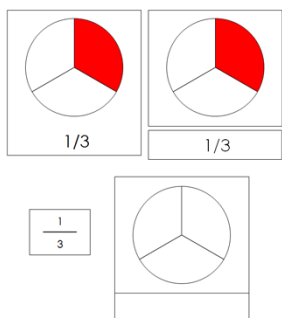
The next time you are cutting fruit or cheese, ask your child, "*Where should I cut to make two pieces that are the same size?*" Let your child estimate and try it. Try again with more fruit until you get two pieces that are the same size. Tell your child, "*We cut the fruit in half, each piece is **one half**.*" Repeat the process to make **thirds** and **quarters**.

Show your child that by putting two halves of fruit back together, that "*One half plus one half equals one.*" Repeat this with thirds and fourths.

This is one of the best introduction to fractions for preschoolers. Look for opportunities to repeat this activity when you can. When your child is pretty familiar with dividing food this way, introduce apps and the fraction printouts.



Left to right: [Pizza Fractions](#) (iPad) is a nice starter app. [Fractions App by Tap To Learn](#) (iPad) uses tutorials and videos, and tests your child's knowledge. [Match the Fraction](#) (iPad) lets your child practice identifying fractions. [Fractions Circle](#) (android) is a clean, simple app. Choose the $\frac{1}{2}$ type numerals, percentages come later.



The inexpensive, beautiful [Fraction Cards and Labels](#) from **Montessori Print Shop** are perfect for teaching your child about fractions. They simulate the [Montessori Fractions Set](#) in a printable material for home use. Start with 1/2, 1/3, and 1/4 and build from there. Let your child practice coloring in fractions, identifying them, and writing them out.

More fractions resources:

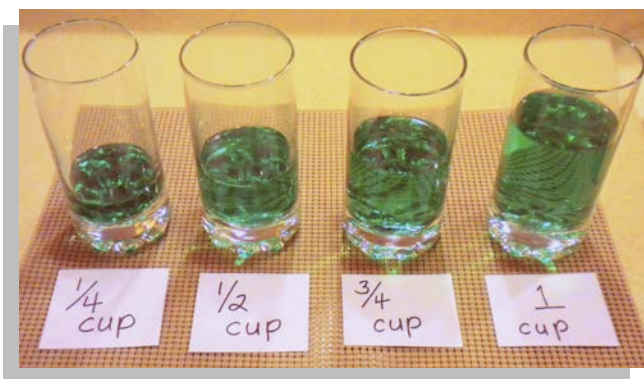
[Free fractions printouts](#)

[More free fractions printouts](#)

[Identifying fractions worksheets](#)

Fractions, like most areas of math, usually require some personally guided instruction and help to master. Apps and printables are great, but 1:1 teaching often helps the most.

Volumes and Fractions



Once your child has worked a bit with food fractions and fractions cards, you can introduce an activity that combines fractions and an experience with **volume**. You will need a **measuring cup**, **4 identical clear glasses**, **some index cards**, and **a marker**.

Show your child the cup marks on a measuring cup. Have her carefully (an activity in itself) fill it to $\frac{1}{4}$ cup – set the

measuring cup on the counter to be accurate. Add some food coloring and pour into a glass. Repeat with $\frac{1}{2}$, $\frac{3}{4}$, and 1 cup. Make up signs and line up the glasses as shown in the photo. Let your child inspect to see if each glass has the right amount more than the last.

The $\frac{1}{4}$ cup glass, added to $\frac{1}{2}$ cup, should equal $\frac{3}{4}$ cup, right? Try it & see. Get another $\frac{1}{4}$ cup in the first glass and add it to the $\frac{3}{4}$ cup to see if it equals 1 cup.

You can vary this in many ways – try $\frac{1}{3}$ cup increments. How much does $\frac{3}{4}$ cup + $\frac{3}{4}$ cup make? Help your child as needed to write out these as addition problems on paper.

Telling Time

When she can tell time, your child can be responsible for getting things done and being ready to go on time. He can keep track of when to call home and when a favorite TV show is on. Telling time is a big accomplishment!



To start these activities, your child should have completed and be familiar with amounts and numerals up to 100. Time does not involve amounts in the traditional sense. **Seconds, minutes, hours, etc., are arbitrary units of measurement that a child becomes familiar with by using and experiencing them.**



Buy a **battery operated analog clock** with a white face, simple black numerals, 60 marks for seconds & minutes, the hour numbers, and the three hands – seconds, minutes, hours. Most office supply stores have these. This is a great first clock for a child's room. It is a real clock with a moving second hand, and no distracting colors or designs. This follows the Montessori practice of **isolating** the information to be communicated. Toy clocks are fine, but **a real clock is better!**

As long as your child can count to sixty and understand the math of a clock, the first thing to be learned is what a second, minute, and hour really are. **Since they are units of time, your child needs to experience them as units of time.**

Seconds

Show your child the clock and point out the **60 marks around the edge**. Tell your child, *"These marks stand for both seconds and minutes. First, we'll do seconds. One second is a very short time."* Point out the second hand to your child. When it reaches the top, start counting 1,2,3....as it ticks off each second. Count along with your child and the second hand to **60 seconds**. Clapping every second helps.

Pick a time the second hand reaches the top again and let your child count the seconds by herself. Ask your child, *"How many second marks are there between the numbers?"* Help your child if needed to determine that there are 5.

Lastly, ask your child, *"What can we do in one second?"* Try clapping hands, jumping up and down once, Standing up and sitting down, etc. This gives your child **real time**

experience in how long one second is. Try this for 5, then 10, then 15 etc. seconds so your child gets a real idea of those time periods.

Minutes

*“Now, let’s do minutes. A minute is a lot longer than a second. 60 Seconds make 1 minute. When the second hand goes all the way around the circle, that is one minute. **Do you think we can sit absolutely still for one minute?**”*

Watch quietly with your child and try not to move as you watch the second hand make a complete revolution. Did you both make it? Try washing your hands, walking around the house, checking the mail, getting a drink of water, etc. See what you can do in one minute. **Estimating and testing** will help your child learn how long one minute is.

Note where the minute hand is and watch the second hand go all the way around. **Count the seconds as they pass.** *“The 60 marks also stand for minutes. One circle around for the second hand is 60 seconds. For the Minute Hand – point to the minute hand – that is just one minute.”* Do this again to emphasize how the minute hand only moves one mark every time the second hand goes around 60 marks.

Hours

“When the minute hand (point to the minute hand) goes all the way around the circle, that makes 1 hour. 60 minutes make 1 hour.” Show your child the hour hand.

Point out to your child that the written numbers on the clock stand for hours. Count to show there are 12 hours. Ask your child what she thinks you two can do in one hour. Could you go to the store, watch a long TV show, watch a movie, take a bath? Get your child’s ideas. Estimate and test.

When the clock hits any hour exactly, tell your child, *“We’re going to see how long an hour is.”* **Set the alarm on that clock or another one to go off in one hour.** Find an errand to run, a TV show you can watch, something that might take an hour. Note clearly with your child what number the small hand is pointing to. If, for example, it points to the 3, tell your child, *“When the small hand points to the 4 it will have been one hour.”* Do your thing together, and take a look at the clock afterwards to see if the small hand has made it to the 4. If not, keep checking on it until it has been an hour. If you went over, discuss how your activity took more than one hour.

Now that your child has experienced units of time, she can learn to identify time on the clock and read and write what time it is.

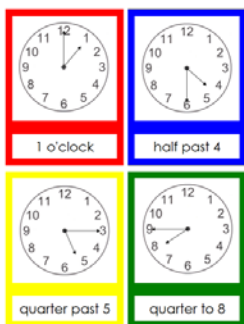
There are many iPad apps for telling time and fewer, of lesser quality, in the android stores. They all focus on reading clocks and digital time displays rather than teaching a child about seconds, minutes, and hours. You'll have to do that yourself. When your child knows a little bit about reading a clock face, any of these apps will provide good practice.



Telling Time HD (iPad), has the most options. **Telling Time Free** (iPad), also shows both analog and digital screens. **Clock Time For Kids** (android) is a decent time telling app. **Telling Time the Easy Way** (iPad) is one of the great apps series from Grasshopper Apps. **Telling Time** (android) is a good basic app with different interactive experiences. **Interactive Telling Time HD** (android) is a nice app with lots to do.



For children who learn best using real objects, which is most young children, the **Learning Resources Big Time 12 Hr. Student Clock** fits the bill. It has the essential elements a child needs to focus on when learning to tell time.



The **Clock Series** printables from **Montessori Print Shop** teach telling time in Montessori Three Part Card format.

Create your own time worksheets at [Homeschool Math](#)

A Mom Blogger creates a time telling game

A BIG clock template with hands your child can attach and move

All kinds of clock and time activities at [Enchanted Learning](#)

Using a Calendar

January 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 New Year's Day
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17 Martin Luther King Jr. Day	18	19	20	21	22
23	24 Inauguration Day	25 31	26	27	28	29

One of the best ways for a young child to learn about the calendar is to simply **put up a planning calendar on the wall in her room and use it every day**. Make sure that the **days of the week** and the **numbers** are clearly displayed.

Each day, have your child make a mark or other sign on the days date. **Say the day and month every**

day – ***“Today is the 15th of June, 2011.”*** You can add in weather information and talk about the plan for the day. As you do this every day, your child will see the progression of days, weeks, and months. Write in **major holidays, family birthdays, and other important dates**. Any time your child shows interest you can help him **memorize the days of the week**. Point to them and have her practice reading them. Let him practice writing them. Count through the entire calendar to find out how many weeks there are in one year.



At ***The Education Of Ours*** they laid out cards with the months around a yellow globe 'sun' to show the passing of a year.

You can also introduce the **12 months of the year** and practice recognizing and writing them. Most calendars have a page with all the months of the year that is good for this. It is always a good activity to point out to your child how some months have 30 days, others 31, and to learn the old rhyme: *“Thirty days has September, April, June, and November. All the rest have 31 except February, with 28 days clear, and 29 every four years on leap year.”*

Once your child has used a calendar regularly through a couple of years she will have it down for life. There are a thousand calendar activities, few more effective than actually using one.

Calendar Resources

[A Four Seasons Word Wheel to display near your child's calendar](#)

[A Month's word wheel](#)

[Free printable calendars](#)

[More free printable calendars](#)

Money

We did some basic work exchanging coins on page 353 when you were just starting the Math Sequence, and on page 368 with the Hundred Board. Now that your child has experience with numbers up to 100, you can extend your money activities.



Splash Money (iPad) is a good money app, with a number of activities for identifying amounts and making change. Also, check out:

Kids & Money - Two First Steps at Carrots Are Orange

Coin Values

Get out **25 pennies, a nickel, a dime, and a quarter.**

Show your child that **5 pennies make one nickel, 10 pennies make one dime** (you did this one earlier), and **25 pennies make one quarter.**

Lay out the coins and = sign cards to give your child a visual experience of these coin amounts.

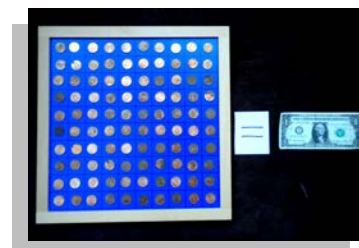
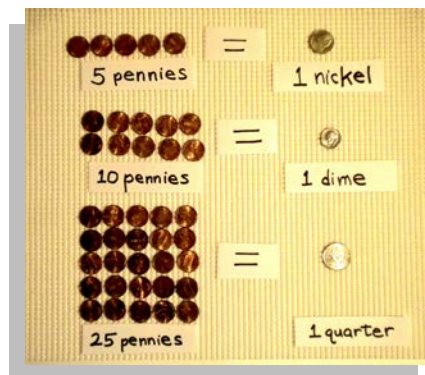
Give your child 5, then 10, then 25 pennies and let her figure out to give you first a nickel, then a dime, and finally a quarter back. Then do it in reverse – give you child a nickel, dime and then a quarter and have your child give you the correct number of pennies back. Work on this until you feel your child understands these coins and the amounts they represent. Now try it with two nickels, then two dimes, then two quarters. Use the Hundred Board if needed to help your child figure things out.

Keep playing this game, adding more nickels, dimes, and quarters as your child gets more comfortable.

Making a Dollar

Children love to start using bills! First, explain that a dollar is 100 pennies. Then use the Hundred Board to lay it out. Place an = sign and then a dollar to the right of the board with 100 pennies and read with your child, “*100 pennies equals one dollar.*”

Ask your child, “*Do you want to find out how many nickels, dimes, and quarters make a dollar?*” If the answer is yes, here you go: Have your child set out a floor rug or table mat.



“There are 10 pennies in one dime. How many dimes do you think it takes to make a dollar?” “Let’s find out!”

Have your child count the first row of pennies, left to right, removing the pennies as she goes. When she gets to the end, have her place a dime on the last square in the row. Repeat for the other rows. When your child is done, have him count the dimes. *“Ten dimes make one dollar.”*

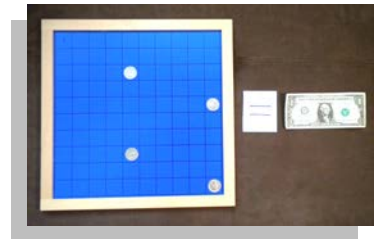
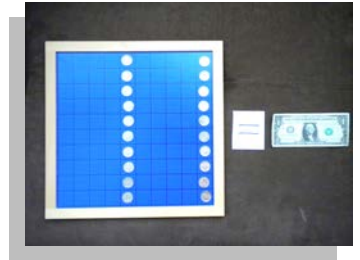
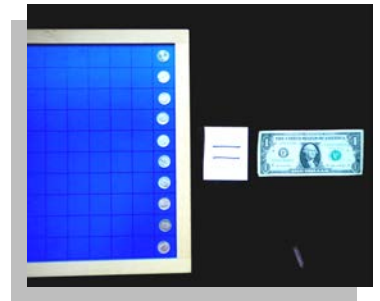
Now repeat these steps with nickels and quarters.

Your child starts counting squares at the top left square and puts a nickel down every five squares. Have your child count the nickels.

“Twenty nickels makes one dollar.” Your child repeats the above, but counting to twenty five four times, and putting a quarter down every time she reaches twenty five.

“Four quarters make one dollar.”

Practice these coin and number skills whenever you can. When your child’s money skills advance a bit, [try making worksheets as shown in this video](#).



Buy & Sell



Now your child can ‘buy and sell’. Collect groups of objects to sell each other. Each of you gets an amount of real money, like 5 one dollar bills and a collection of coins. A toy cash register like the [Learning Resources Pretend and Play](#) in the photo can make this really fun and introduce new experiences, such as the practical life skill of buying a store. Start with even dollars, then amounts like \$1.10, \$2.25, \$1.05. As your child gets better, she can count by 10’s, 5’s, and 25’s. Help as needed and encourage counting to verify amounts. Sell items back for a higher price to teach the concept of **making a profit**.

[A great blog post on introducing money at Counting Coconuts](#)
[Play the Money Exchange Game at The Education of Ours](#)



[App Toy - Cash Register](#) (iPad) is a fun app that lets your child practice addition and using money.

My allowance and bank



A child's **coin bank** and a **regular small allowance** are great first experiences for young children in managing money. Your child can keep a **written record** of how much money goes into the bank, then total it up and check it for accuracy when the bank is emptied.

Saving up for something is another good experience, as is starting a **bank account** and making regular deposits. Your child should go with you to the bank, keep the deposit receipts in an envelope, and keep a passbook record of his savings. It is generally not recommended to pay children for doing chores. Children need to learn that everyone in a family makes a contribution of their time and effort to keep the home clean, the shelves stocked, and the family going. Most families are not profit generating enterprises, so there is no need to pay children as if they were employees. See page 388.

Cashing in coins



A set of **coin tubes** make it easy to organize coins to cash in at the bank. Let your child do it independently as much as possible. Keep a running total and go to the bank together to cash them in!

Some stores have automatic machines for pouring coins in while the machine keeps a running total.

Estimate how much you have in coins before you go and write it down. Let your child drop the coins into the hopper and keep an eye on the growing total. Cashing them in is an exercise in exchanging money.



Money games

Monopoly Junior is a wonderful game when your child is old enough. It involves counting dice and money, buying and selling, collecting rents, and the concept of owning property.

PayDay is a classic game that teaches about earning money and paying bills.

Money Bags teaches coin combining and counting skills while having fun.

Moneywise Kids is a fun board game for practicing counting and exchanging money.

There is a free money counting game at: [apples4theteacher](http://apples4theteacher.com)

At [familylearning](http://familylearning.com) You will find a collection of good free money games

www.carrotsareorange.com

The ABCs of Teaching KIDS about Money

The wonderful series, **The ABC's of Teaching Kids About Money** at **Carrots Are Orange** will help you give your child an early education in financial literacy. Start with: **Kids & Money-Two First Steps**.

More money resources

[Too young for finance? Think again](#)

[18 Ways to help kids learn the value of money](#)

[5 Ways to help children save money](#)

[Money games online](#)

[Money and your children](#)

[Money games](#)

[Money as you grow: 3-5](#)

[Hub Pages: Teaching kids about money](#)

Opinion: paying for chores or an allowance?

Whether to give young children an allowance or pay them for doing chores is a hot topic. I believe that paying children for doing chores is a mistake. Children should not be taught that everything they do should result in a cash payment. Children should be expected to do their chores as responsible members of a family. They are given much, and should learn to reciprocate. This builds responsibility and character.

Without some money to work with, however, children have no way of learning to manage money. An allowance provides a predictable amount of money to plan on and make choices with. Children can learn to save for the future and also for something they want. They learn to plan and delay gratification.

I recommend a *small* regular allowance, given in denominations that encourage money management and saving. If the allowance is \$5, give the child five \$1 bills. She can then easily divide the money into savings or toward other goals in small increments. You will have to decide if you want to use withholding the allowance as a consequence for inappropriate behavior.

Measurement

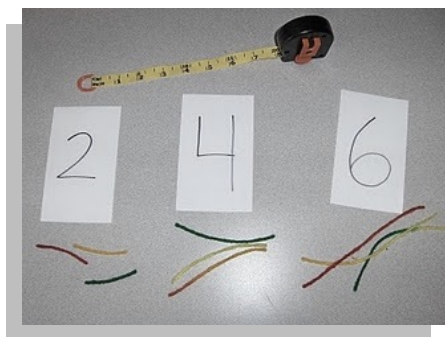
Ruler and tape measure

Whenever you need to measure something, introduce your child to the ruler. Use a 12" ruler and show her the ruler markings that stand for **inches** and have her count how many inches there are in **one foot**. Measuring and marking your child's height on a door frame is always great.

She can now go through the house **measuring things** if she likes. A list of objects and how long they are makes a good **sight word reading** activity. When your child has some experience with measuring lengths of objects, have him **estimate** how long something is just by looking at it, and then check with the ruler to see how close he came.

When your child measures something that is between two inch marks in length, you can show him the half and quarter inch marks. If you haven't already, this is a good time to introduce **Fractions** (page 379).

Get your child a small **tape measure**, even a key chain size tape will do. Let him measure everything around the house. Introduce the terms **length**, **height**, and **width**. Once he has done this awhile, have a contest where you two estimate how long, high, or wide things are and win prizes for the closest answer.



Measuring Worms. Cut pieces of colored yarn in 1,2,3,4,5,6, etc. inch lengths. Use numeral cards or make a quick set. Give your child a tape measure or ruler and let her lay them straight and measure the yarns, and then put them under the right numeral cards.

littlefamilyfun.blogspot.com

Postal scale fun

Your child has learned to tell time and work with linear measurement. A simple 2 lb. postal scale can now provide experiences with weight.

- Find a variety of small objects from around the house. Include some **large but light** items (foam balls, sponge, light bulb) and some that are **small but relatively heavy** (a stack of



coins, rocks). Have your child predict which ones are heavier than others and then check her predictions using the scale. Have her write down the results to add language to the activity.

- Play with your child at pressing on the scale and reading how much **pressure** you are putting on it. Now have your child put on a blindfold or just look away as she presses down and tries to press it down to exactly $\frac{1}{2}$ pound, $\frac{3}{4}$ pound, 1 pound, etc. while you watch the scale and tell her how she's doing.
- Have your child estimate how many of something it will take to make **one pound** of that item. You could use pencils, quarters, pieces of candy – all kinds of things. When you find out how much it takes to make one pound, see if **twice as many makes two pounds**.
- The next time you buy something weighing two pounds or less, check its weight on your scale before you open it. Does it weigh what the package says?

You and your child will find many more activities of interest using this simple device.

Weigh, measure, estimate

- When you go the store, take the time to **weigh your fruits and veggies using the scales**. This is a great experience in math and measurement. Take one fruit out and see what happens. Do calculations on the fly. Make this a regular feature of your shopping trips.
- Using cups or glasses your child cannot see through, pour **measured amounts of water** into each - 1 oz., 3 oz., 5 oz., etc. Let your child hold the cups to compare their weights and line them up from lightest to heaviest going left to right. Now, have her pour each, one at a time, into a measuring cup, and read how many ounces each glass contains to see if she graded them correctly.
- Do the activity above using **salt or small beans** and measuring them out with a **tablespoon**. Put 1, 2, and 3 tablespoons into the cups and let your child weigh and compare them as above. She can scoop the material back out using a tablespoon to check.
- Have your child stand against a wall. Lay a pillow down on the floor a few feet in front of your child. Have her estimate how far - in feet - the pillow is from her. Let her check with a tape measure. Use just feet and inch measurements, not fractions of an inch, unless your child is already doing fractions.

Measurement apps



Top: **My First Weighing Exercises** (iPad, **android**). Is a good app for older children.



Kids Science: Measurement (android) has length, time, weight, and money activities, a nice multipurpose app.



Kids Math - Measurement Worksheets (iPad) require checking and erasing each sheet, making this a nice app to do along with your child.

Learning how to measure

Teaching how to measure

Number Games

Mancala



Mancala may be the oldest known game in the world. Once children learn the simple rules, it usually becomes a big favorite. This game involves counting, creating groups of objects, strategy, and determining a winner and a loser. It is a great introduction to games for young children; and a wonderful early math activity.

A wooden, folding **Mancala game** like the one pictured can be found at most toy stores for \$5-8. The one pictured cost \$5 at a Toys R Us.

Play Mancala on your computer



Two good Mancala apps. Left: **Mancala!** (iPad) and right: **Mancala AS**, (android). Both have clear game play and show how many are in each bin and mancala. Play each other or the computer.



To play, your child will need to be pretty good at counting up to 10 backwards and forwards, and be able to follow the rules of a simple game. There are many more complex versions of the game, below is the simplest one.

Rules for Basic Mancala

Players sit on opposite sides of the board. The six holes in front of each player are called the **bins**. These, and the larger hole at the end to their right called the **Mancala**, belong to that player.

- Each player puts 4 stones in each of his six bins.
- The first player picks up all the stones in any one of her bins and starts moving to her right, counterclockwise, dropping one stone in each hole she passes, including into her own Mancala hole. She keeps going, if needed, onto her opponent's side, dropping one stone in each bin until she has no more.
- If she has enough stones to go around the end onto her opponent's side, she does not drop a stone into her opponent's Mancala. She just goes around the end and keeps going, dropping one stone into each bin until she has no stones left.
- When she has no more stones to drop, Player 2 takes her turn and does the same as Player 1 – choose a bin, pick up all the stones, and move right (counterclockwise), dropping one stone into each hole as she passes, including her own Mancala but not her opponent's Mancala.

Getting an extra turn: If your last stone lands in your Mancala, you get to go again.

Capturing your opponent's stones: If your last stone lands in an **empty hole on your side**, you get to take all the stone's in your opponent's hole directly opposite. You then put the one stone on your side and your opponent's stones from the opposite hole that you captured into your Mancala.

- The game ends when either one of the player's bins are all empty.
 - When that happens, the other player picks up the remaining stones in her bins and puts them into her Mancala.
 - Each player now counts how many stones are in their Mancala. The winner is the player who has the most stones in their Mancala.
-

Dominoes



Dominoes is a classic game with many options as your child gets older. Start with a **double six** or a **double nine** set. When your child is ready, graduate to a **double fifteen** set.

[Play dominoes free online](#)



L: **Domino HD** (iPad), is a very nice Domino app.

R: **Domino-Kids-Calculations** (iPad) is a great app that uses dominoes to teach basic math. Be sure your child is ready before trying the more advanced skills.



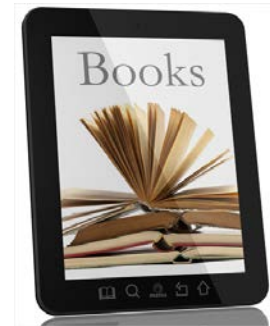
[PBS kids math games online](#)

"We cannot know the consequences of suppressing a child's spontaneity when he is just beginning to be active. We may even suffocate life itself. That humanity which is revealed in all its intellectual splendor during the sweet and tender age of childhood should be respected with a kind of religious veneration. It is like the sun which appears at dawn or a flower just beginning to bloom. Education cannot be effective unless it helps a child to open up himself to life."

"If education is always to be conceived along the same antiquated lines of a mere transmission of knowledge, there is little to be hoped from it in the bettering of man's future."

Maria Montessori

Reading & Writing



"...the muscular sense is most easily developed in infancy, and this makes writing exceedingly easy for children. It is not so with reading, which requires a much longer course of instruction, and which calls for a superior intellectual development, since it treats of the interpretation of signs, and of the modulation of accents of the voice, in order that the word may be understood. And all this is a purely mental task while in writing the child....materially translates sounds into signs, and moves a thing, which is always pleasant for him. Reading...is the interpretation of ideas from graphic symbols..."

Maria Montessori, The Montessori Method



In Montessori, everything a child does with the **Practical Life** and **Sensorial** materials prepares her for math, writing, and reading. Practical Life materials help a child develop **fine motor control** so that he may execute a **writing grasp** when he starts learning to read and write. She learns to **concentrate**,

and is exposed to **words** on labels and cards. The Sensorial materials educate a child's senses to focus more closely on **line and form**, to arrange objects from **left to right**, and to use **graphic printed materials**. They encourage the **passage into abstract thought** required for **decoding** the graphic symbols we call numerals and letters. If a young child has sufficient opportunities to work with Practical Life and Sensorial materials, then learning math, writing, and reading is natural and stress-free.

Children usually enter a **Sensitive Period for reading and writing around age four**. If we take full advantage of this time of increased interest and ability, children surprise us with how fast they learn. **Many children struggle with reading because they start too late**. If a child has little experience with early learning materials and no one helps him learn to read until kindergarten, the process can be slower and sometimes difficult. Most children eventually do fine. Many more, however, could be excellent readers with high comprehension and a love of reading much earlier, with less effort and more joy.

The **Reading Sequence** (p. 411) will guide you and your child with a series of activities that have been used very successfully to teach children to read. Watching a young child experience success with learning to read is fun and gratifying. To do it with your own child is an extraordinary experience, not to be missed.

This Reading Sequence vs the Montessori Method

The **Reading Sequence** (p. 411) presented here is more streamlined and focused on learning to read quickly than the traditional Montessori method. Montessori developed a fairly complex series of materials that also teach grammar and parts of speech.

Implementing the full Montessori reading program is an unrealistic goal for most parents. It is also unnecessary for simply teaching a child to read. Young children are more exposed to graphics, words, and reading at an early age now than in 1905. Reading is now understood as an organic, genetic process which is more than the sum of its parts. Children are genetically programmed to learn to read. Using a focused, sequential approach that gives children quick success and moves them along fairly rapidly, they can

learn to read before they understand every phonetic blend, what a noun and verb are, and all the rules of grammar. If they are exposed to excellent reading materials, children absorb all this just by reading. There will be time to analyze language later.

The Reading Sequence presented here has been used very successfully to teach many children to read. It is a hybrid approach we developed in our schools by taking the best from a number of good methods and combining them into a simple sequence that gets children reading. Try it and you will see for yourself. **Here is how to prepare:**

Create a reading-friendly home environment

The two most important things you can do to **help your child learn to read** are:

1. **Read every day yourself**
2. **Read with your child every day**



Children imitate us. If you watch TV and hardly ever read, don't expect your child to be excited about reading. **If you don't read much, start today.** Let your child see you reading often. Talk with your spouse and others about what you read. Get excited about books. Read a novel, the newspaper, and magazines. Read on your tablet and computer. Go to the library together. **Reading should be practiced, valued, and encouraged in your family.**

The single most important thing you can do to help your child learn to read is to read with your child every day.

Read with your child every day from a variety of books your child finds interesting. Look for **award winning books** (p. 430), do internet searches, and encourage your child to pick out books at the library, the bookstore, and the app store. As you two read together every day, you can point out interesting words, phrases, and sentences. If you have not laid this foundation, **start reading daily with your child today.** Point out words and what they mean. When your child shows spontaneous interest in words, start the **Reading Sequence** on page 411. **Family reading time creates an early interest in reading.** There are things you can do to make reading time the best possible experience for your child:

Make reading time special

Make reading time a regular part of your daily routine. Let your child pick out books to read. Read with your child close or on your lap. Make reading time a **warm, loving time of fun and discovery**. Your child will associate reading with these positive feelings.

Animate the story, be dramatic

Let out your inner child as you read. Make the story come alive by changing voices with the characters and acting out the emotions of the story. Be amazed when it takes an unexpected turn. Be **animated and excited**, and show this in how you read.

Encourage your child's participation

Ask your child what he thinks is going to happen next. Have him **predict** what the characters will do. Encourage your child to express **ideas, questions, and observations**.

Read books your child finds interesting

Your child will develop an interest in reading faster if she reads books she finds really interesting. Let your child pick out books at the bookstore. Check out the classic books listed starting on page 430. Let your child pick out what to read each day.

Read favorite books often & draw your child's attention to the print

Repetition encourages an interest in the print. This helps a child become comfortable with reading, build a sight word vocabulary, and imprint the text in her mind. Children gradually learn to start **focusing attention on the print** as well as the illustrations and the story line.

Encourage your child to read

If your child wants to, let him take over reading a familiar book. If he veers off into his own version, let him go. His creative energies are being stimulated. If it is a familiar book, your child may soon be able to recognize some of the words.

Read from a variety of sources

Books, magazines, the iPad, signs, labels, tags – every bit of information registers in the early years. Let your child read the words he can and tell him what the rest say. Reading should evolve as a natural process, not on a deadline or with any stress. Use every opportunity every day to help your child learn to read.

**The most important factor in reading success
is having been read to regularly as a child.**

Is my child ready?

Your child is ready to learn to **read** whenever she is interested in it. A sensitive period for reading happens for most children around 4; but there are no firm rules about when a child learns to read. If the motivation is there, a child can do it. When you see a three or four year old expressing an interest in words and what they say and mean, start with the first step, **Phonics** (p. 412). If the interest is there, continue as far as your child wants to go at the pace he wants to travel. **Always let your child's interest and enthusiasm be your guide. Go at your child's pace. Pressure and stress have no place in early learning.**

One big key is to provide paper books and tablet books that are highly interesting to your child. It sounds simplistic, but it is true: **children learn to read faster if they are reading about something they are very interested in.** Whatever your child is into today, tomorrow, next month; find experiences, hands-on materials, books, You Tube videos, and iPad apps about it.

Videos: [Ready to read - the six reading readiness skills](#)

Writing (p. 401) requires a good deal of fine motor control. If your child uses a grasp other than a **proper writing grasp**, provide more **Practical Life** materials and let him practice with the ones he really likes. Provide opportunities for **tracing** objects (p. 403). When she is ready, your child will learn to write letters.

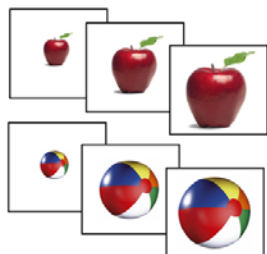
How long will it take?

Reading is an important rite of passage. Many parents are anxious for their children to start reading. If you feel this way, don't let your child know! For most children, learning to read happens over a few months to more than a year. There are big individual differences and a lot of factors. **Speed is not important. Developing reading skill takes time**, and building a vocabulary can go on for a lifetime. Using Montessori principles, **we go at the child's pace**. Nature has a developmental plan working in your child. Trust it, help it along, and all will be well.

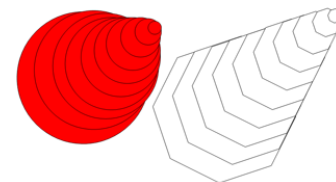


Printed materials to build pre-reading skills

Montessori Print Shop has a wide variety of beautiful, inexpensive, printable materials that will help your child develop the skills needed to read. Check out their excellent **Pre-Reading Materials** and pick those you like. Here are a few I recommend:



Left: The **Small, Medium, Large Cards** are free. Your child lays them out left to right. Right: The **Superimposed Geometric Figures** offer more challenge.



Sequencing Printables at The Activity Mom



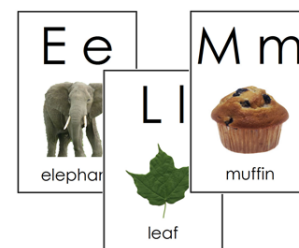
Left: **Patterning Cards**. Left-to-right visual trainers that improve visual discrimination. Right: **Three Part Cards** (p. 96) are classic Montessori pre-reading materials



Left: **What Does Not Belong?** Requires attention to graphic images & decision-making. Right: Sorting games like this **Air, Land, and Water Sorting** printable set are great pre-reading materials.



Left: **Phonics Sound and Picture Sorting** is a perfect lead-in to Phonics, the first step of the Reading Sequence. Emphasize the starting sounds. Right: **Alphabet Cards** are another perfect introduction to the alphabet and phonetic sounds



Printed materials can be used before, or at the same time, as digital tablet apps. Both mediums have value. Printed materials are individual objects that can be manipulated and arranged in ways that images on a tablet cannot. They provide a different experience and a valuable counterpoint to screen images.

Apps for building reading skills

There are many apps that help preschoolers develop the **visual and thinking** skills required for reading. Some do this with really fun games. Here are a few:



Left to right: **Pick-up Sticks** (iPad, **Android**) develops visual acuity and discrimination. The excellent **Touch and Learn - Emotions** (iPad) encourages a child to focus attention on visual cues and develops visual discrimination while sparking conversations about emotions. **Labyrinth** (iPad, **Android**) requires visual concentration, eye tracking, planning, and fine motor skills. **Touch and Learn - ABC Alphabet and 123 Numbers** (iPad) reinforces letter and number recognition and listening skills. **Bitsboard** (iPad) is an incredible app that, IMO, should be on every preschooler's iPad. It has all kinds of customizable picture, number, object, letter, and verbal recognition activities. One of the best apps for kids.



Left to right: **Kids Connect the Dots** (Android) uses either numbers or letters to connect the dots (use lower case when using letters), and directs a child's visual attention to line drawings. **A Preschool Pattern Recognition Game** (iPad) helps establish left to right tracking while focusing attention on graphic forms. There is a kindergarten version, too. **Little Patterns Shapes** (iPad) is another patterning app that uses more abstract shapes. The great **Wood Puzzle Slider** (iPad) is a fun, engaging game with beautiful graphics. It requires visual focus, planning, and symbol recognition skills. **123 Domino** (iPad) is another beautiful game that requires increasing levels of color and pattern recognition.

Have your child use a **stylus** with these games to help her develop a writing grasp.

Learning to Write



Let's do writing first. **Practical Life** and **Sensorial** materials help a child develop the fine motor skills she will need when she becomes interested in learning to write. Transfers, Sorting, Dressing, Polishing, Nuts & Bolts, and other materials develop fine motor control, resulting in a **proper writing grasp**. **Drawing** and **Tracing** further refine a child's ability to use a writing instrument.

It can be frustrating for a child to move too quickly into writing if he has not developed the required skills. If you start Montessori at home when your child is 4 or 5, it is really important to **start with Practical Life and Sensorial activities first**. Spending more time with these materials will make writing easier and more enjoyable.

Reading is different. Your child can start the Reading Sequence whenever he shows an interest in letters and words and what they say. When you do the first Phonics activities, you will quickly see if your child is ready because the enthusiasm will be there. When you see it, proceed at your child's pace with **plenty of practice at each step**, just like Math.

Think of writing as developing in a sequence:

Developing a writing grasp —————> Drawing & Tracing —————> Writing letters & numerals



Left: a **proper writing grasp**. See page 124 for how materials like the **Transfers** develop this grasp naturally and gradually.

Below: Grip aids like this from **Draw Your World** help a child develop a writing grasp, but natural development is best. These are only *temporary* aids for 5-6 year olds if they need them.

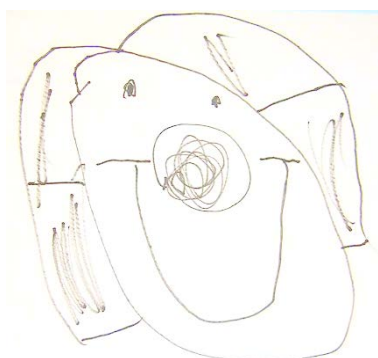


Drawing and Painting

While your child is developing fine motor control with Practical Life materials, he can draw whenever he likes. Let him use whatever grip he has developed to hold crayons, markers, and colored pencils. Drawing gradually refines and develops the writing grasp.

Keep supplies available:

- Colored pencils, crayons, washable markers, chalk, pastel charcoals
- Writing paper, notebooks (lined & unlined), card stock, construction paper
- Safety scissors
- Chalkboard (buy or make with blackboard paint)
- Desk or table with a firm, flat surface and good lighting



Let your child draw and color whatever she likes. If you are reading an interesting book or she takes a trip and sees something interesting, let her draw about that. If your child needs inspiration, the [free drawing templates at Activity Village](#) can help. Encourage her to trace each template's lines before coloring it in. Here are [more free templates](#).
Drawing: *Chasing Cheerios*

If your child develops an interest in learning to draw, check out the [How to Draw Guide at 123 Peppy](#), and the great site, [Draw your World](#). Make books of your child's drawings. Display them on your refrigerator and in your room and your child's room. Frame the really special ones.



Painting is fun, allows self-expression, teaches about color, and develops fine motor skills. A [painting easel](#) is nice if you have the funds and space. Put a plastic tablecloth underneath and have your child wear old clothes or an apron. Your child can also paint at the table or you can tape a sheet of paper to a wall or a board outside.

How about tablet apps for drawing and coloring?

Using a finger does not develop fine motor skills. This requires holding and manipulating objects and drawing instruments. Apps also do not provide the sensory and kinesthetic experience of drawing and painting on paper. If your child draws and colors on a tablet, have him use a [stylus](#) so he is working with a drawing instrument.

Tracing



Once your child has a good start on a writing grasp, **tracing** will refine her motor skills to prepare for writing letters and numerals.

Top: He can start by tracing his hand, then everyone's hands in the family, and objects around the house.



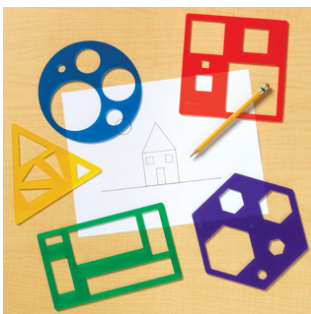
Wooden plaques and frames from the crafts store provide tracing practice. Glue wooden knobs on the plaques with wood glue. Overlaying shapes creates many designs.



While at the crafts store, pick up some wooden shapes. You could also **trace these onto illustration board and cut them out with an Xacto knife to make frames** that your child can trace around the inside. This is a little easier at first than tracing around the outside of an object.



Plastic cookie cutters are great frames for tracing around the inside and outside. Multiple tracings create interesting designs.



The Primary Shapes Template Set from Learning Resources is a wonderful tracing material for only \$8.

Printable tracing resources:

[Tracing worksheets](#)

[Beginning tracing printables](#)

[Pre-printing skills practice at Kidzone](#)

[Free tracing printables at Lilbunnyhops](#)

Learning to write letters and numerals



After working on developing a writing grasp with Practical Life materials, and then free drawing and tracing, your child will be ready to learn to **reproduce specific line drawings consistently and accurately**. In other words, writing. This is done with worksheets, a cornmeal tray, a tablet and stylus if you have them, and lots of practice.

Is it time to use the tablet yet?

Yes. If you have a **stylus**, your child can use tablet apps for learning to write, as well as paper and pencil. I recommend that children do both, by the way, as nothing really replicates writing on paper. Both methods are helpful. We'll get back to apps, but first:

By the time most children start learning to write letters, they are also starting the Reading Sequence.

If you have not started already, now is typically the time to start the Reading Sequence on page 411. Your child can now do letter and number writing and the Reading Sequence at the same time.

When most children reach this point they are also starting the Math Sequence - exciting times!

Wow, your child will be doing reading, writing, math, science, and more, all at the same time. This will be great preparation for both of you for the next 18 or so years through college. Okay, where were we? Oh yes, learning to write letters. First, you will need a set of **lower case Tactile Letters**.



Tactile letters are required for properly teaching a child to read and write. **Left:** The best, **Montessori sandpaper sounds**. Get the block print, lower case. **Right: Didax Tactile Letters**, cheaper at \$15 and still work well. Again, buy **lower case** only.



Top: Another option, the **Ideal School Supply Lower Case Tactile Letters**. These are around \$9 on Amazon. They are the smallest letters, but work for folks on a tight budget.



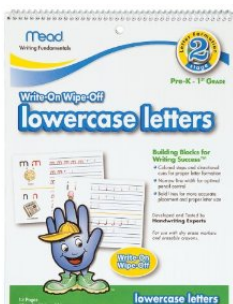
Bottom: **Lakeshore Learning Tactile Letters** - around \$15. Get just the **lower case** letters. These are nice wide letters for tracing with **first two fingers**, which is the preferred method, despite the photo showing one finger.

Note to crafty Moms: Try making sandpaper sounds if you must; but you will spend as much or more, ruin good scissors, and endanger your mental health. Your set will not be as nice; and you could better spend that time working on sounds and other activities with your child. My advice: buy a set, sell it later, save your sanity.

The Importance of Tactile Letters & Numerals

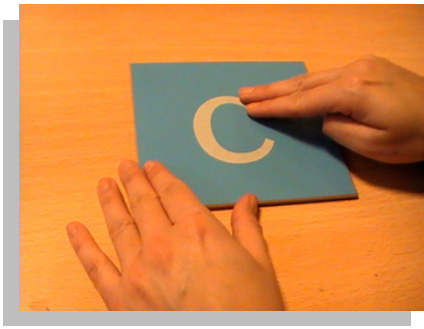
Getting started successfully in reading and writing is critical to mastery and enjoyment of the process. Tactile letters and numerals are the best way to start. When a child **traces, looks at, and says** the letter sound or numeral name, he gets **visual, auditory, and tactile** feedback simultaneously. This imprints the information in your child's brain. These tools have been used with wonderful results in Montessori schools for over a hundred years and I recommend that you use them, also.

In addition to paper, pencils, and lower case tactile letters, your child will also need:



L to R: **Write on-wipe off lower case letter practice book**. Next: a **shallow pan with a layer of cornmeal** for practicing tracing letters. The third photo shows **blank, ruled letter writing practice paper**. Last photo: **Letter writing master sheets** with dot letter guides.

First: Introducing the letters & their phonetic sounds



See p. 412-420 in the **Reading Sequence** for this. Your child is probably doing the Reading Sequence now, so you cover both bases - writing and reading - by teaching your child the **Phonetic Alphabet** using tactile lower case letters. The phonetic alphabet has one sound for each letter. The vowels use their short vowel sounds, as in apple, elephant, it, off, and up.

When you introduce the tactile letters as shown on pages 412-413, your child **looks at, says the sound, and traces the letter** with the first two fingers all at the same time.

Making learning to read a fun game at [Living Montessori Now](#)

A Three Step Lesson teaching two phonetic sounds

Why lower case letters?

There is a tradition of teaching preschoolers using capital letters. This is unfortunate, since over 95% of everything we read is in lower case letters. Montessori started children out with lower case letters. We should, too.

Your child can also be learning the numerals 0-10 using the Sandpaper Numerals, as shown on page 358. Once your child has learned quite a few of the letters and numerals, move to the next step below.

Next: Practice with writing letters & numerals

From this point on, learning to write letters and numerals is a matter of practice. Worksheets, free writing, cornmeal tray, tablet apps - all are used to provide a variety of activities with the goal of helping your child learn to write letters and numerals.

Here are some good sources of free printable worksheets:

[Donna Young](#)

This wonderful site has almost every imaginable writing practice worksheet parents and teachers could want. The **[Beginning Manuscript Handwriting Lessons with Arrows](#)** page has many great worksheets and is the place to start.

[Donna Young's Cursive Handwriting Worksheets](#) is another great page. Cursive letters are actually easier for children to write at first because of all the curves, which more naturally mimic the movement of the hand. Donna also has a really wonderful page of [word writing practice sheets](#) when your child is ready for these. Another great resource are the [Handwriting Animations for ZB Style](#). These animations show how to make each letter if your child needs a review.

Handwriting Worksheets

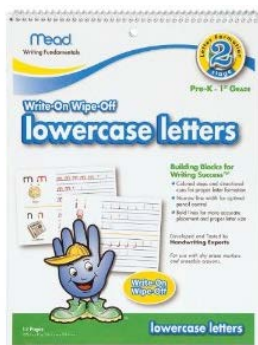
This fabulous site offers [Print style](#), [D'Nealian](#), and [Cursive Writing](#) worksheets, take your pick. The D'Nealian style is great starting out because it uses more curves than block print.

Kids Learning Station

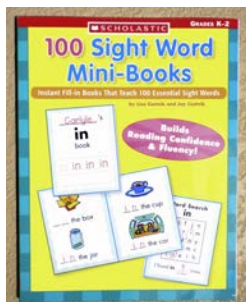
This excellent site has free worksheets for the alphabet, colors, shapes, numbers, phonics, and more. You will find many fun sheets for your child here.



Put cornmeal in a shallow pan for your child to practice tracing letters. **As you teach your child the phonetic alphabet, set tactile letters next to the pan and let your child practice making them in the cornmeal.** Shake the pan to erase.



Notebooks like the [Mead Lower Case Letters Dry Erase Book](#) and an erasable marker allow a child to write letters, wipe them off, and practice again, which saves on paper. The one shown was \$3 at WalMart.



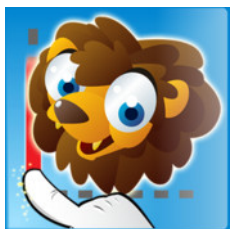
[100 Sight Word Mini-Books](#) from Scholastic provides writing practice while teaching many common sight words. This is a great book.

[Dr. Seuss copywork printable](#)

Practicing writing with a tablet & stylus



A tablet can be used for practicing writing, as long as your child uses a **writing stylus**. Consider a stylus essential equipment for a child writing on a tablet. Younger children can use a finger to start, but learning to write requires an instrument. A stylus encourages the development of a writing grasp. Many parents and children like the **Mini Alloy Stylus** (photo). It is sized and weighted for children and has a grip that encourages a proper writing grasp. You can also find cheaper ones that work well.



Some good iPad writing apps. Left to Right: **Montessori Letter Sounds** has script and cursive options, and introduces the phonetic alphabet and initial word sounds. Writing can be done on lined 'paper', tracing over guides, and freehand in a sand tray. **Write On** lets your child practice capital and lower case letters and write words, and has a blank, lined board for practice. **Approach To Montessori: Numbers** allows practice with writing numerals and serves as an early math app. **LetterForms** is a nice, simple app that allows children to practice writing capital and lower case print and cursive letters. The too cool for **Letter School** app entertains while teaching your child to write.



Android writing apps. Left to Right: **Writing Numbers** provides practice writing numerals and counting. The excellent **Kids Handwriting Grade K** allows a child who is ready to write sight words, which is a great way to learn them. **Phonics and Handwriting** allows your child to write phonetic words and practice handwriting. **Magic Slate HD for Tablets** gives your child a place to freely draw and write letters and numbers. You can also use it later for math problems and other teaching activities. I had a harder time finding good Android apps. Apple's selection and quality were superior.

Alternatives: learning to read online

If you won't have enough time to devote to taking your child through the Reading Sequence, or want to supplement your work, you may want to consider an online reading program. A number of websites offer interactive programs that teach 3-7 yr. olds to read. 'Digital Natives' adapt readily to online learning. A great approach is to **use learn-to-read web sites and activities from this book during the same time period**. This provides computer, hands-on, parent-interactive, and independent experiences which complement and reinforce each other. Multiple approaches create variety and maintain enthusiasm. Using multiple ways of teaching the same skills is called **immersion**.

Both the Reading Sequence and online programs take **time and regular practice**. Some programs are expensive, but a high price does not always mean high quality. Based on content and value for the money, here are a few good online learn-to-read programs:



Starfall is a totally amazing, **free** resource for parents and teachers. Take a look at their **letter to parents** to see how to get started. It's pretty simple, the steps are numbered 1-4 for you on the home page. There are many games there also. You can use Starfall on any



Rover Browser

lets you view sites using flash, like Starfall and many others listed here, on an iPad.

laptop. If you use an iPad, download the free **Rover Browser** app (left). This browser allows your child to view sites using flash, like Starfall, on the iPad. There are also a couple of Starfall apps for the iPad (below).

After going through all 4 steps, your child will be ready to learn more sight words and begin reading more challenging materials. Starfall is a phonics based site, so once your child has read all the beginning readers in step 2, and started on the materials in steps 3 and 4, it will be time to move on to sight word activities. Starfall makes a wonderful companion to the activities in the Reading Sequence.



Left: **Starfall ABC's** iPad app.

Right: **Starfall Learn To Read** iPad app, which has all their phonetic readers.



Reading Eggs is a well known online reading program. The monthly fee is less than similar sites. Many parents report good results with Reading Eggs. Their program is sequential and uses games and plenty of practice at each step. Children can move through many steps independently. There are also now a few companion tablet apps.

Review of Reading Eggs



Literactive is a great online program. Register a user name and password and you have **free** access to everything on this activity-packed site. The '**Road To Reading**' activities cover everything from pre-reading activities to phonics, sight words, and spelling. There are books and nursery rhymes, downloadable writing worksheets, and much more. A highly recommended resource.



Teach Your Monster To Read, from the Usborne Foundation, is a novel and fun approach to learning to read through playing cool games and other interactive experiences. This great site is also free.



Never planned to homeschool
Now, wouldn't I trade it for the world.



At **1+1+1=1**, a wonderful homeschooling website, click '*Kindergarten*' at the top, then click '*Learn to Read*' for access to an extensive set of free resources you can use at home.



Does your iPad tell you it cannot access many of these great sites because they use flash? Download the free **Rover Browser app** and your child can use any educational web site that uses flash, on an iPad. A great tool.

More reading freeware

Learning to Read: The Reading Sequence

Helping a child learn to read and watching their progress is fun and rewarding. Follow the steps and read regularly with your child and you will see his reading skills blossom.

To app or not to app?



Tablets are dramatically changing how children learn to read. Once a child has learned the phonetic sounds, she can learn to read using tablet apps without ever holding a traditional book. Just because it is possible, however, does not mean it is always the best approach.

Not all parents can afford tablets for their children. Many parents prefer teaching their children using printed books. Others disagree with preschoolers using tablets altogether. Digital information and eBooks are taking over, but we still use printed books, magazines, and newspapers. Printed material and eBooks are both valuable for young children learning to read. This section will offer information on both types of reading experiences so that you can choose what you do with your child. If your child uses a tablet, I recommend that you also provide and use printed materials. Seek a balance.

Sandpaper Letters



Now is the time to order a set of **Montessori Sandpaper Letters** in block print, lower case. See more on this on page 404. You can teach a child the phonetic alphabet without these, but using them is the most effective way possible to give your child a successful introduction to reading and a firm foundation to build on.

Review of the steps of the Reading Sequence:

1. Phonics

2. Sight Words

3. Reading

Phonics takes the mystery out of written language and allows a child to build and read his first words and books. This gets things off to a great start and generates enthusiasm. Early, rapid progress helps your child believe that she will be successful in learning to read. Phonics gets things started, and is a springboard for moving on.

Sight words help your child recognize common words when he sees them. Fun activities reinforce the recognition of words, their meaning, and their use in sentences.

Reading goes on throughout the entire process. **Nothing builds reading skill like reading.** As your child learns more words she will naturally start reading on her own more. At some point, he will take over.



Phonics

You will need:

Sandpaper Letters (p. 404)

Pictures of objects with initial phonetic sounds (p. 415)

A moveable alphabet (p. 417)

Phonetic books or phonetic reading tablet apps (p. 419-420)

You can start with just the Sandpaper Letters and the pictures of objects with phonetic names. You can use the recommended books or apps for the phonetic readers, so download or order them now also.

First we need to teach your child the **Phonetic Alphabet, one sound for each letter**. We are not learning the names of the letters or reciting the ABC's. Here are the **sounds** you will teach your child:

a	As in a pple	n	As in n ut
b	As in b at	o	As in o ff (sounds like 'aw')
c	As in c at	p	As in p et
d	As in d og	q	As in q uit (sounds like 'qw')
e	As in e lephant	r	As in r ed
f	As in f og	s	As in s it
g	As in g um	t	As in t op
h	As in h at	u	As in u p (sounds like 'uh')
i	As in i f	v	As in v ictory
j	As in j et	w	As in w et
k	As in k entucky	x	As in x (sounds like 'ks')
l	As in l ap	y	As in y ellow
m	As in m at	z	As in z oo

Avoid the 'uh'. With consonants, **don't add an 'uh' after the consonant sound**. Say just the sound itself. For example, b is just the 'b' sound, as in b-a-t, not 'buh'-a-t. D is just the 'd' sound, as in d-o-g, not 'duh'-o-g.

Videos

[Demonstrating how to trace letters with two fingers](#)

[A child uses Sandpaper Letters at 2 yrs. 9 months](#) Remember to use 2 fingers.

[Word formation using Sandpaper Letters](#) You will be doing this soon.

[A child works with cursive letter a](#) Notice the objects that start with the short **a** sound: ant, apple, etc., and the use of a sand tray for practicing writing.


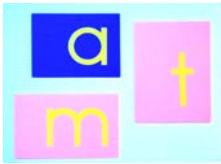


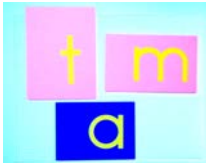


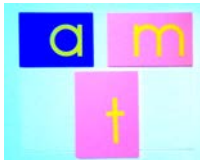

[The Montessori Language Program](#)

[Montessori Language Curriculum Demonstrations Excerpts](#)

To show your child a letter, **carefully set it down in front of you and look at it while you trace it slowly (like you are writing it) with your first two fingers and say it's phonetic sound.** Do this at least two times. Now, give it to your child so she can do the same. Have her do it 2-3 times. This is how you show your child each letter in step one.

Learning the phonetic sounds with Three Step Lessons

First, teach your child the sounds for **m**, **a**, and **t**, using **Three Step Lessons** (p. 85):

Step 1: Identification	Step 2: Recognition	Step 3: Recall
 <p>"This says aaa." Trace and say short a sound, child repeats</p>	 <p>"Show me the (m,t,a)." Use phonetic sounds. Switch positions</p>	 <p>"What does this letter say?"</p>
 <p>"This says mmm." Trace and say phonetic sound, child repeats</p>	 <p>"Show me the (t,a,m)." Use phonetic sounds. Switch positions</p>	 <p>"What does this letter say?"</p>
 <p>"This says t." Trace and say phonetic sound, child repeats</p>	 <p>"Show me the (a,m,t)." Use phonetic sounds. Switch positions</p>	 <p>"What does this letter say?"</p>

Tips to Remember

In steps one and three, show your child one letter at a time. Hide the other two.

It is okay to mention letter names, as in, "*This is the letter a, it says 'aaaa'*", but **focus on the sound** each letter makes.

Focus on success. Use two sounds if three is too many. Do just steps one and two if your child is struggling. **Encourage and recognize every success.** Stop if your child becomes frustrated or tired. It usually takes a few lessons to really master each set of sounds.



If you decide to mostly use tablet apps to teach your child to read, the **Intro To Letters** (iPad) app is probably the best app for teaching a child the phonetic alphabet. It focuses on each letter and its sound, and provides the sound of sandpaper as your child traces each letter.

When your child masters m, a, and t, do the rest 2-3 at a time, in this sequence:

u b c s o h g r e n p i f j l d v w y z x k q

As you teach your child these sounds, introduce initial sound picture cards.

Using Initial Sound Picture Cards

As your child works with each letter sound, **introduce pictures of objects whose names start with the sound your child is learning**. Pictures work better than little objects, because your child is working with symbols and learning to read now.



The lovely [Phonics Sounds and Picture Sorting](#) material from [Montessori Print Shop](#) has control charts, work charts, 72 picture cards, word lists, and complete instructions. Download these, print them out on card stock on your color printer, and you are ready to go. Store them in nice little boxes or envelopes for independent use.

[Another set of initial sound picture cards](#)

[EZ Read Beginning Sound Picture Sorting Cards](#)

[56 Initial sound picture cards](#)

[Free beginning word sound printables](#)

Apps for reinforcing phonetic sounds



Left to right: [Starfall ABC's](#) (iPad, iPhone). A great app. [Phonics Consonants Free](#) (iPad) has great activities that also teach sight words. [Kids ABC Phonics](#) (Android) lets children learn and manipulate letter sounds, as well as make words (I told them about the capital letters in the word building activity, we'll see if they change it). [ABC Read Write Phonics](#) (Android) is a pretty good app that also provides writing practice. [Phonics Song](#) is a nice Android app for introducing phonetic sounds to a younger child. [Little Reader Three Letter Words](#) (iPad) is a great introduction to beginning word sounds using actual words.

Three Letter Phonetic Word Building



When your child has learned the first 9 letters shown, m - h, it is time to have her **build her first words**. This is a big moment! Here's how to present it:

- Get a picture of a cat and the sandpaper letters c, a, and t.
- Review the word with your child, saying it slowly so your child hears each individual sound: "C - a - t, cat." Have your child say the word and sound it out.
- Lay out the letters in a random way and ask, emphasizing the c sound, "*What sound do our mouths make first when we say C - at?*" Let your child respond that it is the c sound. Have him set the c to the left side of your work area.
- "*What sound do our mouths say next when we say c - a - t?*" Let your child find the a and show her where to set it to the right of the c.
- "*What is the last sound our mouths say when we say c - a - t?*" Let your child find it and set the t at the end of the word.
- Point to the sounds and say each sound, not the letter names: "C - a - t, cat." Run your finger quickly left to right along the letters and say "Cat." Have your child do the same.
- Make a big deal out of this - your child just built a word!

Video: [Sounding out and building words](#) Use this video a guide and example.

Three letter words like this are called **CVC words** (consonant - vowel - consonant). As your child learns more phonetic sounds, he can build the words below. Click for images.

cat	can	cub	bug	bun	bat
sun	mug	rug	tub	hat	map
hen	nut	pot	net	pan	cab
mop	hog	pen	ten	cap	pug

If you like, place your computer or tablet so your child can see it and let her click on or touch each word above for a photo as she builds the words. Give your child lots of practice with this important skill. Encourage his efforts!



Now it is time to print and cut out a few **Moveable Alphabets** so your child has more letters to work with. This **moves your child away from the large sandpaper letters to smaller ones** in preparation for reading. The inexpensive, beautiful alphabets in multiple colors at left from **Montessori Print Shop** are perfect for this. Keep them in little boxes or envelopes with the words you print out from the links below. **PS** - don't waste \$ on expensive Montessori wooden alphabets for home use.

Here are more CVC words and activities to print out

Download CVC printables with pictures

Say each word and let your child find the letters to make it without looking at the word. After your child has built CVC words for awhile, use printed words for **sight word practice**. Show them to your child as flash cards. This prepares your child for the Sight Words.

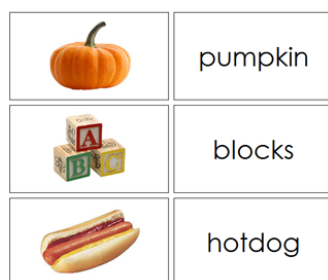


The **Little Stars - Word Wizard** app (iPad), is fun and provides practice with identifying simple words and beginning and ending sounds. **Alligator Apps** offers a number of great apps for young children.

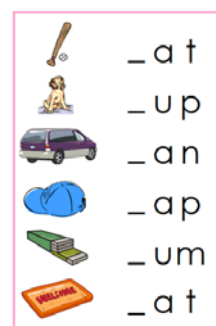
Building larger phonetic words

When your child is getting good at making CVC words, you can introduce larger phonetic words. **Notice that each letter in these words says its phonetic alphabet sound.** Your child will probably need some help with these to carefully sound them out and build each word using the moveable alphabets.

must	grab	trot	flop	slip	band	west
dust	blast	crop	soft	stamp	split	crisp
hasp	past	frog	cost	sand	drink	best
plan	last	camp	plastic	swim	frantic	trip
drag	snap	stand	blend	pond	glob	lips
cramp	trap	hand	lamp	flag	bank	stab
stub	mend	bend	send	tent	swept	crept
slept	link	milk	drip	gift	mist	wink
twist	frost	pond	drop	stop	cost	strip
melt	spend	bunk	skunk	trunk	drum	plum



The **Word and Picture Cards** (left) and the **Initial Sound Cards** (right) from **Montessori Print Shop** make nice companion materials for your child's word building activities.



A Phonetic word list

Apps for word building

Here are examples of good apps for word building practice:



Left to right: **Montessori Crosswords** (iPad, **Android**) app. This great app provides practice making three letter and larger phonetic and non-phonetic words & consonant blends, has an option to focus on a single sound, and a moveable alphabet for free word building.

ABC Spelling Magic Short Vowel Sounds and **ABC Spelling Magic 2** (iPad) have options for building CVC words using the short vowel sounds as well as double consonant sounds.

Bitsboard (iPad) has CVC boards for each short vowel sound. Each board has flash card, photo touch, and word building options.

ABC Pocket Phonics (iPad) provides letter writing and word building practice as it guides your child through writing and making words.

Phonics Make a Word (iPad) allows building 3 letter CVC words.

Using these resources and your moveable alphabets, practice word building with your child until she knows most of the phonetic alphabet and is getting good at sounding out and building the larger words. Then it is time to have your child read his first books. This is the sequence:

Learn the phonetic alphabet —————> Build words —————> Read phonetic readers

Reading Phonetic Books

With the word skills your child has learned so far, she can **read her first books all on her own. This is a HUGE deal, make a big fuss over it!** This shows your child that he can read actual books with the skills he has learned. That is the purpose of the phonics step of the Reading Sequence. After this it is goodbye Phonics, hello Sight Words and Reading.

eBooks or print?

At this point in the process, I prefer printed phonetic readers. An eBook has no separate object identity like a printed book with a front and back cover and pages. If your child is a big tablet user, she may see little difference. Most kids, though, get a charge out of reading actual books they can handle and see on the shelf. There is a sense of connection and accomplishment that is harder for a child to get with an eBook. It's your call, but I encourage you to try printed books for this step if you can.



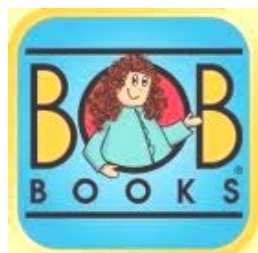
The **Starfall Short Vowel Pals** boxed set of phonetic readers makes a perfect choice for your child's first books to read on her own. These have been the first reading books of countless children, and your child will succeed with them, too. The **Starfall Learn-To-Read** books are another great boxed set of first reading books.



For tablet users, the **Starfall Learn To Read** iPad app has all their Learn To Read first readers in eBook format.



The **Bob Books** are classic first books that have launched as many kids into reading as the Starfall books. There are 5 sets in the series, and other Bob Books available, also, all from Scholastic, one of the best suppliers of reading materials.

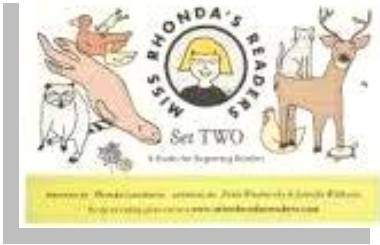


The **Bob Books 1** and **Bob Books 2** (iPad) apps bring the Bob Books to your iPad.

[A huge selection of free Bob Books printables](#)



The **We Read Phonics** series is part of the **We Both Read** program. Many parents love this series for first readers and beyond.



Miss Rhonda's Readers are really excellent first reading books; organized into sets and also offering supporting materials like word cards. These are many parent's top choice for first readers.

Free phonetic readers you can download

First Step Reading has a series of videos for parents teaching their children at home.

The **I Can Read Leveled Readers** are a wonderful resource, but I wish buying books was easier from their web site. The best bet is to find individual titles, starting with the **Shared Reading** series, and search them on Amazon or Barnes & Noble. They may also be in your local bookstore. Many of their readers have Kindle editions. **These are not strictly phonetic readers**, but make good starting books for you to read with your child at this stage.

Encourage fluency

Fluency is the goal. Encourage your child to **read fluently, as if she were speaking to someone.** **Avoid following under the words with a finger and reading one-word-at-a-time.** These tactics encourage a choppy reading style. Model fluent, smooth reading for your child and encourage her to read that way. If she has to sound out words or stops to figure out a word, try to have her then **read the sentence fluently, as if she were speaking to someone.** **If your child reaches a word he cannot figure out, simply tell him what it says** so that his reading is not interrupted for too long. Use this technique whenever you read together. If your child stumbles on a word, just tell her what it says so she can keep reading. A smooth, fluent reading style takes practice from the start.

Keep Reading!

Once your child starts reading her first books, continue her reading every day as she does the Sight Word activities. These activities support each other. Slowly start introducing more complex books with more non-phonetic words that must be recognized on sight. Let your child choose books he is very interested in. From this point on, **nothing builds reading skill like reading**, and your child will learn to read faster if his reading material is highly interesting to him. Gradually, your child will take over and start reading.

Sight Words

Alright, moving on. **We now teach your child to recognize words when she sees them.** Your child has had a successful introduction to written language. Now it is time to start **building her vocabulary of sight words**, because we read by recognizing words.

In phonics, your child combined *sounds* together to read words.
Now she combines *words* together to read sentences.

Introduce first reading books

We now use books your child can learn to read on her own as she is ready, at the same time that she is learning sight words. Your daily reading time now starts to include first reading books that build on the phonetic readers your child read in the Phonics step. Gradually, your child will start to take over more when you two read together. Many first reader books use repetitive word combinations. These are fine, but they can also get boring. The list below also includes books that have variety in their wording. Let your child help pick out books he is interested in.

[Brand New Readers](#) - Amazon

[Brand New Readers](#) - Ordering list

[First Books for Emergent Readers](#)

[Level One Readers on Amazon](#)

[Top Books for First Time Readers](#)

[Usborne Very First Reading Books](#)

[I Can Read Collections](#)

[Miss Rhonda's First Readers, sets 2 & 3](#)

[Grasshopper Apps I Like Books \(iPad\)](#)

[Great reading apps for kids](#)

[Dr. Seuss Beginner Collection #1 \(iPad\)](#)

[Read Me Stories - Children's Books \(iPad\)](#)

[iStoryBooks \(android\)](#)

[MeeGenius Books \(iPad / Android\)](#)

[Good Books for Beginning Readers](#)

[Ages 3-6 Pre to Beginning Readers](#)

What are the sight words?

The first sight words we teach are those most frequently seen in children's books. The typical starting point are the **Dolch Words** - 200 of the most common words. There are many more words to learn, but these are a great start.

The Dolch Words

Here are the **Dolch Words**. They are often seen divided into groups based on either how often they are seen in most children's books, or based on what words should be learned by different ages of children. It probably makes sense to learn the **most frequently** seen words first, so here are the Dolch Words grouped in this way:

<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>	<u>Group 4</u>	<u>Group 5</u>	<u>Group 6</u>
the	at	do	big	from	away
I	look	what	now	want	saw
was	out	get	very	put	ran
for	we	my	ride	every	sleep
to	him	can	went	good	old
you	is	so	long	don't	call
said	am	them	an	too	let
on	as	would	into	pretty	brown
and	with	could	are	any	by
it	her	see	no	how	after
his	be	like	over	got	help
they	then	me	just	jump	yellow
he	up	when	come	about	their
of	there	not	came	know	well
that	have	one	your	take	make
but	little	will	blue	green	five
a	all	did	if	around	here
in	some	were	ask	right	think
she	go	this	its	where	going
had	down	yes	red	for	six

<u>Group 7</u>	<u>Group 8</u>	<u>Group 9</u>	<u>Group 10</u>	<u>Group 11</u>
walk	tell	soon	use	wash
again	first	has	hurt	live
stop	black	our	sit	upon
cold	goes	warm	under	thank
two	much	made	fast	show
play	try	find	pull	draw
off	white	better	which	these
today	write	ate	read	wish
or	keep	run	say	hot
who	new	only	cut	clean
never	ten	hold	fall	sing
fly	always	full	why	many
before	give	gave	light	because
been	must	us	kind	grow
seven	does	buy	carry	together
myself	drink	those	own	shall
eat	work	open	pick	far
may	start	three	both	best
eight	bring	funny	small	please
round	once	done	found	laugh

How to teach sight words

a	can	I	go
get	see	me	have
not	did	run	and
my	the	is	to
you	in	like	said
it	for	was	we

Flash cards are great, but can bore your child silly if that's all she has. There are materials, games, and apps that make learning sight words fun. **Mix these up for a variety of experiences.** Use favorite games and apps frequently and make them available for independent use. Encourage your child to **write as well as read** the words. Writing is a very effective way to help a child remember words.

Flash Cards

Flash cards are still a good way to learn. Write one word each on 3X5 index cards, punch a hole in the upper corner of each card, and connect them with a split ring. Go over the Dolch Words any time by showing them to your child as you go through the stack of cards.

If your child does not remember a word, simply tell her what it says and have her look at it and repeat it. Use words in sample sentences. Keep track of how many your child gets correct and come up with a reward system - like a favorite treat - if your child gets above a certain number right. Here are [Free Dolch Word Flash Cards](#).

Good sight word apps for tablet users:



Left to right: [Bitsboard](#) (iPad) has the largest catalog of photos and words available, all in an easy to use format. If you get only one app for sight words, get this one. The simple, convenient [Sight Words List](#) (iPad) has sight words grouped by age. [Abby Sight Words](#) (iPad, [android](#)) is a fun app with different activities. Use the lowercase letters option. [My Sight Words](#) (android) is a good basic sight word reviewer. The great [Kids Handwriting Grade K](#) (android) is a nice app that teaches sight words while providing writing practice. Writing words is a great way to remember them.

Note: Apps like Bitsboard (above), include many words that are not on the Dolch Words list. Introducing these is fine after your child has learned the more basic words on the Dolch list. Common sense dictates that we start with easier words first.

Memory Games

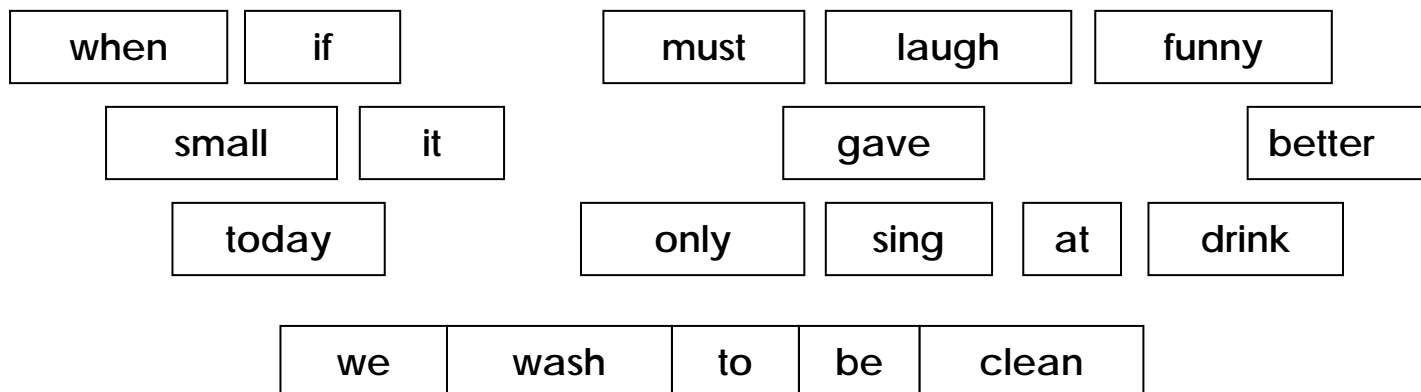
The classic '[Concentration](#)' **memory game** is always fun. Make up a set of small cards with the Dolch Words on them. Lay them out in a grid pattern. Have your child read each word. Flip them all over and play the memory game, turning two over at a time.

as	when	try	it
it	as	must	buy
must	buy	when	cold
play	cold	play	try

Making Sentences

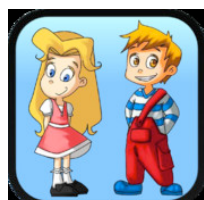
Encourage your child to make simple sentences as soon as she knows enough sight words. Sentences form the basis for how we read. This activity also gives you a perfect chance to introduce your child to **nouns, verbs, and adjectives**. As your child learns more sight words, expand his sentence making activities to longer, more complex sentences.

Lay out sight word flash cards at random. Say a sentence using some of the words, and have your child find the words and build the sentence:



Have your child read each sentence she makes fluently, as if she were talking to someone. Do not worry right now if the first word in the sentences is not capitalized. You can show your child about that as he works on writing; and he will also pick this up as you read together.

Here are a few good sentence building apps:



Left to right: **Sentence Maker** (iPad) has great photos, a clean interface, and many customization options. **Sentence Builder** (iPad, **android**) is a popular sentence app, with two levels and the ability to create your own lessons. **Sentence Magic** (iPad) has two and three word options for children just starting with sight words. **Rainbow Sentences** (iPad) is expensive, but has quite a few customization options and attempts to teach correct grammar by color coding words.

Beautiful free Nomenclature Cards at Montessori For Everyone

Blended sounds

If your child has trouble recognizing sight words, it may help to do some work with blended sounds. **Two or more letters that combine to make a sound** appear in many words. Helping your child recognize consonant and vowel blends can help her learn sight words by giving her a new way to recognize sounds. Here a few of the more common blended sounds and a few words for each to help your child learn to identify them:

sh

ship
shoe
shine
show
she
shop
shell

ch

chip
chair
chunk
chew
china
chop
chin

th

the
them
those
their
that
then
they

ew/ue

blew
true
view
new
blue
threw
due

ee

see
bee
knee
tree
flee
peep
deep

aw

saw
raw
gnaw
paw
jaw
claw
pawn

ai

rain
train
brain
main
pain
drain
plain

oo

book
wood
brook
took
hook
look
nook

ing

sing
ring
thing
bring
cling
string
fling

oy/oi

boy
toy
foil
hoist
moist
soil
toil

ay

say
may
tray
hay
lay
day
play

ea

read
bead
lead
bread
head
beach
beak

le

able
beetle
bubble
table
handle
doodle
gentle

ow

blow
know
crow
sow
how
cow
town

wh

white
when
while
where
whisk
whale
what

These links have many sight words using common blends and non-phonetic words for your child to learn as sight words:

[Enchanted Learning](#)

[Carl's Corner - Blends Boulevard](#)

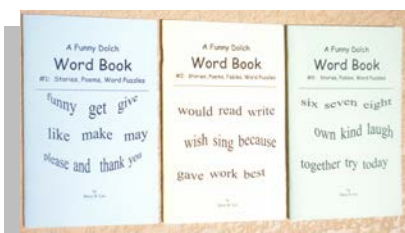
[Wordway - Digraphs](#)

English defies the rules of phonics

I hope the blended sounds didn't make you crazy! English is a nutty language to try to figure out based on sounds alone. The same letter combinations make different sounds in different words. Many words defy any rule that tries to describe them using sounds. That is why we don't spend a lot of time with phonics once your child is reading phonetic books. Since English often defies all the rules of phonics, it is better to move right into recognizing words on sight and using them in sentences. That way we don't drive kids, teachers, and parents all nuts.

Sight Word Readers & Workbooks

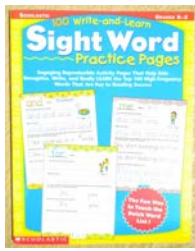
These excellent sight word readers and workbooks will make introducing sight words easier. Use these during your daily reading time together.



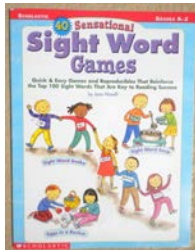
The **Funny Dolch Word Books # 1,2,& 3** are practice readers that will entertain your child while he learns many of the Dolch Words.



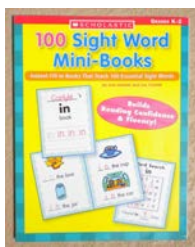
25 Read and Write Mini-Books by Scholastic is a wonderful workbook and resource. Your child can make little books, learn sight words, decorate the books, write in words, and then save them to read.



100 Write-And-Learn Sight Word Practice Pages from Scholastic is another excellent workbook with sight word recognition, writing practice, sentence building, and reading practice on every page.



40 Sensational Sight Word Games by Scholastic gives your child many entertaining ways to learn the sight words. Very nice to have to add variety and keep things fresh and interesting. These games will definitely make sight words fun.



100 Sight Word Mini-Books from Scholastic will give your child more experience recognizing words containing common letter combinations. Each mini-book includes a word search game, writing practice, sight word recognition, and reading practice.

These resources will help make learning sight words fun and interesting. You can alternate between sight word games, workbooks, tablet apps, and online resources. Varying your child's sight word activities keeps things fresh and presents the same sight words in different ways. Immersing your child in all these activities will get her sight word vocabulary off to a great start.

Once your child has started learning sight words, **do some practice with them every day**. Having a variety of activities to choose from makes this easier and more fun. As you read every day with your child, look for the sight words your child has learned and point them out. Make a game out of looking for them. This **draws your child's attention into the print**, which is your goal.

Internet Resources for Learning Sight Words

These sites contain excellent, interactive sight word activities that will propel your child into reading. Today's 'digital natives' love interactive games using the computer and internet. Learning sight words is all about practice. Be sure to be available in case your child has any problems making the games work. A few of them take a little practice.

1+1+1=1

Go to the **You Can Read** link and check out this really nice sight word activity series. The 10 sets cover a few sight words at a time with a variety of activities, all easy to do at home. A great example of reinforcing learning in multiple ways.

Starfall

This site is mentioned often in this book for good reason – it's fabulous. There are four steps, titled **ABC's**, **Learn To Read**, **It's Fun To Read**, and **I'm Reading**. Each has interactive activities that make learning to read fun. Find your child's level and play along! Your child will find many favorite activities here and excellent reading practice.

quiz-tree

This is a great site with two free quick sight word games to download and other wonderful activities at no cost. Click on English, then sight words.

Click on the '**Free downloadable sight words software**' link to download these excellent games. The **Sight Words Buddy** is a game where the child clicks on words as they are spoken. The **Sight Words Sentence Builder** allows the child to drop and drag words to make sentences. Both are wonderful resources.

Another highly recommended activity on this site is lower on the page. There you will find lists of Dolch Words named Pre-primer, Primer, First Grade, etc. Click on these to bring up Dolch Word lists that allow your child to click on words and hear the words spoken. This is a great way to reinforce learning these words. A bit further down the page are free **Word Search Puzzles**.

gamequarium

This page has at least 7 links to great sight word games.

yourdictionary

More than a dictionary! Many links to sites with sight word games.

bingocardcreator

Click **Pre-Primer Sight Word Bingo Cards 1-8** to find bingo cards you can print out free.

theschoolbell / theschoolbell.com

The first page has a number of word search games ready to print out. Kids love these games. Have your child read all the words while searching and after they all are found. Add in some practice writing to make this a full-featured activity. The second page has a number of links to good games. This site is well worth exploring for other activities also.

[familylearning](#)

This page has numerous links to great sight word games, and a sight words video at the bottom that goes through all the Dolch words and uses each in a sentence. Very nice.

[kellyskindergarten](#) A number of good word games.

[adrianbruce](#) Free sight word bingo game downloads.

[teach-nology](#) Word search games and bingo cards.

[wordsearchcreator](#) Free sight word search games



The last step in the Reading Sequence is to keep on reading with your child every day. As she learns more and more sight words, and reads familiar books more than once, your child will start to read more on her own. Encourage and support this process. Whenever your child feels that he can **read even one sentence or phrase**, let him. When he has trouble reading a word, **tell him what it is and move on**. Encourage fluent reading rather than reading one-word-at-a-time. Read the books your child is most interested in.

When your child is ready to move on from the first phonetic reading books, here are more good books to take a look at:

[Kipper's A to Z: An Alphabet Adventure](#)

[The Icky Bug Alphabet Book](#)

[Eating the Alphabet](#)

[Brown Bear, Brown Bear, What Do You See?](#)

[Bubble Trouble](#)

[You Read To Me, I'll Read To You: Very Short Stories To Read Together](#)

[Good Luck Bear](#)

[Thank you Bear](#)

[Why Mosquitoes Buzz In People's Ears](#)

[Where's Spot](#)

[Spot's First Words](#)

[Rosie's Walk](#)

[Spot Goes To School](#)

[Have You Seen My Cat?](#)

[Dr. Seuss books graded by reading level](#)

My Mother Is Mine

Goodnight Dog

Hop On Pop

Green Eggs and Ham

Are You My Mother?

The Cat In The Hat

Horton Hears a Who

How the Grinch Stole Christmas

The Snowy Day

Alexander and the Terrible, Horrible, No Good Very Bad Day

The Rose In My Garden

Blueberries For Sal

The Napping House

All The World

My Garden

The Giving Tree

The Big Dipper

** This is one of the “**Lets Read and Find Out**” Science series – a *wonderful* set of books!

Boo Hoo Bird

Bringing the Rain to Kapiti Plain

Terrific

At Night

Every Friday

One is a Snail, Ten is a Crab: A Counting by Feet Book

Where the Wild Things Are

The ‘How Do Dinosaurs’ series

This excellent series has titles like **How Do Dinosaurs Clean Their Rooms?** (Learn to Read, Say Goodnight, etc.). See the whole collection on Amazon.

Today and Today

Curious George

Leo The Late Bloomer

Gregory, The Terrible Eater

The Day Jimmy's Boa Ate The Wash

The Ball Bounced

Animals Should Definitely Not Wear Clothing

The Jacket I Wear In the Snow

Drummer Hoff

Hattie and the Fox

eBooks

There are many good eBooks and collections for the iPad and android tablets. Some make more use of the interactive features of tablets than others. Here is a small sample:

iPad

Bookboard

[Dr. Seuss Beginner Book Collection #1](#)

[MeeGenius! Kid's Books](#)

[14 Best of the Best preschooler's books for iPad](#)

[Booksy Learn To Read Books](#)

[Scholastic eBooks](#)

[The Oceanhouse Media Collection](#) Check out the Magic School Bus eBooks

[Disney Digital Books](#)

[Good Night Moon](#)

[Rounds: Parker Penguin](#)

[Rounds: Franklin Frog](#)

[The Chalk Box Story](#)

[Sleepy Mole's Moving Day](#)

[Five Little Monkeys Jumping On The Bed](#)

[How Rocket Learned to Read](#)

[Bella Goes Bump In The Night](#)

[Mouse and Owl](#) Check out School Zone's Start To Read! series

[Gadgetwise: The best children's books on the iPad](#)



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Android

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[Dr. Seuss Books](#) (Amazon)

[Oceanhouse Media Books](#)

[Booksy Learn To Read Platform](#)

[MeeGenius! Children's Books](#)

[iStoryBooks](#)

[Read Me Stories](#)

[Just Grandma and Me](#)

[Good Night Moon](#)

[The Going to Bed Book](#)

[Ant and Grasshopper 3D](#)

[Good Night Train](#)

[The Grumpy Family](#)

[Grandpa Grumpy's Family](#)

Online Reading Resources

[Barnes & Noble free online storybooks](#)

[Children's Storybooks Online](#)

[192 Sites for Free Children's Books Online](#)

[Free downloadable Children's Books](#)

[20 Places Online for Free Kids Books](#)

[We Give Books Free Online Books](#)

Improving Comprehension

Learning to read is great, but it is just the beginning. Your child needs to **remember and understand** what she reads. This is **reading comprehension**, a vital skill. Without comprehension, reading is just a mechanical decoding process that does not stimulate your child to think. Reading comprehension, like all skills, is developed through **practice**. Luckily, this is easy for you to do with your child at home.

Reading comprehension is improved by *talking* about books before, during, and after they are read.

You don't need special workbooks or programs for this.

Before you and your child read a book, talk about it. If it is one you've read before, what does your child remember about it? Who are the characters? What happens to them? If it is a new book, what does your child think it might be about? Flip through the pages before you read the book and get your child's ideas. Stimulate thinking about the book.

During the reading, ask your child what she thinks will happen next, and what she thinks about what is happening. Is the book making her feel something - scared, anxious, happy, curious? Who are her favorite characters and why? Does she like the story or not? How would she change the story if she could?

After reading, talk about what happened in the story. Ask your child questions about the characters - what did they say, what did they do, who are her most and least favorite characters and why? Talk about the meaning of the story and how it might relate to your child's life. Does he agree with what the characters did? What would he tell someone else if they asked what the story was about?

All this discussion will get your child **thinking and paying attention** when she reads, which is the key to comprehension.

Making & reading your own books

Young children learn to read much faster and easier if they are highly interested in what they are reading about. What could be more interesting than a child's own life? Almost everything your child does and experiences, even dreams, can provide the subject matter for homemade books. A book your child makes that talks about her life experiences or comes from her own imagination is almost guaranteed to be high interest material.

Making books



Homemade books are not hard to create. Keep supplies on hand, like glue sticks, computer printer, plain white paper, and a stapler. Put a sheet of colored construction paper on top of a few sheets of white paper, fold in half, staple along the fold, and you have a book. You can also punch holes in two card stock sheets for the covers and along one side of the pages and tie the book together with yarn.

Photo: A bookmaking project at [The Artistic Life](#)

When your child has an interesting experience, idea, or dream, ask him if he would like to make a book about it. Let your child illustrate her book with her own drawings, photos you print out, pictures from magazines, etc. If he is not writing well enough to write on his own, have him dictate what each page should say. Help him tell the story as needed, but only if he gets stuck. This is *her* book. Here are more ideas for making books:

[DIY homemade children's books](#)

[Another simple method of making homemade books](#)

[Video: Making a homemade book](#)

[Video: Homemade books for toddlers and preschoolers](#)

[DIY simple, artsy homemade books](#)

When your child is writing, she can write the text for her books herself. Until then, have her dictate what to write and write it in yourself using block letters, like the style the sandpaper letters are made in. If you do the text on a word processor, use Century Gothic or a similar type. Homemade books can be wonderful early readers, precious memories, even gifts. Below are great apps for making your own eBooks.



Left to right: [Scribblepress](#) (iPad) allows your child to create all kinds of eBooks. Your child can add photos or illustrations, and use stock images and templates. [My Story](#) (iPad) is another great children's book creation app. Books can include recordings, and can be shared with others, even published to the iBookStore. [Book Press](#) (iPad) is a free keepsake bookmaking app that many people love. [Story Patch](#) (iPad) has many options for story templates, creating new stories, and other options.

Montessori At Home!

Printable Materials

The following pages contain materials for you to print out and use with various activities. The activity descriptions will tell you what materials to print for specific activities.

- Make sure your computer printer is in good working order and the ink cartridges have enough ink.
- Materials can be printed onto white or colored **card stock**. It makes sense to buy these by the sheet at an office supply store copy center or a copy shop, as you will not need a full package.
- **Cardboard** from boxes, like food and shipping boxes, works very well for making sturdier printables. You can also use science project displays and cut them up as needed. Print out your materials onto regular white or colored paper, glue them onto the cardboard, and cut them out. **Spray paper glue** works well for this.
- Keep **index cards** and **black and colored markers** always handy. You can make up an incredible amount of materials for activities very quickly with these.
- For the amount of use most printables get at home, laminating can be overkill. If you want to laminate your printables, use **self-sealing laminating pouches**. These don't require a heat laminator.
- A **hanging file folder bin**, stocked with **hanging file folders**, makes a great place to store printables. Use the provided tags and clear holders to label your child's files. These can be used for schoolwork for years.
- A basic **paper cutter** is handy to have around.
- A **single hole punch**, a **stapler**, and good **scissors** are essentials.

[illegible]

[illegible]

Reading & Writing					

Notes

Activities for the 'Montessori Jar'

Cut these out and place in a container.

When you need an activity idea, have your child reach in and grab one! **Make your own.**

Dust or polish furniture

Carry a glass of water on a tray without dropping it

Sweep something up into a dustpan

Name all the parts of your body

Find something red, yellow, blue, orange, green, and purple

Be totally quiet for one minute

Stand or hop on one foot for as long as you can

Check to see if the plants need watering

Get someone a glass of water

Cut a picture out of a magazine

Check for loose knobs and tighten them

Count all the stairs in your house

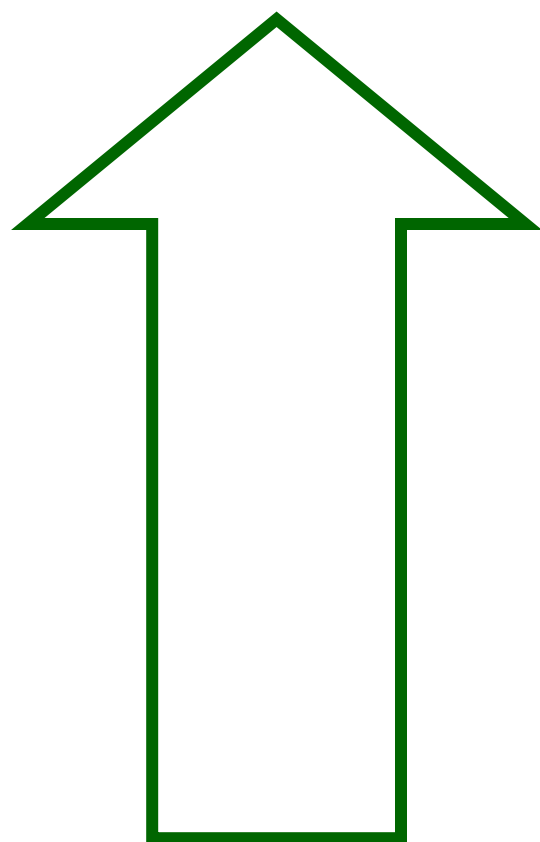
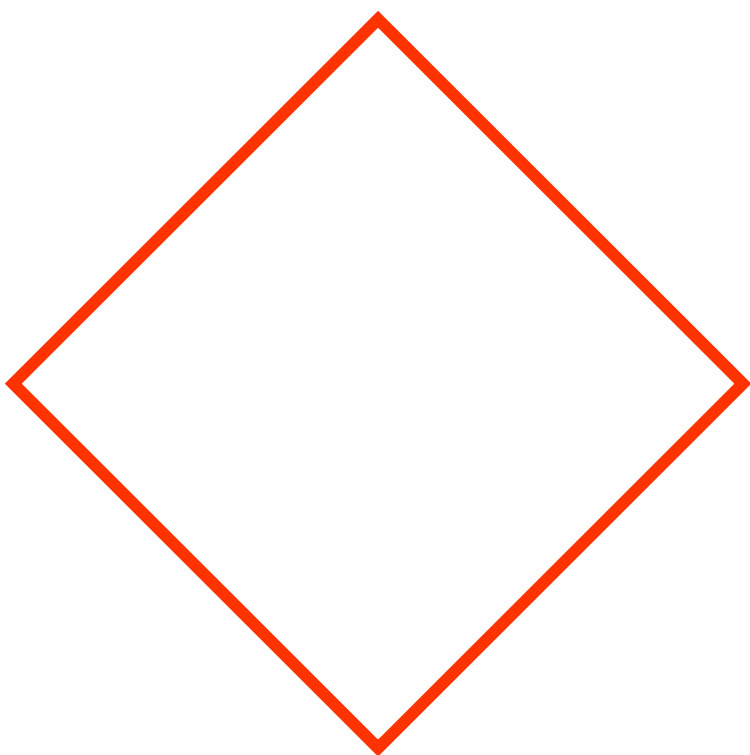
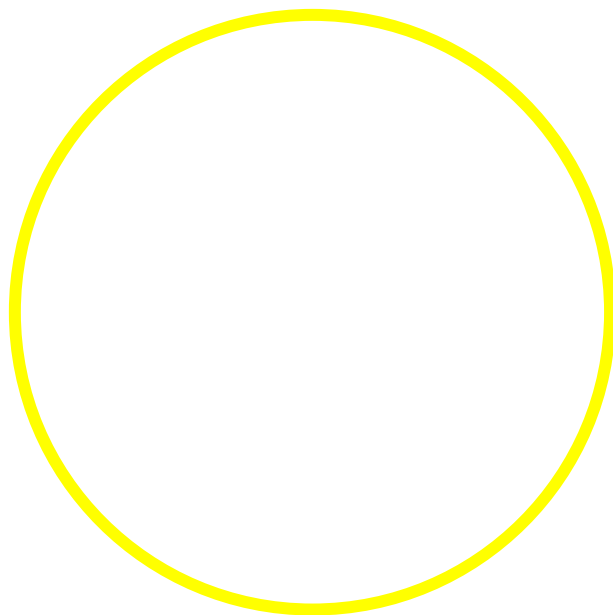
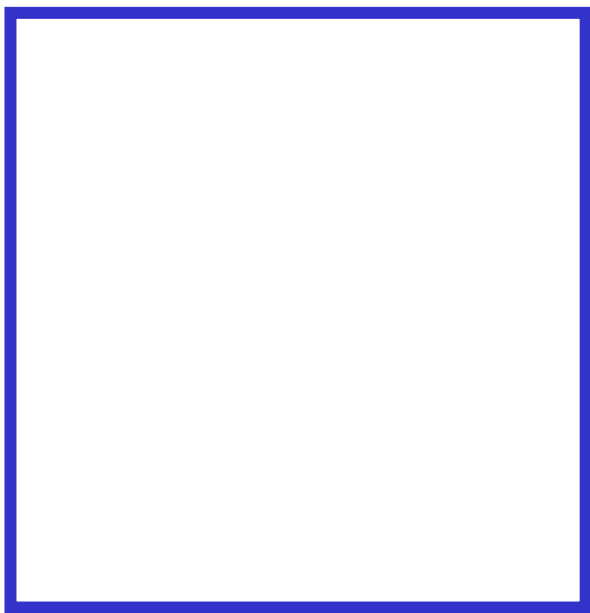
Open and close a
door without making a sound

Hang up a towel neatly

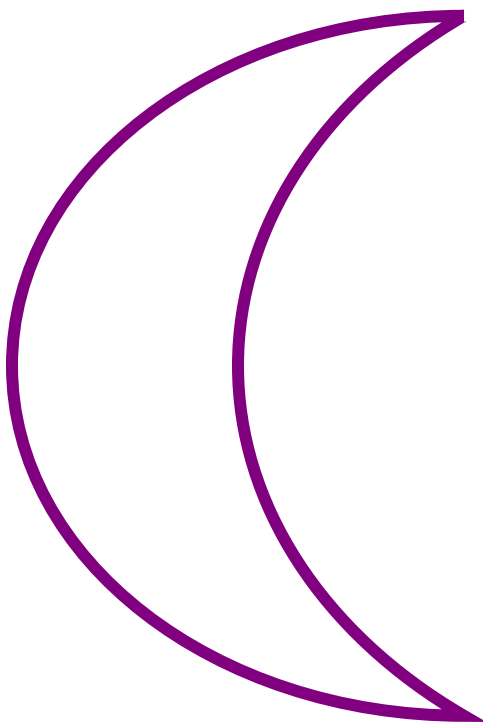
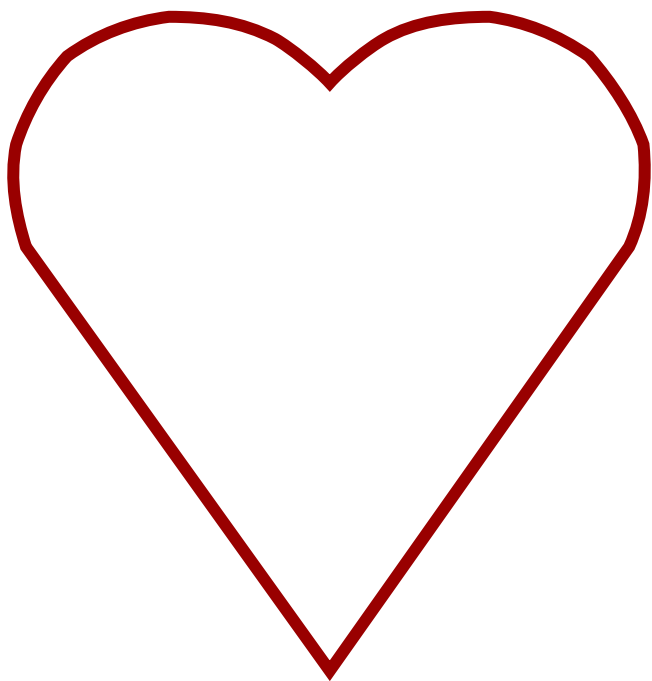
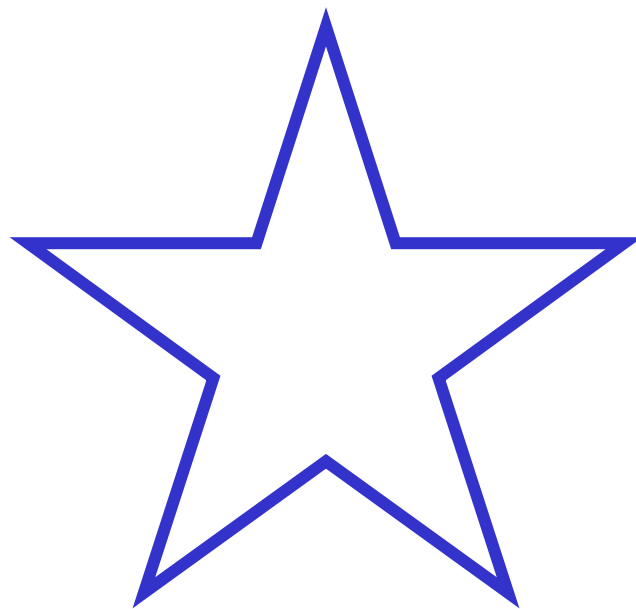
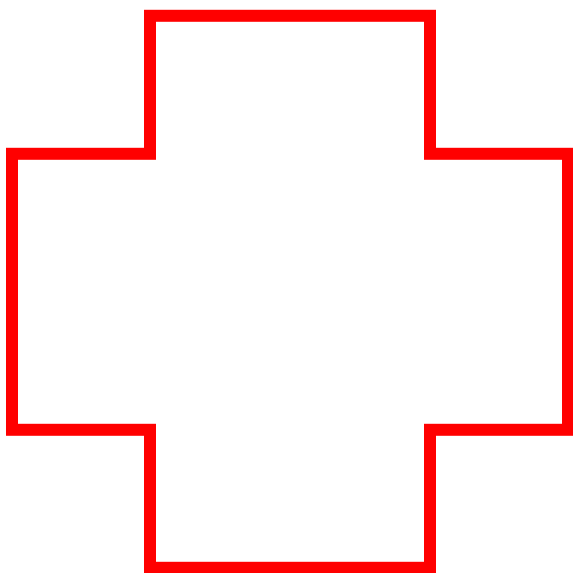
Fold a towel and a T-shirt neatly

Put a band aid on someone

Read your favorite book

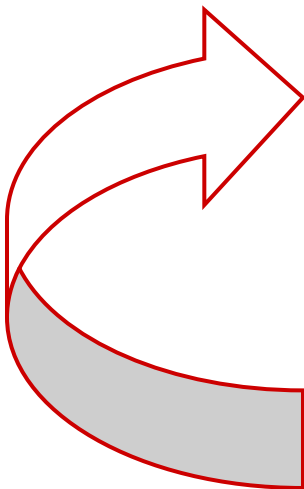


Lacing Shapes Cutout #1

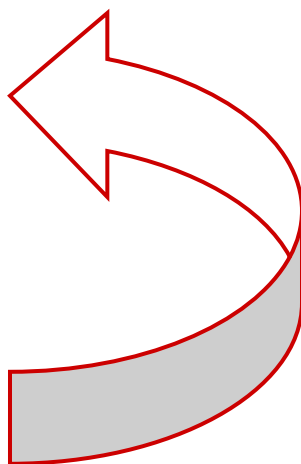


Lacing Shapes Cutout #2

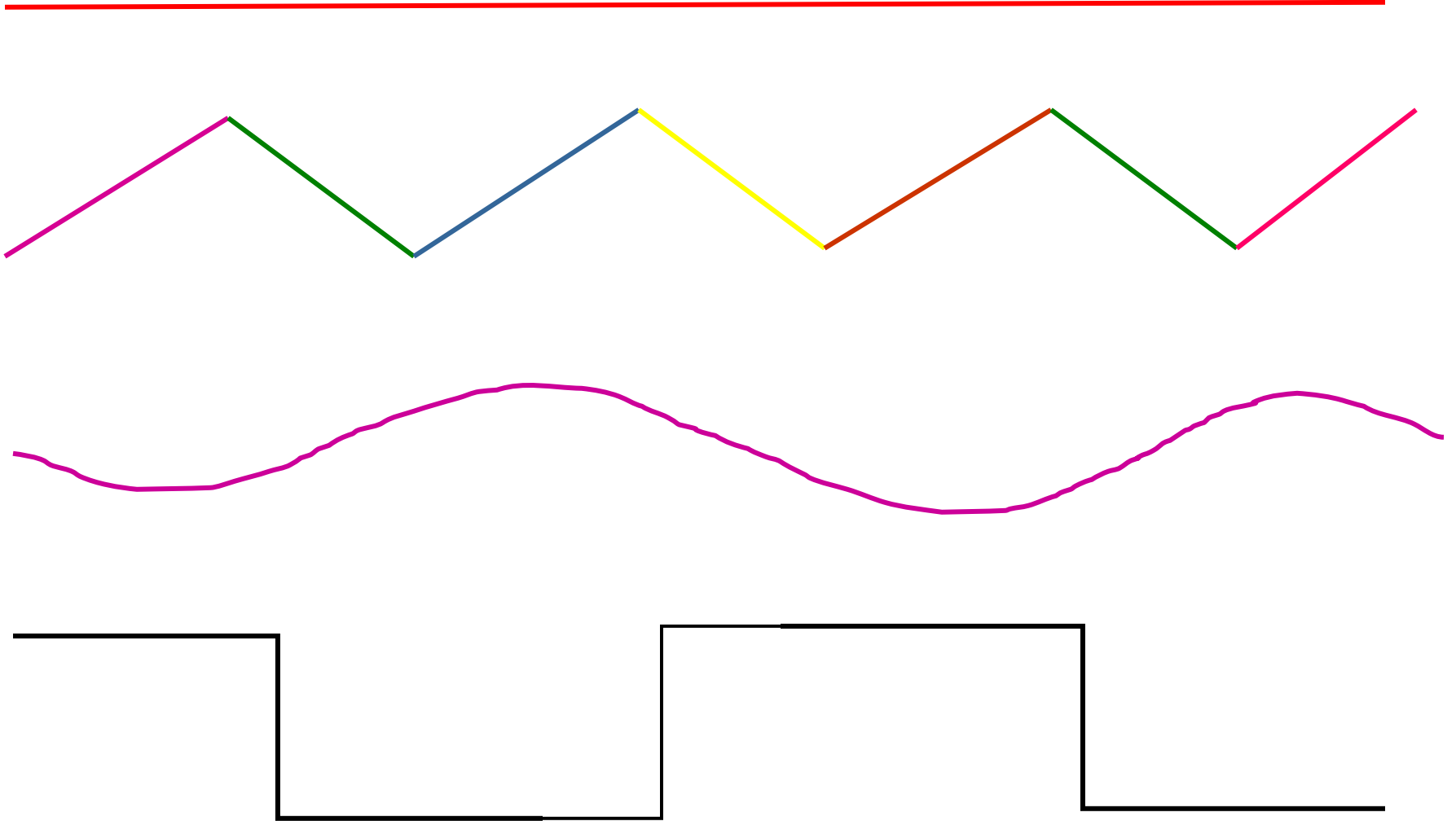
Right is tight

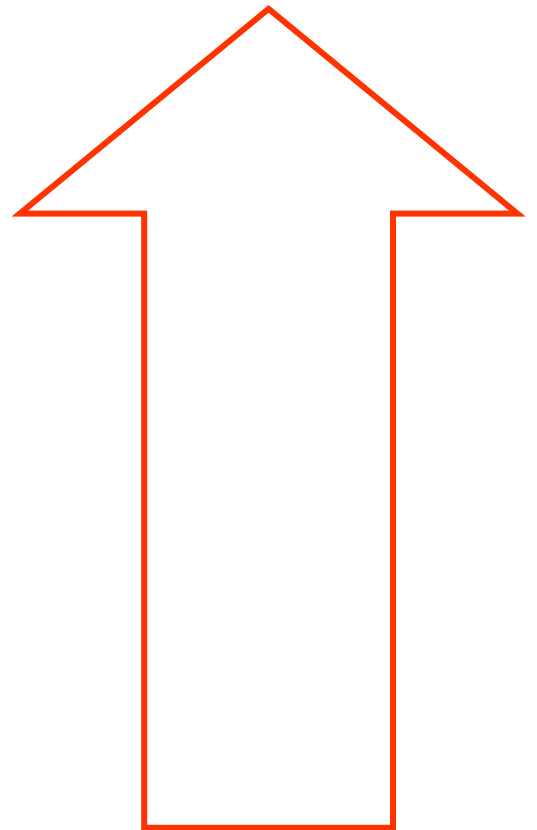
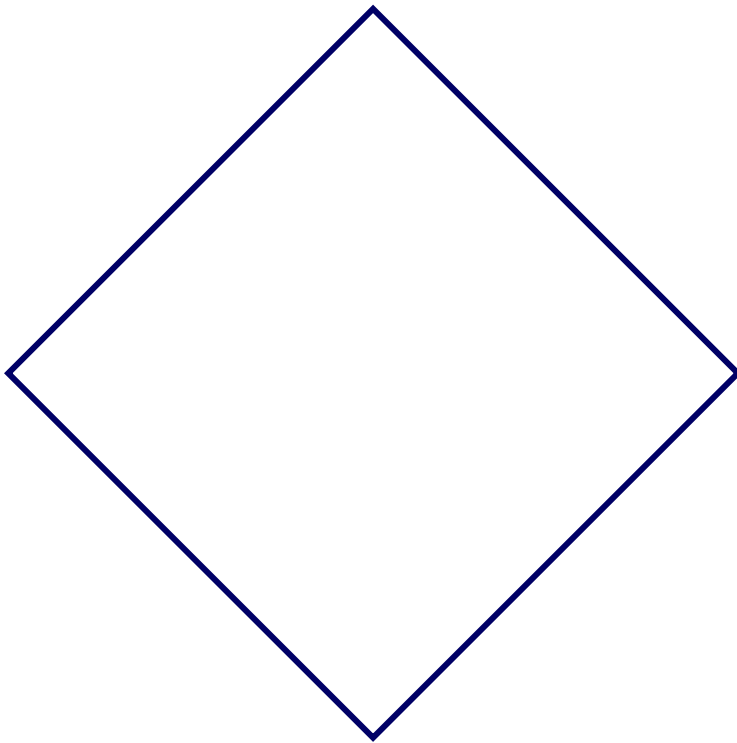
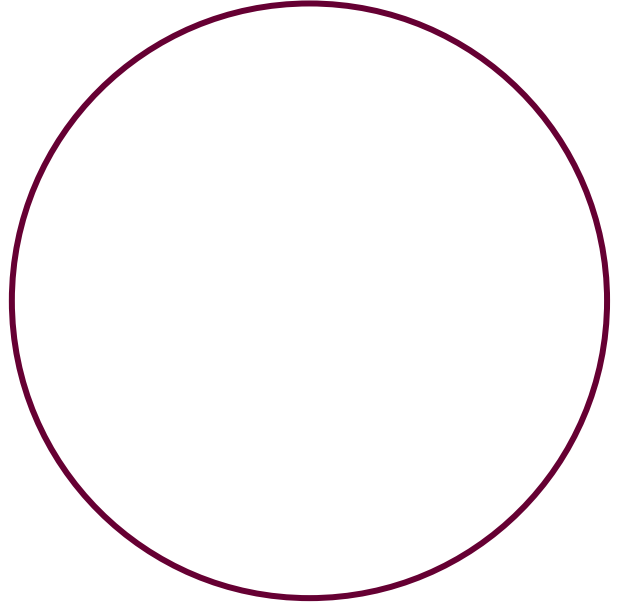
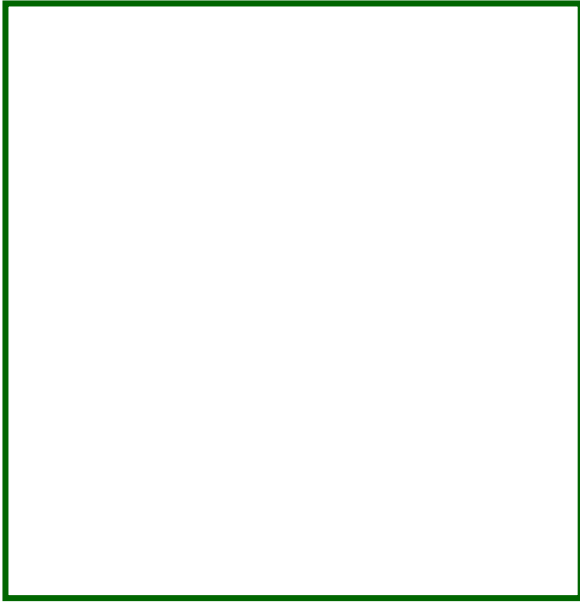


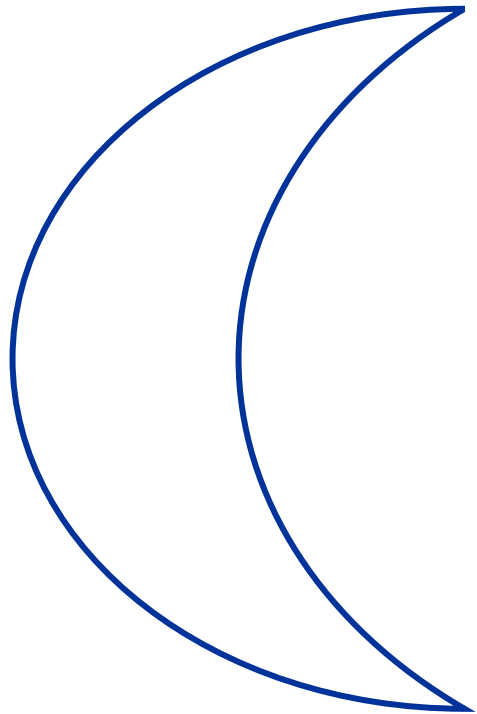
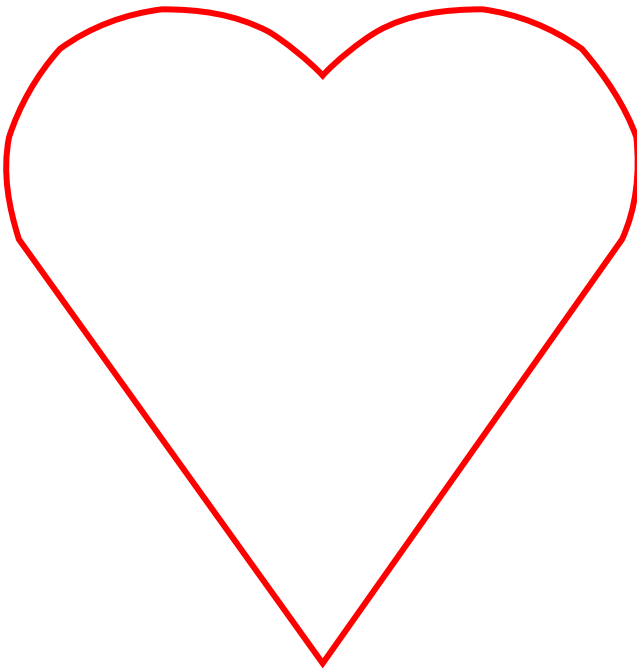
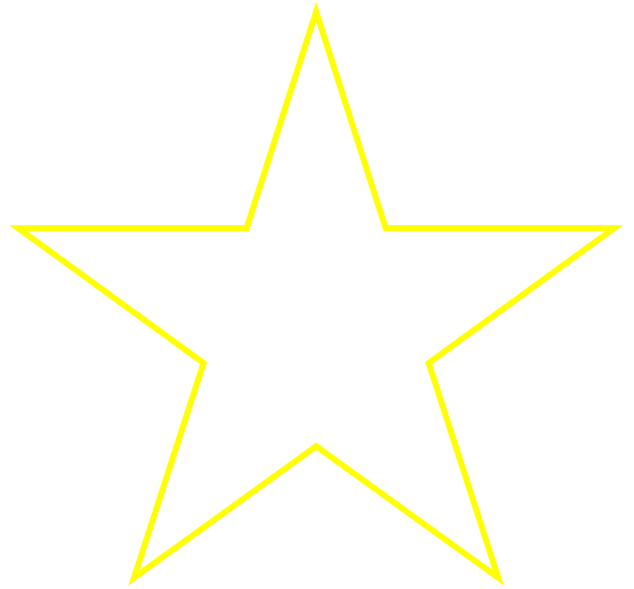
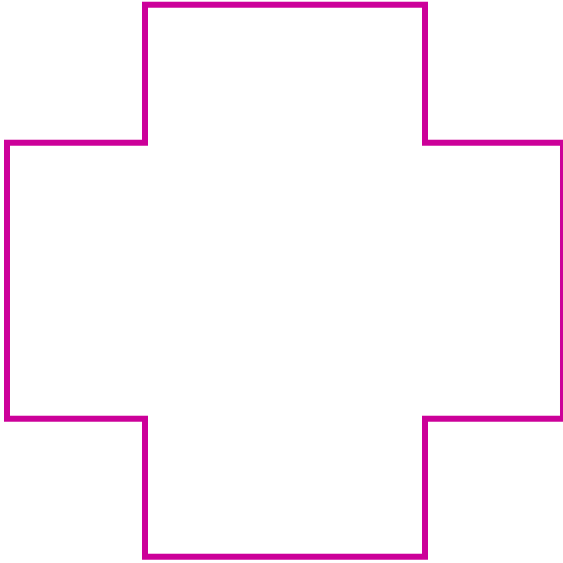
Left is loose

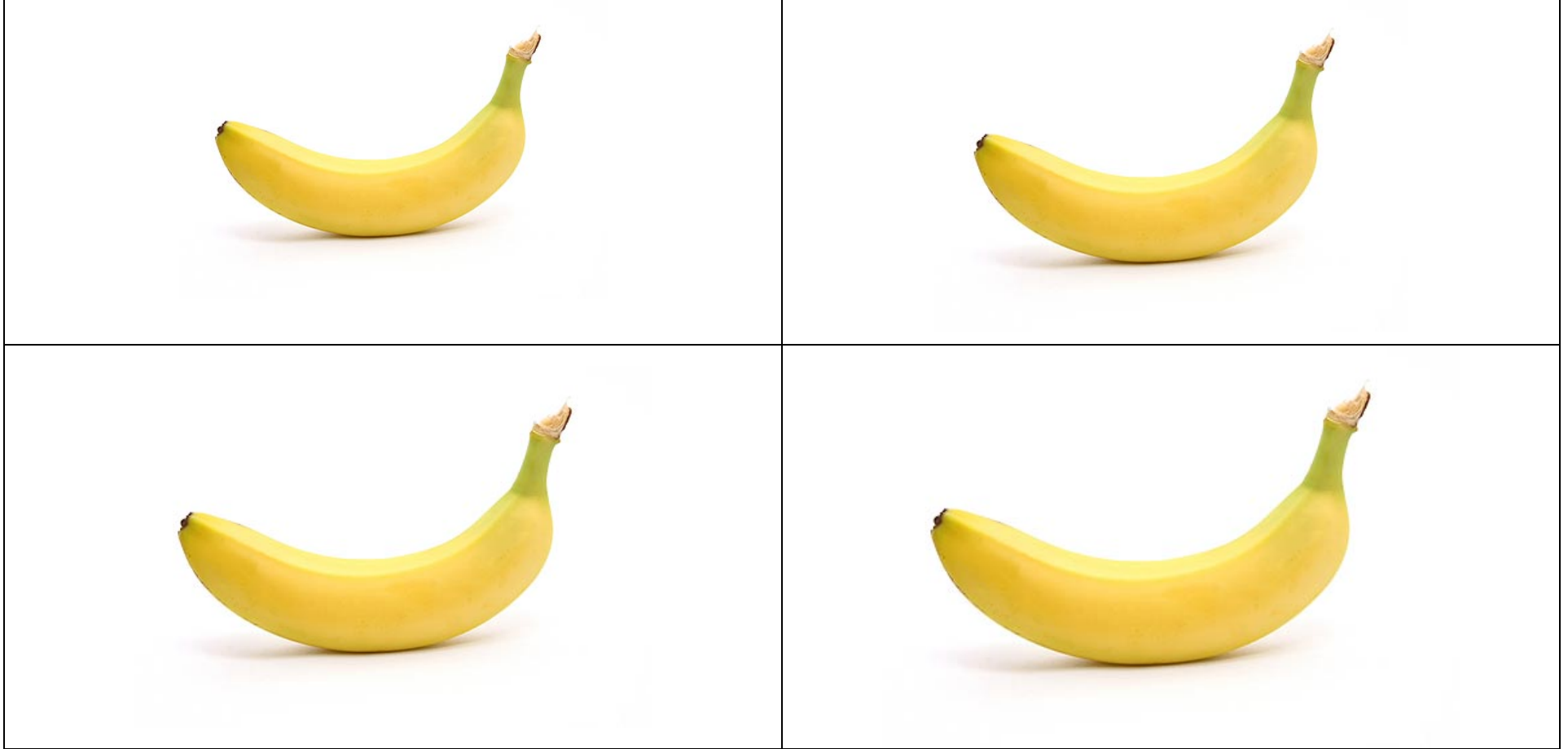


Line Cutting Copy Masters: Use this and the next two sheets as master sheets to make copies for cutting practice









Banana Size Grading

Print out this sheet and the next on white card stock. Cut the images out along the lines. Have your child mix them up on a mat and find either the largest (or smallest) banana. Have your child set this one on the **left** side of the mat. Now, she can find the largest (or smallest) of those that are left in the group and set it to the **right** of the first banana. Repeat until all the bananas are graded in a row, left to right, from either largest to smallest or vice versa.





Squirrel Size Grading

This one may be a bit harder than the bananas. Print , cut out, & let your child grade these the same way as the bananas.



Fruit Classification Activity

Cut out the names below and the next two sheets of fruit pictures
and use for a fruit types classification activity

apple

banana

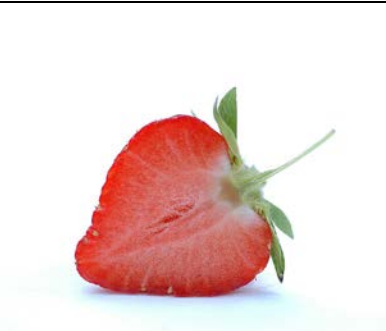
orange

peach

blueberry

strawberry





red

yellow

blue

orange

green

violet

brown

gray

white

pink

black

gold

sphere

cube

rectangular prism

ovoid

ellipsoid

triangular prism

cone

cylinder

triangular pyramid

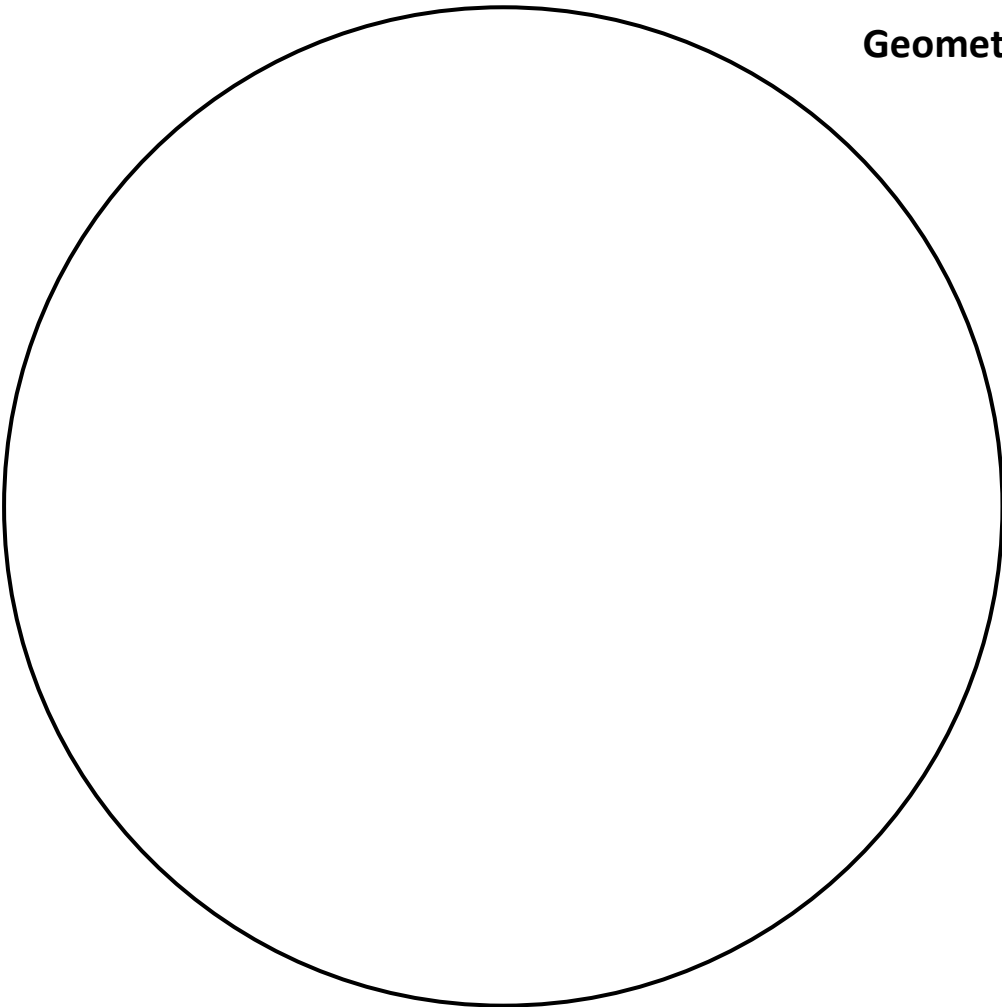
square pyramid

square
circle
triangle
parallelogram
right triangle
oval
pentagon
hexagon
trapezoid
rectangle

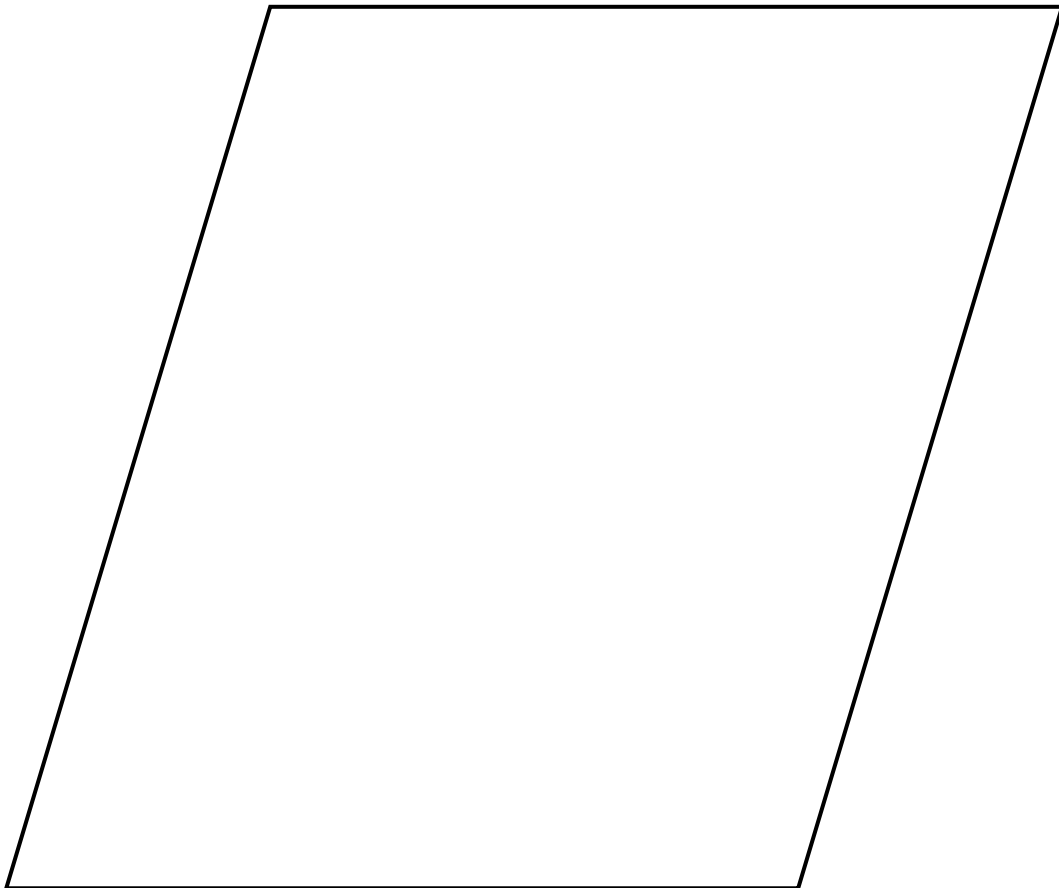
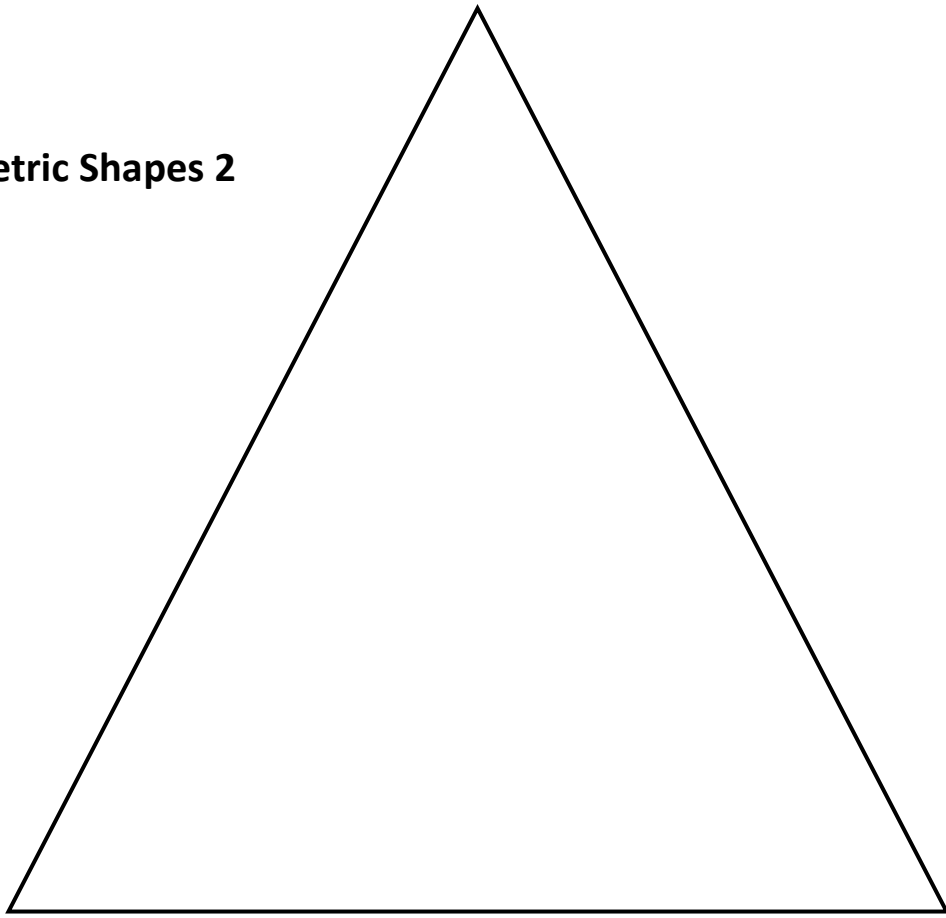
GEOMETRIC SHAPES NAMES

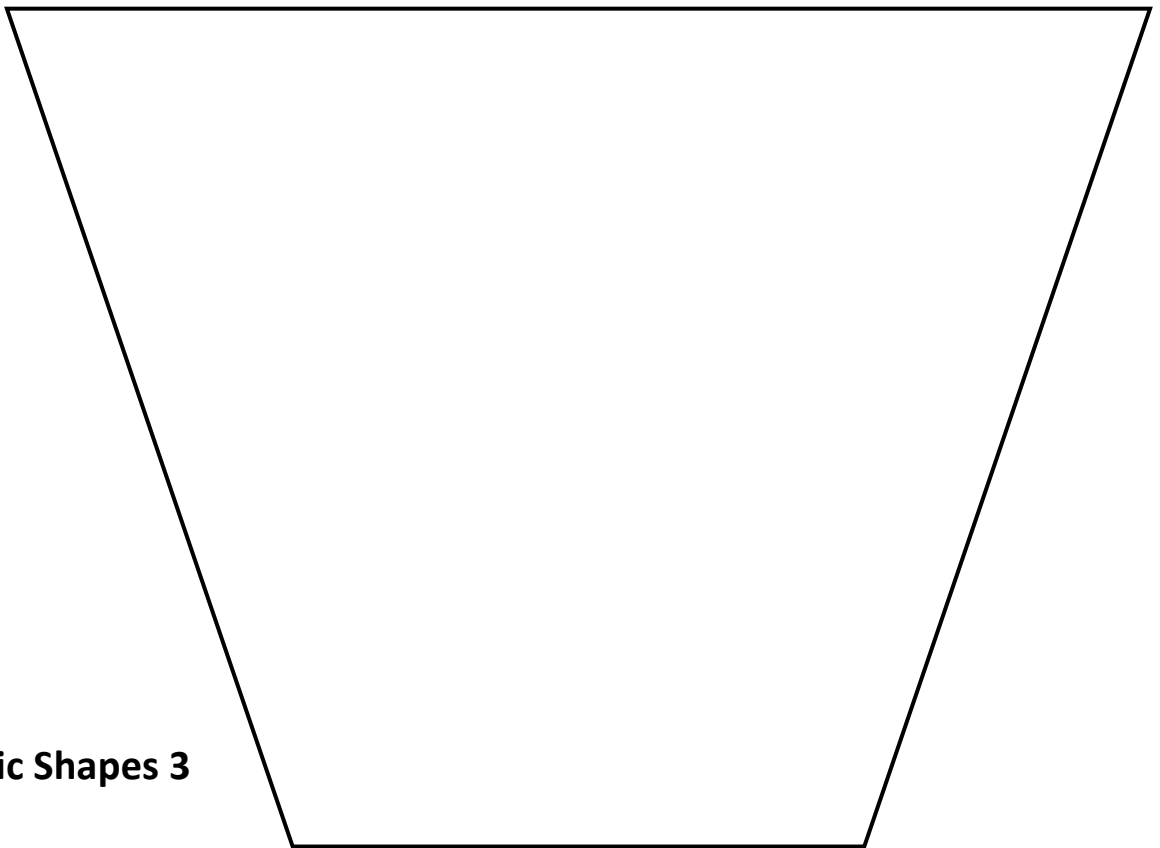
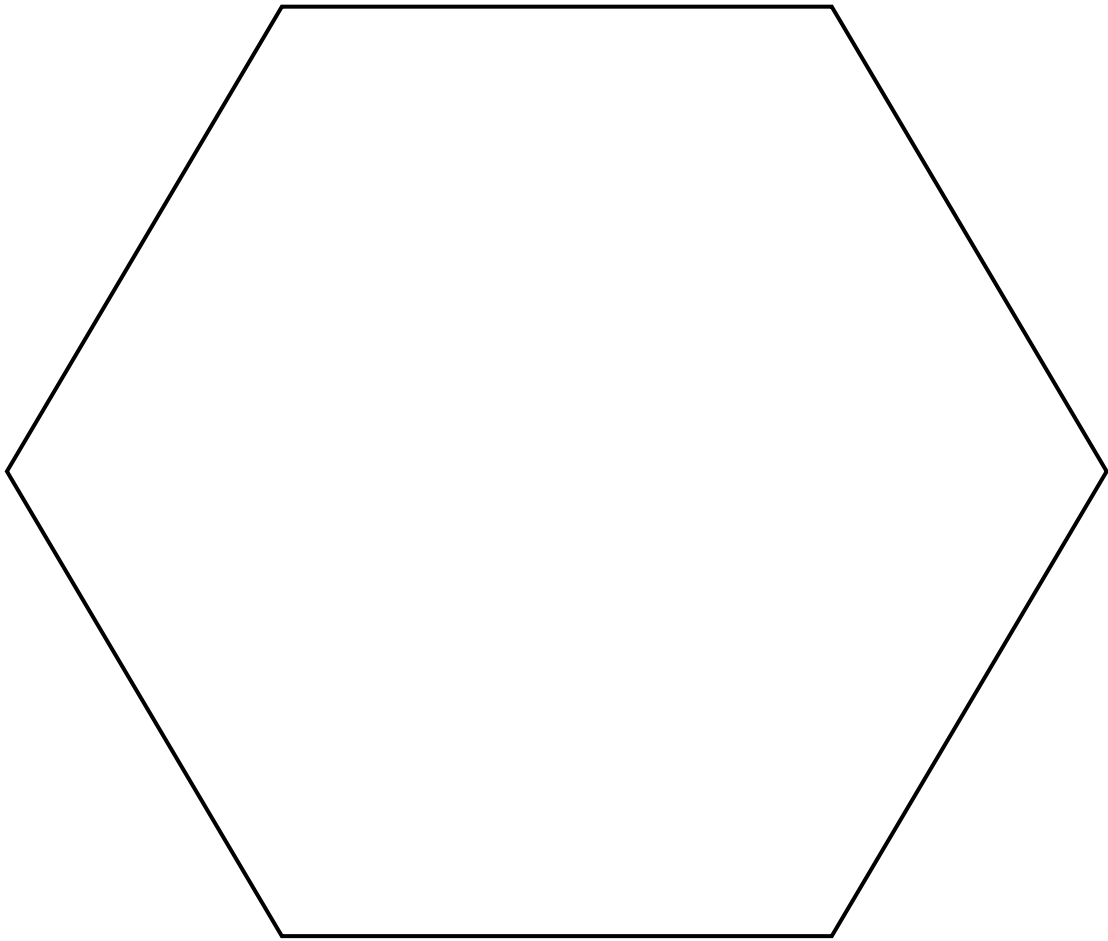


Geometric Shapes 1

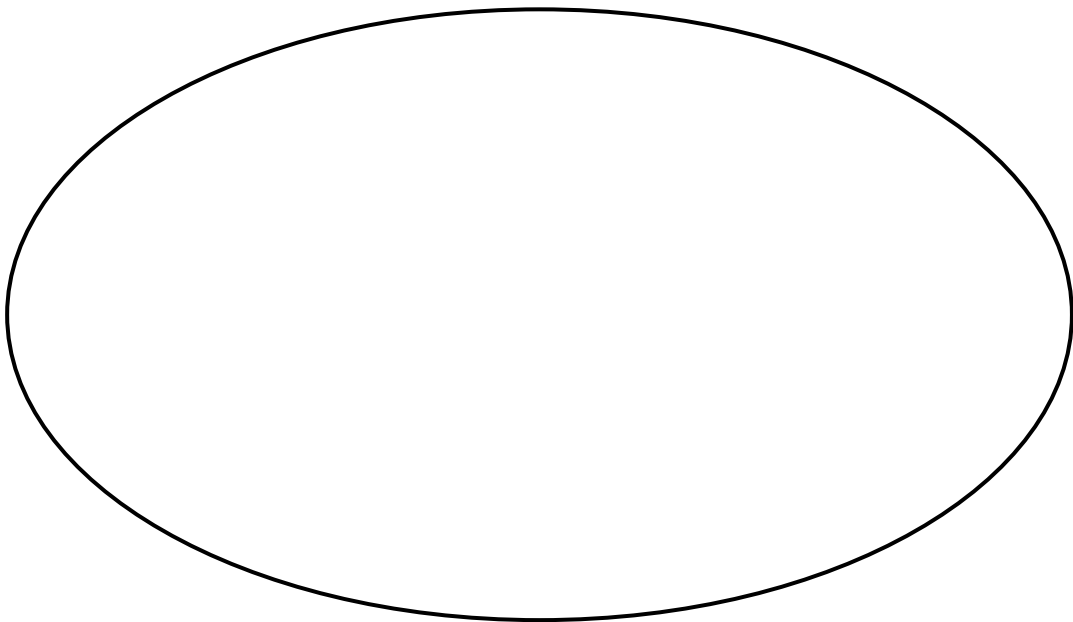
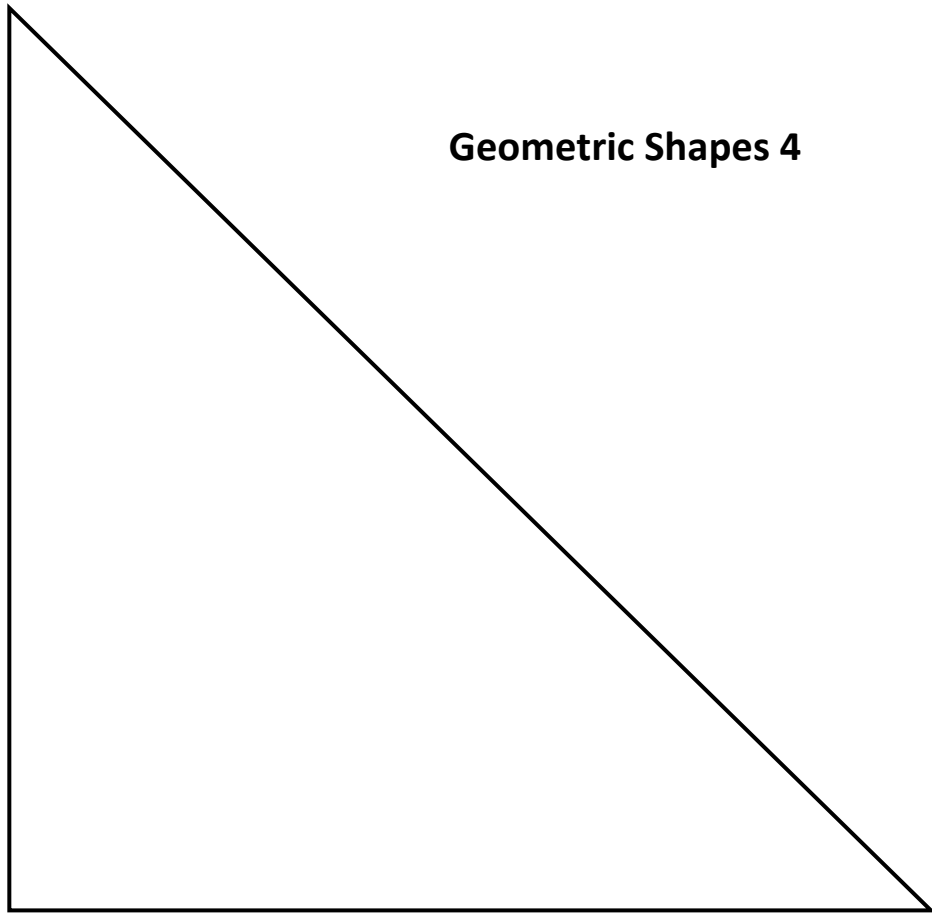


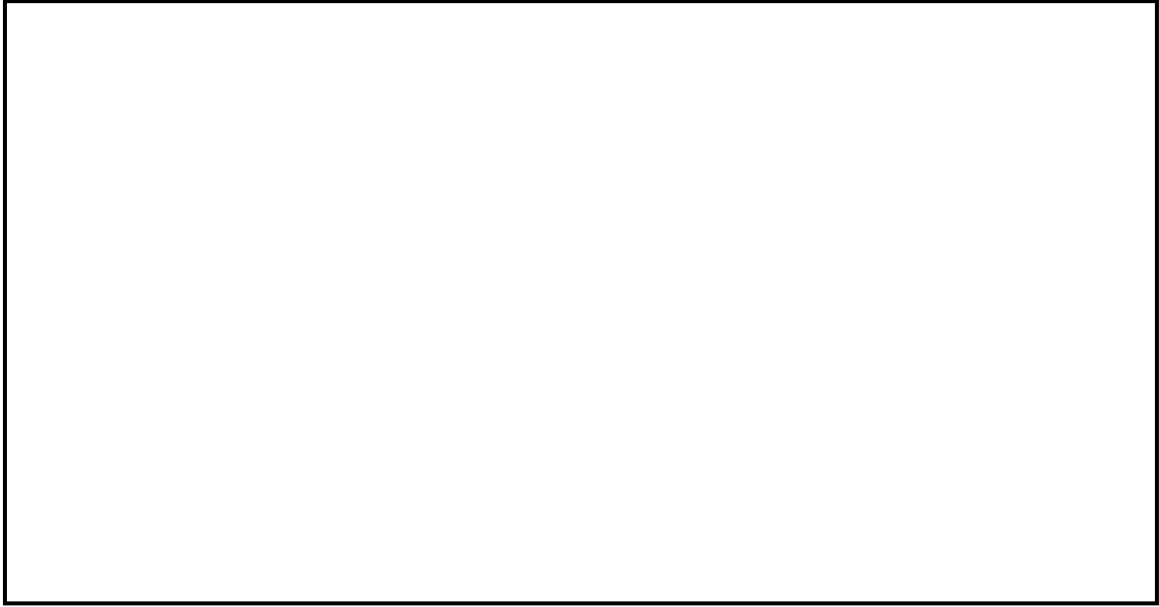
Geometric Shapes 2



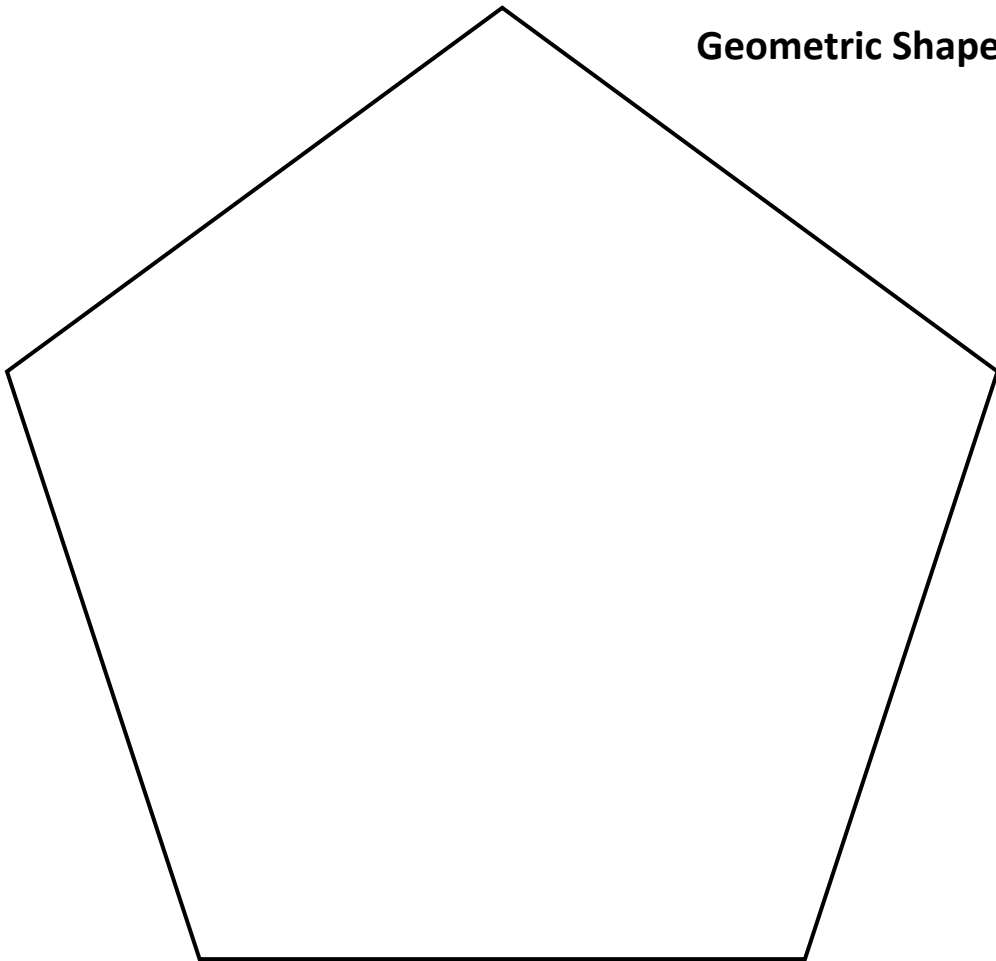


Geometric Shapes 4





Geometric Shapes 5



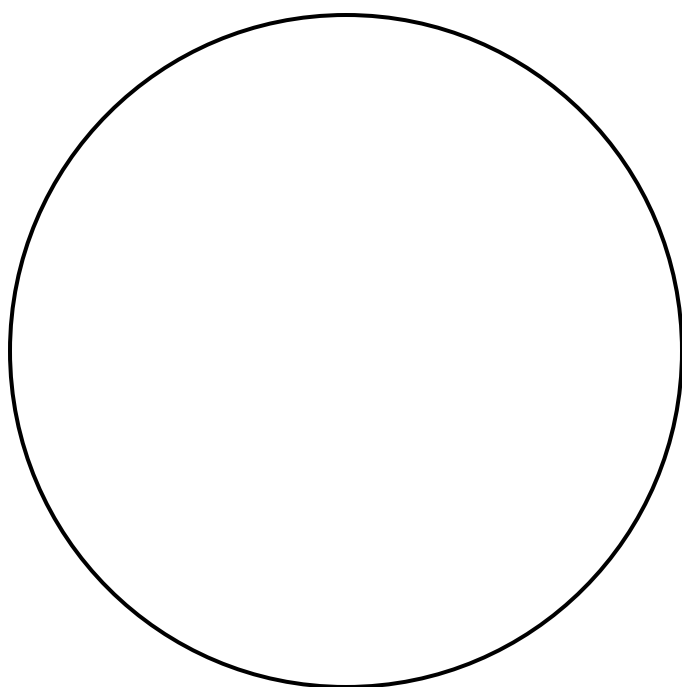
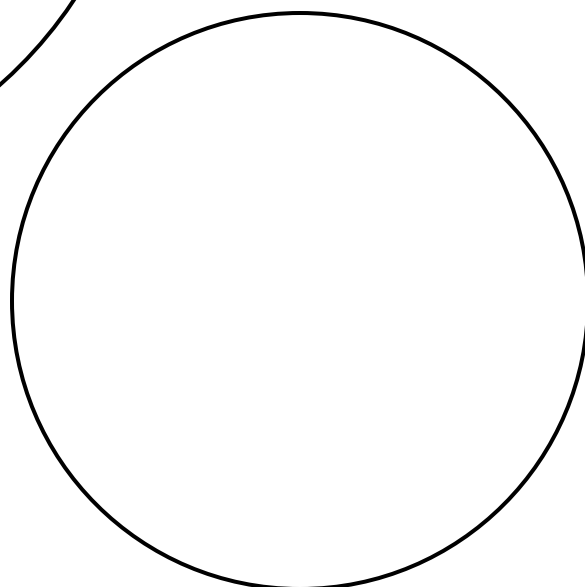
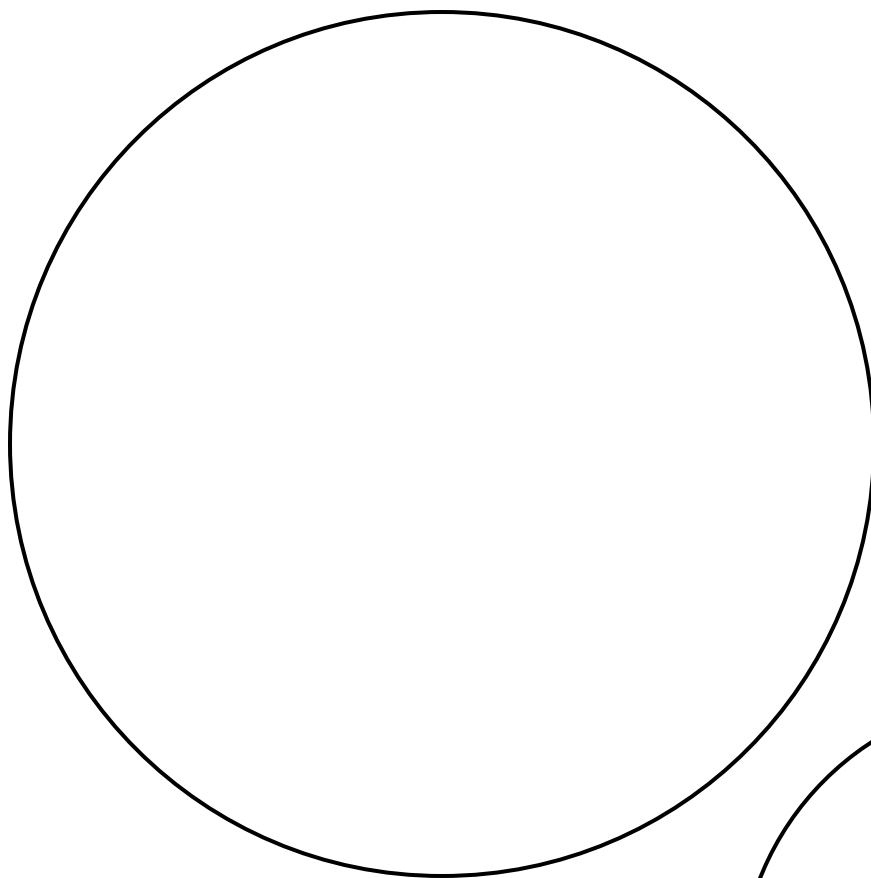
Taste Names

sweet

sour

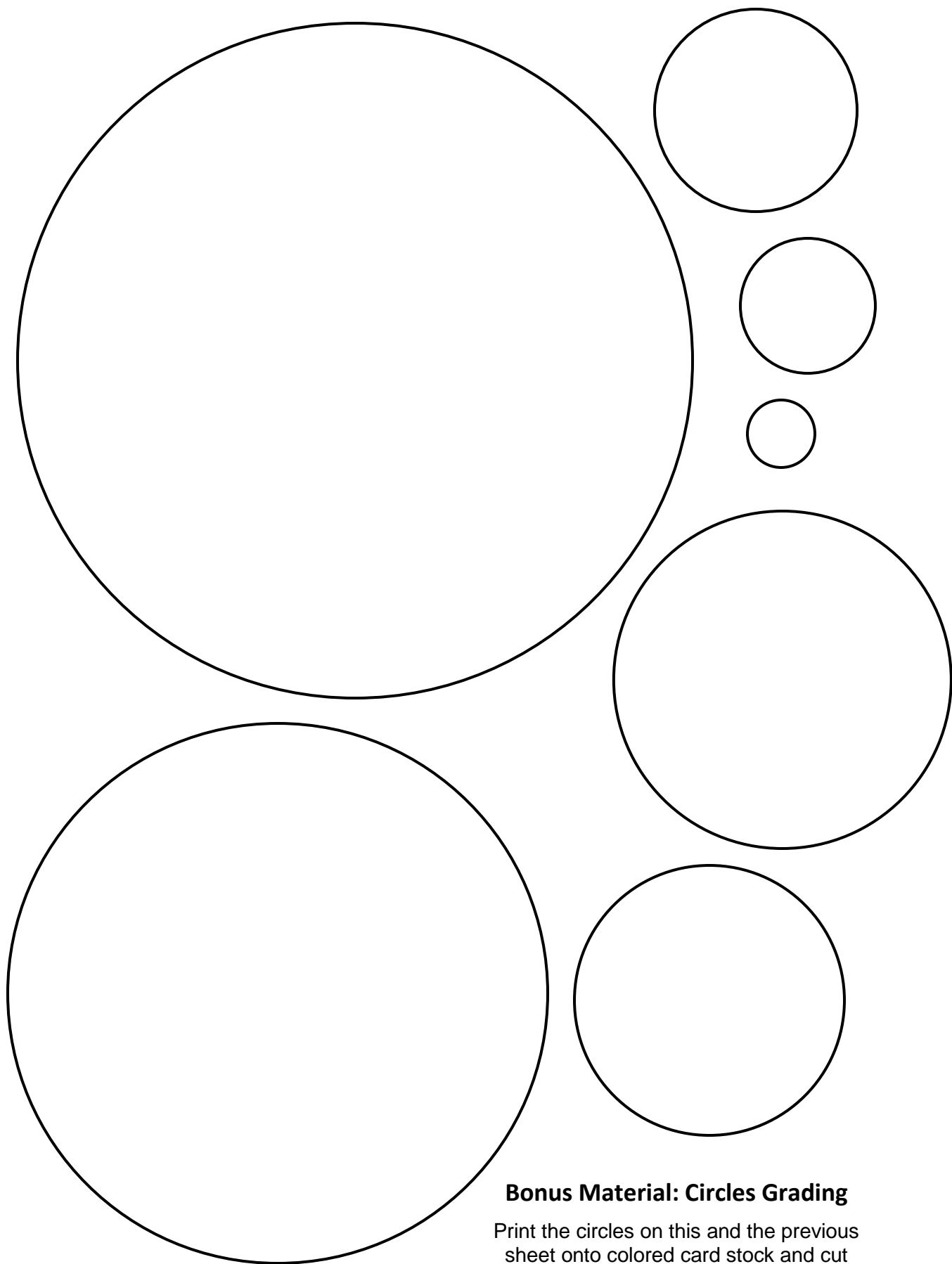
salty

bitter



Bonus Material: Circles Grading

Print the circles on this and the next sheet onto colored card stock and cut out carefully. Your child can grade them by size and make all kinds of constructions.



Bonus Material: Circles Grading

Print the circles on this and the previous sheet onto colored card stock and cut out carefully. Your child can grade them by size and make all kinds of constructions.

fish

crustaceans

mammals

birds

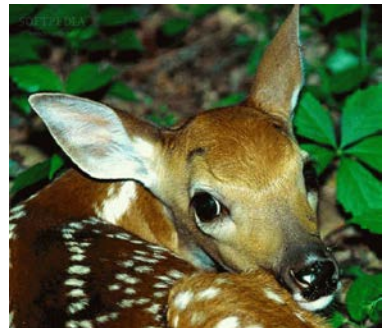
insects

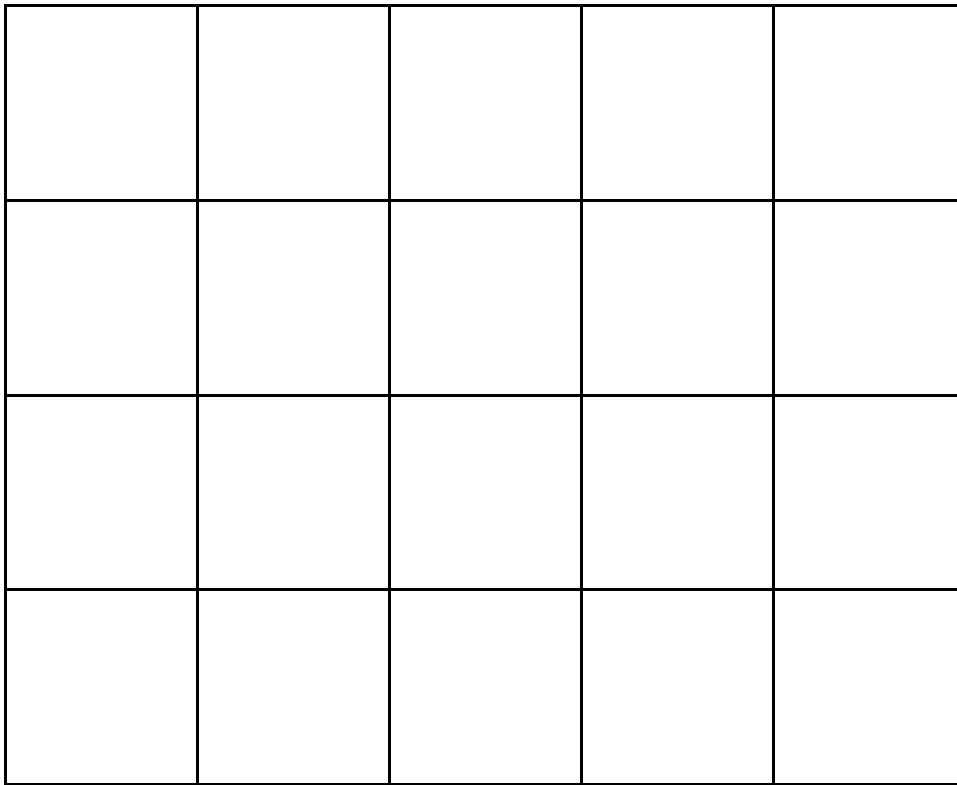
reptiles

Animal Sorting Cards

Use with the images on the next two sheets for a sorting activity

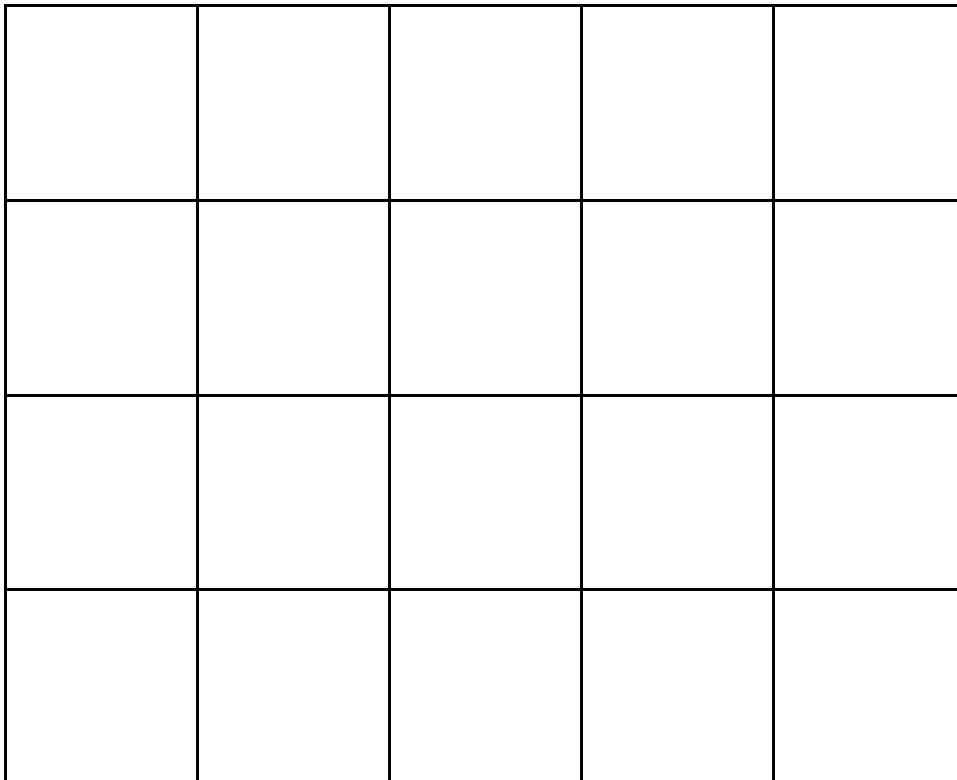






Small Grids Board Cutouts

Print on colored card stock and use these when teaching your child amounts from 0-20. Lay out pennies or beans in the squares. These prepare your child for the Hundred Board and introduce organized patterns of arranging objects.



0	1	2	3
4	5	6	7
8	9	10	

0-10 Numeral Cards

1 0	1
1 0	2
1 0	3
1 0	4
1 0	5

10-15 Numeral Cards

1 0	6
1 0	7
1 0	8
1 0	9
2 0	

16-20 Numeral Cards

20	1
20	2
20	3
20	4
20	5

21-25 Numeral Cards

20	6
20	7
20	8
20	9
30	

26-30 Numeral Cards

30	40
30	40
30	40
30	40
30	40

30 & 40 Numeral Cards

Use with the 1-9 cards from the 20's set

50	60
50	60
50	60
50	60
50	60

50 & 60 Numeral Cards

Use with the 1-9 cards from the 20's set

70	80
70	80
70	80
70	80
70	80

70 & 80 Numeral Cards

Use with the 1-9 cards from the 20's set

9 0

9 0

9 0

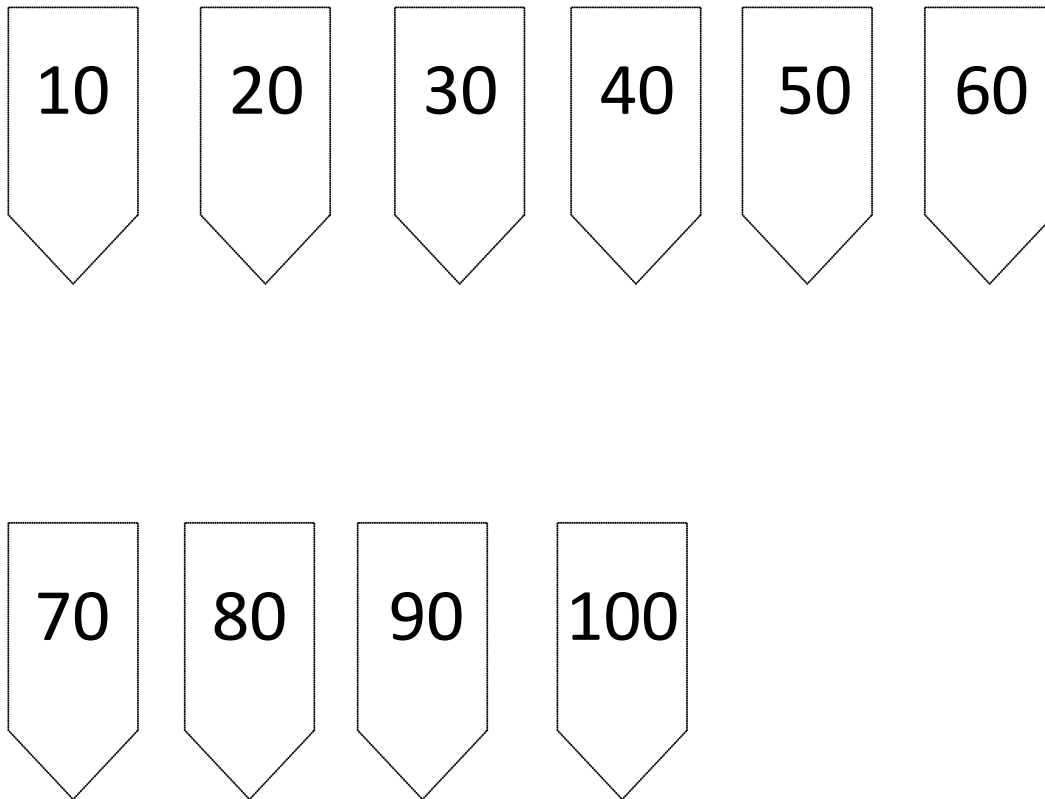
9 0

9 0

100

90 & 100 Numeral Cards

Use with the 1-9 cards from the 20's set



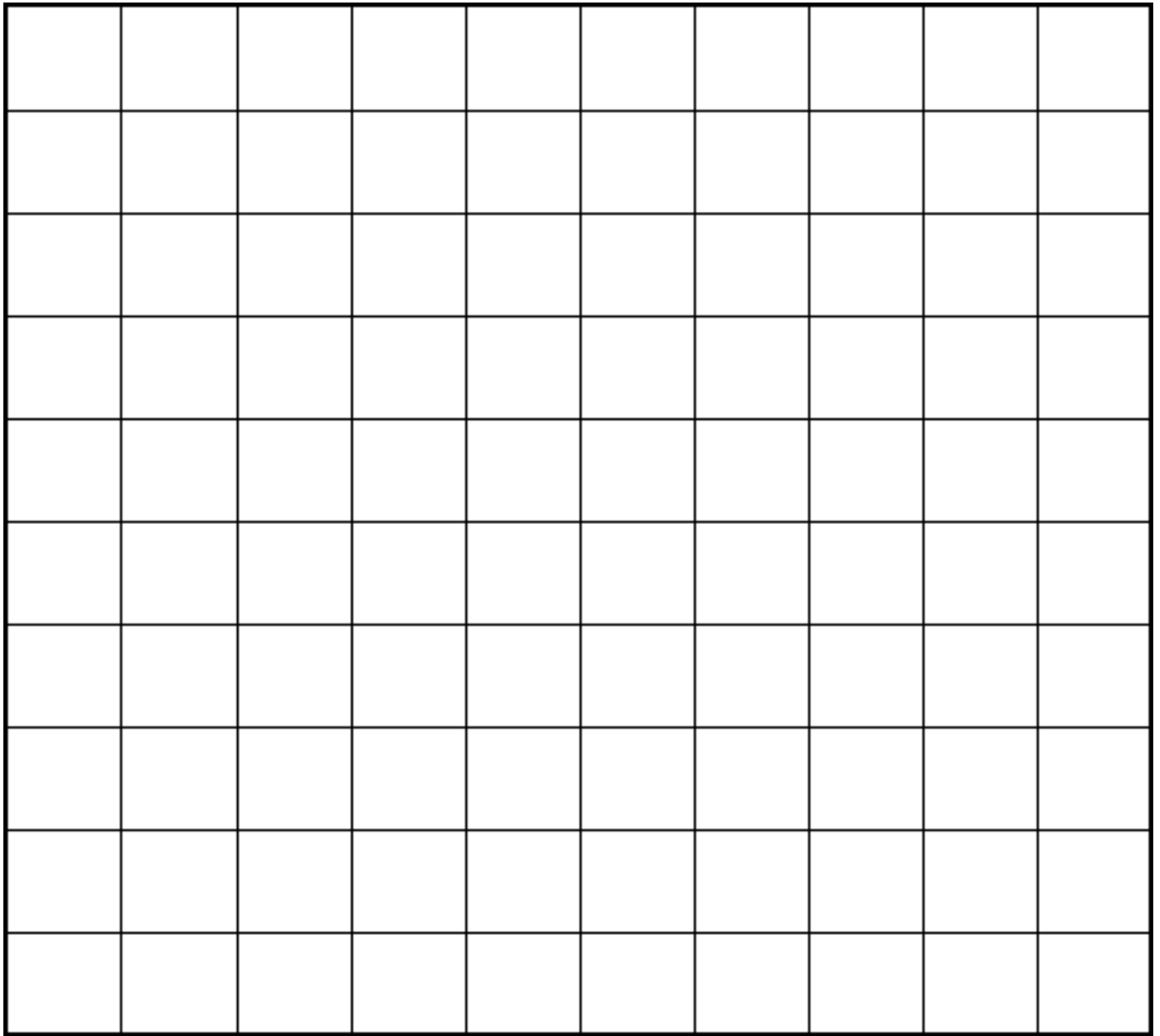
Golden Bead 100 Chain Pointer Cutouts

Cut these pointer cards out carefully on the dotted lines.

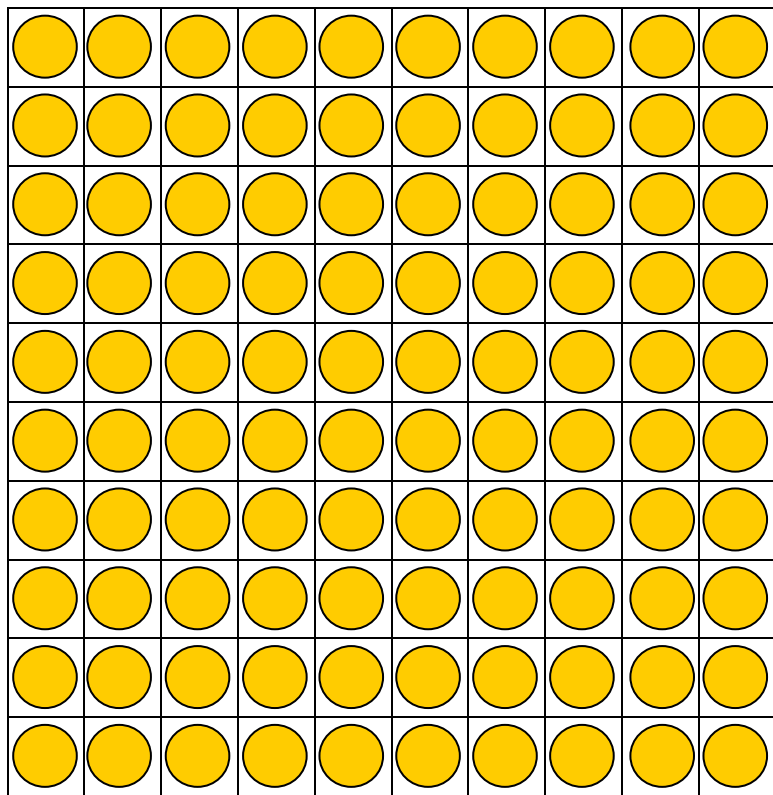
Keep these for use with your Montessori Bead Bars and 100 Golden Bead Chain.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Hundred Board Numerals

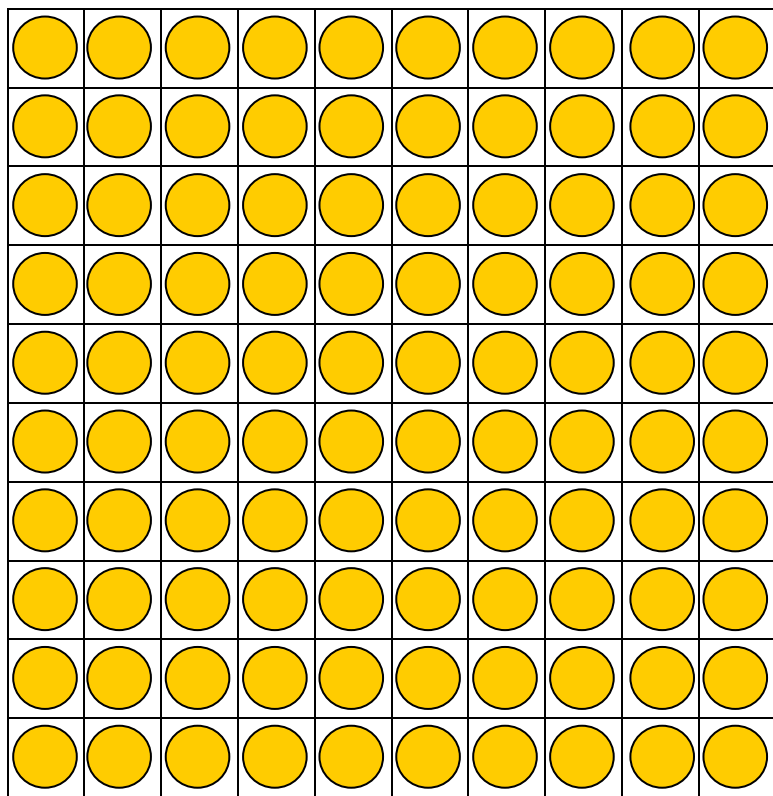


Blank Hundred Board



Hundred Squares

Print as many of these as you need on heavy card stock and cut them out to visually represent 100 in activities for learning amounts above 100 and the Decimal System.



101	102	103	104	105	106	107	108	109	110
110	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

101-200 numerals

1 0 0

2 0 0

3 0 0

4 0 0

5 0 0

6 0 0

7 0 0

8 0 0

9 0 0

1 0

2 0

3 0

4 0

5 0

6 0

7 0

8 0

9 0

9

1

2

3

4

5

6

7

8

1 0 0 0

2000

3 0 0 0

4 0 0 0

5 0 0 0

6 0 0 0

7 0 0 0

8 0 0 0

9 0 0 0

$0 + 0 =$	$1 + 0 =$
$0 + 1 =$	$1 + 1 =$
$0 + 2 =$	$1 + 2 =$
$0 + 3 =$	$1 + 3 =$
$0 + 4 =$	$1 + 4 =$
$0 + 5 =$	$1 + 5 =$
$0 + 6 =$	$1 + 6 =$
$0 + 7 =$	$1 + 7 =$
$0 + 8 =$	$1 + 8 =$
$0 + 9 =$	$1 + 9 =$
$0 + 10 =$	$1 + 10 =$

Addition Tables

Use the tables on pages 501 - 506 for early experiences with addition. These tables illustrate the relationships between numbers as your child completes them.

$2 + 0 =$	$3 + 0 =$
$2 + 1 =$	$3 + 1 =$
$2 + 2 =$	$3 + 2 =$
$2 + 3 =$	$3 + 3 =$
$2 + 4 =$	$3 + 4 =$
$2 + 5 =$	$3 + 5 =$
$2 + 6 =$	$3 + 6 =$
$2 + 7 =$	$3 + 7 =$
$2 + 8 =$	$3 + 8 =$
$2 + 9 =$	$3 + 9 =$
$2 + 10 =$	$3 + 10 =$

$4 + 0 =$	$5 + 0 =$
$4 + 1 =$	$5 + 1 =$
$4 + 2 =$	$5 + 2 =$
$4 + 3 =$	$5 + 3 =$
$4 + 4 =$	$5 + 4 =$
$4 + 5 =$	$5 + 5 =$
$4 + 6 =$	$5 + 6 =$
$4 + 7 =$	$5 + 7 =$
$4 + 8 =$	$5 + 8 =$
$4 + 9 =$	$5 + 9 =$
$4 + 10 =$	$5 + 10 =$

$6 + 0 =$	$7 + 0 =$
$6 + 1 =$	$7 + 1 =$
$6 + 2 =$	$7 + 2 =$
$6 + 3 =$	$7 + 3 =$
$6 + 4 =$	$7 + 4 =$
$6 + 5 =$	$7 + 5 =$
$6 + 6 =$	$7 + 6 =$
$6 + 7 =$	$7 + 7 =$
$6 + 8 =$	$7 + 8 =$
$6 + 9 =$	$7 + 9 =$
$6 + 10 =$	$7 + 10 =$

$8 + 0 =$	$9 + 0 =$
$8 + 1 =$	$9 + 1 =$
$8 + 2 =$	$9 + 2 =$
$8 + 3 =$	$9 + 3 =$
$8 + 4 =$	$9 + 4 =$
$8 + 5 =$	$9 + 5 =$
$8 + 6 =$	$9 + 6 =$
$8 + 7 =$	$9 + 7 =$
$8 + 8 =$	$9 + 8 =$
$8 + 9 =$	$9 + 9 =$
$8 + 10 =$	$9 + 10 =$

$10 + 0 =$

$10 + 1 =$

$10 + 2 =$

$10 + 3 =$

$10 + 4 =$

$10 + 5 =$

$10 + 6 =$

$10 + 7 =$

$10 + 8 =$

$10 + 9 =$

$10 + 10 =$

$0 \times 0 =$	$1 \times 0 =$
$0 \times 1 =$	$1 \times 1 =$
$0 \times 2 =$	$1 \times 2 =$
$0 \times 3 =$	$1 \times 3 =$
$0 \times 4 =$	$1 \times 4 =$
$0 \times 5 =$	$1 \times 5 =$
$0 \times 6 =$	$1 \times 6 =$
$0 \times 7 =$	$1 \times 7 =$
$0 \times 8 =$	$1 \times 8 =$
$0 \times 9 =$	$1 \times 9 =$
$0 \times 10 =$	$1 \times 10 =$

Multiplication Tables

Use the tables on pages 507 - 512 for early experiences with multiplication. These tables illustrate the relationships between numbers as your child completes them. They can also be used to memorize the multiplication tables.

$2 \times 0 =$	$3 \times 0 =$
$2 \times 1 =$	$3 \times 1 =$
$2 \times 2 =$	$3 \times 2 =$
$2 \times 3 =$	$3 \times 3 =$
$2 \times 4 =$	$3 \times 4 =$
$2 \times 5 =$	$3 \times 5 =$
$2 \times 6 =$	$3 \times 6 =$
$2 \times 7 =$	$3 \times 7 =$
$2 \times 8 =$	$3 \times 8 =$
$2 \times 9 =$	$3 \times 9 =$
$2 \times 10 =$	$3 \times 10 =$

$4 \times 0 =$	$5 \times 0 =$
$4 \times 1 =$	$5 \times 1 =$
$4 \times 2 =$	$5 \times 2 =$
$4 \times 3 =$	$5 \times 3 =$
$4 \times 4 =$	$5 \times 4 =$
$4 \times 5 =$	$5 \times 5 =$
$4 \times 6 =$	$5 \times 6 =$
$4 \times 7 =$	$5 \times 7 =$
$4 \times 8 =$	$5 \times 8 =$
$4 \times 9 =$	$5 \times 9 =$
$4 \times 10 =$	$5 \times 10 =$

$6 \times 0 =$	$7 \times 0 =$
$6 \times 1 =$	$7 \times 1 =$
$6 \times 2 =$	$7 \times 2 =$
$6 \times 3 =$	$7 \times 3 =$
$6 \times 4 =$	$7 \times 4 =$
$6 \times 5 =$	$7 \times 5 =$
$6 \times 6 =$	$7 \times 6 =$
$6 \times 7 =$	$7 \times 7 =$
$6 \times 8 =$	$7 \times 8 =$
$6 \times 9 =$	$7 \times 9 =$
$6 \times 10 =$	$7 \times 10 =$

$8 \times 0 =$	$9 \times 0 =$
$8 \times 1 =$	$9 \times 1 =$
$8 \times 2 =$	$9 \times 2 =$
$8 \times 3 =$	$9 \times 3 =$
$8 \times 4 =$	$9 \times 4 =$
$8 \times 5 =$	$9 \times 5 =$
$8 \times 6 =$	$9 \times 6 =$
$8 \times 7 =$	$9 \times 7 =$
$8 \times 8 =$	$9 \times 8 =$
$8 \times 9 =$	$9 \times 9 =$
$8 \times 10 =$	$9 \times 10 =$

$$10 \times 0 =$$

$$10 \times 1 =$$

$$10 \times 2 =$$

$$10 \times 3 =$$

$$10 \times 4 =$$

$$10 \times 5 =$$

$$10 \times 6 =$$

$$10 \times 7 =$$

$$10 \times 8 =$$

$$10 \times 9 =$$

$$10 \times 10 =$$

Practical Life Sensorial Geography Music

Language Math Art Science

Mom Bloggers Talk Montessori: Favorite Ideas and Activities

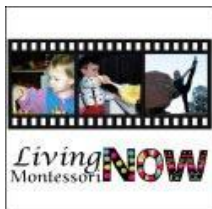
Independence Freedom of Choice Work Love

Repetition **Respect** Pink Tower

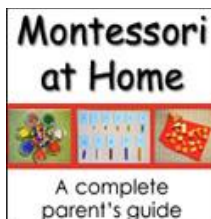
Communication Fabric Match Sandpaper Letters

Geometric Solids **Blog** Constructive Triangles

An Ebook from Deb Chitwood & John Bowman



Deb Chitwood offers inspiration and information for parents and teachers on her blog: [Living Montessori Now](#)



*John Bowman's Ebook, **Montessori At Home!** Is a complete guide to doing Montessori early learning activities at home. Available at: [montessoriathomebook.com](#)*

Mom Bloggers Talk Montessori: Favorite Activities & Ideas

An Ebook from Deb Chitwood & John Bowman

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Deb Chitwood at: debchitwood@livingmontessorinow.com , **or**

John Bowman at: jbowmanbooks@gmail.com

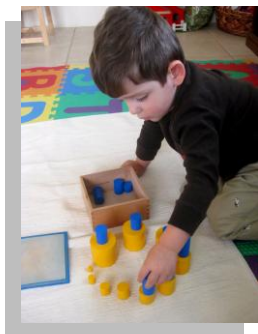
Table of Contents

Blogger & Activities	Page	Practical Life	Sensorial	Cultural & Science	Language	Math
Martianne	6					
Montessori Activity Bags	7	•	•	•	•	•
Car wash!	8	•	•			
Jen	9					
Dinosaur Egg Weighing	9	•	•	•	•	•
Liquids	10	•	•	•	•	•
State Study	10	•		•	•	
Jessie	11					
Blend Sorting	11				•	
Middle Vowels	12				•	
Practical Life for Fall	13	•	•			
Addition Strip Board	13					•
Coedith	14					
Christmas Tree Work	14	•	•	•		
Tea Time	15	•	•	•		
Stephanie	16					
Getting Outside	16	•	•	•	•	•
Stamp Game	18					•
Washing Clothes by Hand	19	•	•			
Rachael	19					
Button Chicken	20	•	•	•		
Colors	20		•			
Wooden Dowel Toy	21	•	•			
Amanda	22					
Rolling	22	•				
Sponging	23	•				
Jen	24					
DIY Math Project	24					•
Pattern Strips	26	•	•			•
Creating Shapes	27		•			•
Ashley	28					
Grinding, Baking, & more	28	•	•		•	

Blogger & Activities	Page	Practical Life	Sensorial	Cultural & Science	Language	Math
Domino Math	29					•
Top 3 Montessori Principles You Can Use With Your Preschooler p. 30						
Nataša	32					
Sink / Float	32	•		•	•	
Aggregate States of Water	33	•		•	•	
Carolyn	34					
Insects	34			•	•	
Skeleton	35			•	•	
Specimens from the Sea	36			•	•	
Ms Shelley	37					
Fabric Box	37		•			
100 Board	39					•
Heidi	42					
Writing Names	42				•	
Multiplication, Elementary Math	43					•
Lisa	44					
Elephant Math	44					•
Word Family Fun	45				•	
Shelly	46					
Open & Close	46	•				
Self-Serve Snacks	47	•				
Defining a Workspace	48	•				
Share	49					
Thankful Cards	49	•	•		•	
Thankful Leaves	50	•	•		•	
Anupama	51					
The Dwyer Approach	51				•	
Allison	53					
Please Touch Table	53		•	•		
Shoe Polishing	54	•				
Jessica	55					
Lacing Cards	55	•	•			
Matching Numbers	56					•
Pouring for Toddlers	58	•	•			
Family & co	59					
Pink Series	59				•	

Conclusion & Resource Links p. 61-62

Welcome!



Counting Coconuts

Mom Bloggers not only do early learning at home; they blog about it so everyone can benefit. That makes them special. We thought it would be nice to hear from Mom Bloggers who focus on Montessori activities and principles. We wanted to get their thoughts on Montessori and hear about activities they have enjoyed doing and blogging about. We thought you might, too. So, here is a compilation of contributions from Montessori Mom Bloggers around the globe. We hope you have as much fun reading it as we did putting it together!

P.S. You will see a few Montessori Teachers here also. We call them 'Moms to Many'. In this way we recognize their vital role as caregivers and include their contributions!

What Does Montessori Mean to You?



Photo: Julie Smithey

Since Maria Montessori developed her revolutionary approach to helping children develop more of their potential, the word Montessori has come to mean many things.

Teachers taking Montessori training learn to bring the brilliant work of a visionary woman to life in Prepared Environments that children love today as much as they did in the early 1900s.

Children who attend a Montessori school find a fun place where they can do all kinds of things of their own choosing and learn to make their way in this world while getting along with others.

To Mothers doing Montessori at home, it is activities they put together, fun times with their kids, learning and growing along with their children, and feeling pride and joy when their little ones make progress. Mom Bloggers bring these experiences to life and encourage more parents to have their own. To all of you we say, "Thank You"!

Deb

John Boman



Martianne

Martianne Stanger is a traditional educator turned Montessori-inspired homeschooler of three young children, one with special needs. She blogs about homeschooling, faith, parenting and similar topics at:

traininghappyhearts.blogspot.com

“As a long-time educator both in the US and abroad, I have always been interested in Montessori. It was not until my eldest son was a toddler, however, that I began to really dive into learning more about the method than I had come across through teacher training and casual contact.

At a very young age, my son demonstrated behaviors that made my husband and I feel that he would not do well in traditional school. His personality seemed well-suited for a Montessori environment. Due to location and financial constraints, sending him to a Montessori school was not an option, so we decided we would do our best to provide a Montessori-inspired education at home. Since then, I have read numerous books and blogs and have also participated in Karen Tyler's wonderful online class.



If you're anything like me, when you first began thinking about making your home more Montessori, you began to collect books, ideas and Montessori albums which are filled with activities, materials and suggestions about the environment. While all these can be very helpful, they can also be overwhelming. If, like me, you are easily distracted, get hyper-focused, or seek perfection even in the often imperfect, sometimes chaotic world of home keeping, homeschooling and, perhaps, working part time, then **the vision of what your Montessori home *should* look like might waylay it ever becoming a reality.** Truly, when I was just starting out, I let myself get "stuck" for a while, wanting to read more, learn more, understand more, get more materials, make more materials, get my home more in order... Are you seeing a trend here? **I was seeking perfection and more, more, more** ("missing" making the most of some of my children's sensitive periods) **instead of distilling all the "stuff" down to the philosophy and just beginning with what we had.**

So, in a nutshell, my suggestion for parents just starting to do Montessori activities at home is to **be less concerned about introducing the most ideal materials in the most ideal way in the most ideal environment and instead, begin with what is real.** As Maria Montessori did,

OBSERVE your children in their environment, note their needs and attend to them in ways that you can with what you have. Concentrate on the philosophy over the materials. Follow your children and the real observations you make of them.”

Montessori Inspired Activity Bags

From Martiane's post: [Montessori In a Bag](#)

“Some time ago, I got excited by a post on one of the yahoo groups I belong to which proposed an Activity Bag exchange based on the ideas at ActivityBags.com. I quickly responded, knowing that the exchange would motivate me to get going on fall planning for more formal pre-homeschooling with the kids. Within days, I was paired up with an energetic homeschooling mom of toddler twins. Together, we decided to begin our trade by making 24 bags each – a dozen to keep and a dozen to share.”

Curriculum Area(s): Practical Life, Sensorial, Language and Mathematics

Materials: plastic zipper bags, various inexpensive and recycled items

“I opted to limit my materials for use in the bags to mostly things I already had around the house that could be repurposed. These parameters, along with a wish to pay attention to some descriptors the mom I was paired with used to introduce her children, set me on my way.”



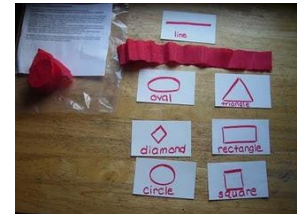
Tweezing Pom Poms



Sound Canisters



Yoga Cards



Walking The Line



Fabrics



Color Grading



Color Matching



Color Clips



Color Lacing



Sorting Buttons



Animal Numbers



Sorting Shapes

Car Wash

From Martiane's post titled: [Practical Life: Car Wash!](#)

Materials:

- a large cloth or blanket
- vinegar-solution spray bottles
- a roll of paper towels
- a vacuum and extension cord
- a dustbuster
- a hose
- a bucket
- dish detergent
- small cloths and towels

and, of course, one very dirty car!



The car cleaning equivalent of creating a work space?



Wax on, wax off.....



Great Concentration!



Independence gets an assist!

Aims:

eye-hand coordination, concentration, control, proprioceptive experience (lots of bending, stretching and crawling), tactile experience (rugs texture, wall texture, suds, eater, etc.), responsibility, family work time, care of environment, ability to clear a space, ability to spray clean, ability to vacuum, ability to wash the exterior of a vehicle.

**Super, fun activities; and a great way to get this book started!
Your comments on doing Montessori at home are fabulous, too.**

Thanks, Martianne!



Jen

***Jen Altman** is a Homeschooling Mom from Hawaii with a Master's in Early Childhood Education. She blogs about homeschooling (among other things) at:*

chestnutgroveacademy.blogspot.com

“The best way to implement Montessori principles into everyday life is to **give children a sense of independence**, let them help you in the kitchen, set the table, pour their own juice, get their own snacks, put things in their reach for easy access (like plates, cups, snacks, etc...), have them help you around the house, hanging laundry, putting clothes in to the wash or dryer, emptying the dishwasher, washing dishes, getting themselves dressed. **Encourage them in their everyday activities.** It's not always easy; it takes a lot of patience on the parent's part, and extra time. But it **builds their confidence** in the process!”

Dinosaur Egg Weighing



Comparing weight with Dinosaur Eggs (or any type of egg you want)

Items needed:

- Balance scale
- Several eggs filled with items of varying weights



“First, we talked about a balance scale, what it is and what it is used for. Then I chose two eggs that were distinctly different in weight, handed them to C, and had him tell me which one was heavier. Then we placed them on the balance scale to check his guess. We continued doing this until he was done with it.”

Author's Note: A perfect example of how great activities are usually a combination of experiences – Practical Life, Sensorial, Math. The more elements included while a child's attention is focused, the more effective the activity! Each of Jen's activities here takes this approach, a great way to make the best use of precious homeschooling time. *John*

Liquids

See Jen's post on this super cool activity at: [Math Monday – Liquids](#).



“Our math activity was measuring! We had a recipe that was 2 cups yellow water and 2 cups blue water. We had a 1 cup measuring cup, so we discussed how many times we had to fill it up with each color to get 2 cups. Then we mixed the recipe to get GREEN water. Then I brought out the pint container, and we counted to see how many cups made a pint, and how many pints made a half gallon. We also talked about empty, full, and half-full.”

State Study

Jen's post on this Geography and Culture activity is at: [State Study - Hawaii](#)

“We are studying the 50 States this year. I decided to tackle our state first, and since our state was #50 to gain statehood, we will be going in backwards order of statehood! As part of our state study we are participating in a postcard exchange!”

**** Check out the great links Jen included in this post!**



Nomenclature Cards



Family Album review



On the map



Jessie

***Jessie Beerman** is the mother of three primary-aged daughters and a Montessori Teacher. She blogs about having a Montessori home, preparing a home classroom for her children, and educational activities at:*

The Education of Ours.

“I found Montessori as an undergrad, while studying traditional education. The philosophy made so much sense to me; I had found my little niche in life. After college, I found a job teaching at a Montessori School while attending American Montessori Society training. Shortly after training, I went on to get my Master of Education for Early Childhood Education. My thesis was about keeping the home environment consistent with Montessori School. How's that for foreshadowing? As a Mother, Montessori Philosophy worked well with our values and wishes for our children. While I work part time at a lovely Montessori School; I home school/after school my own children with the Montessori Method.

I feel that the best way to begin incorporating Montessori in the home is through **observation**. Each child and each family is different, so **by following your own child your Montessori home will be unique**. If you see your baby trying to pull up, prepare the child's environment so that it is secure and interesting for pulling up. If your toddler is dumping out her cereal at breakfast, give her pouring work. If your preschooler loves animals, bring in some science work. Think about **independence and warmth**. Take it one day at a time, **parents are learning, too!**”

Blend Sorting

Read about this activity in Jessie's post: [Blending It All Together](#)



Practical Life for Fall

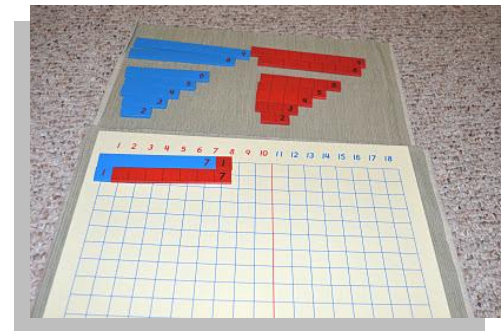
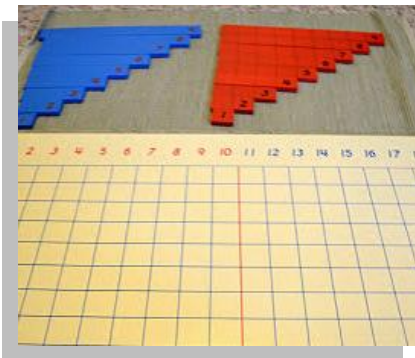
Jessie's post is at: [Fall Themed Practical Life](#)

"It's nearly October in New England, and we are just now seeing a few signs of Autumn. My girls are very excited about the changing seasons, so we just updated our Practical Life-Physical Skills work with some objects from a craft store. These items were 75% off the day after Thanksgiving last year, total cost for the update was \$2.05. Today they were busy and independent for the entire work period. Every year, everything old is new again! I also used these items to create our Fall Sets Basket for counting, sorting, and numeration."



Addition Strip Board

See this post at: [Cumulative Property with the Addition Strip Board](#)



*"Left: The Addition Strip Board Set Up. This time, she let her little sisters set it up for her. "Once you know all your numerals, you can do this work! Okay?" They were happy to be involved. I showed her an example of Commutative Property, $1+3=4$ AND $3+1=4$ **Look at that! What a discovery** ;) She tries another..... $4+2$ AND $2+4=6$ "Wait until my teacher finds out this secret, she's going to be surprised." She's so entertaining! Now she explores the idea. She made all of the Commutative Property equations. When I presented it, I showed it to her as a 'trick'....now she has this knowledge for future math work."*



Coedith

Coedith Mess is a home schooling Mama. She blogs about living with children at:

[School In A Pink House](#)

“I worked as an assistant in an AMI Montessori school before having children. My children later attended this school and again I found myself in the classroom. I have experience in both primary and toddler classrooms.

My suggestion to any one just starting to incorporate Montessori into their home is to **spend time observing your child and their environment. Look at everything from their point of view** (I have been known to crawl to do this). Now ask yourself how you can guide them to as much independence as possible in your home. **Helping them "do it myself" is more important than any materials you may want to rush out and buy.**”

Christmas Tree Work



Coedith's post is titled: [Christmas Tree Work](#)

“Remember Montessori encourages using the real thing (i.e., real tools not toys) Christmas trees are no exception. Playdough, felt, and foam trees can be a fun craft but it definitely isn't the real thing. We keep a small basket of sturdy ornaments near our tree. The way I look at it, it is 'work' to take the ornaments on and off the tree. This work needs no encouragement as it happens naturally

any time you have a toddler and a Christmas tree. Saying "no" gets old and putting everything out of reach seems cruel. Create a safe place and say "yes!"”

Tea Time

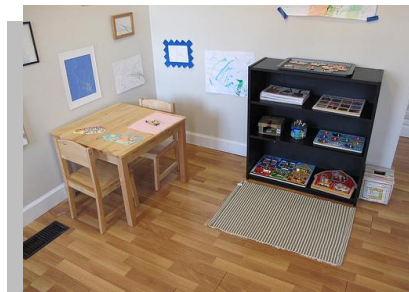


"This is a shelf that rotates cooking activities for the girls. It is currently set up for preparing tea. Tea parties are multifaceted. It begins by choosing a menu, we may bake or simply put goldfish crackers in a pretty bowl. The table must be set, which might require ironing. It should be pretty, if flowers are in the yard they can be picked and arranged. The water is heated in an electric kettle that I chose because I can adjust the heat of the water. Once the water is hot a child can pour it into the pot. I also need to pick up sugar cubes and limit the amount used. Grace cannot help herself from eating all the sugar in the bowl!"



See this post at: [Tea Time](#)

How to Start Using Montessori at Home



Deb Chitwood writes:

It seems overwhelming, I know. There are so many amazing Montessori activities and resources online, books to buy, and materials to make and buy. So, what should you do first?

I am sometimes amazed at how many resources are available on my site alone – and I link to TONS more. It becomes difficult to find them all among the many blog posts after awhile. So, here, I'll try to put an order to some of the posts I think are most helpful if you're trying to get started using Montessori at home for a child from birth-6.

Read & save this post at: [Living Montessori Now](#)



Stephanie

Stephanie Stasa is a Mom of two and a big Montessori enthusiast. She blogs about Montessori ideas and all the other little things at:

Discovery Days and Montessori Moments

“I was looking into schooling options for my kids and being homeschooled I knew that I wanted something different than the typical public school education. When someone mentioned Montessori to me I looked it up. It sounded good, so I called our local school and took the kids (and my hubbie) on a visit! It was amazing! I knew in that moment that we had found what I was looking for! My girls were so attracted to it and wanted to get to work in the room! One of the teachers in the room we visited even let them try a few things! I was all set to send them there, until I saw tuition. We just couldn't afford it. So I did the next best thing....**read like crazy and learned everything I could!** Shortly after that I found all the amazing Montessori bloggers out there who were able to help me find the answers I needed! The rest is history! We are loving our Montessori time and **I love being able to watch their faces light up with the joy of discoveries they have made!** It's the best part of Montessori!

Getting Outside

Read about this at Stephanie's post: **Outside Prepared Environment!!!** Let's do a 'Pinterest' kind of thing and let Stephanie's photos speak for themselves.





Name: Outside Learning Environment

Curriculum Areas: Practical Life, Sensorial, Language, Mathematics, and Cultural! :)

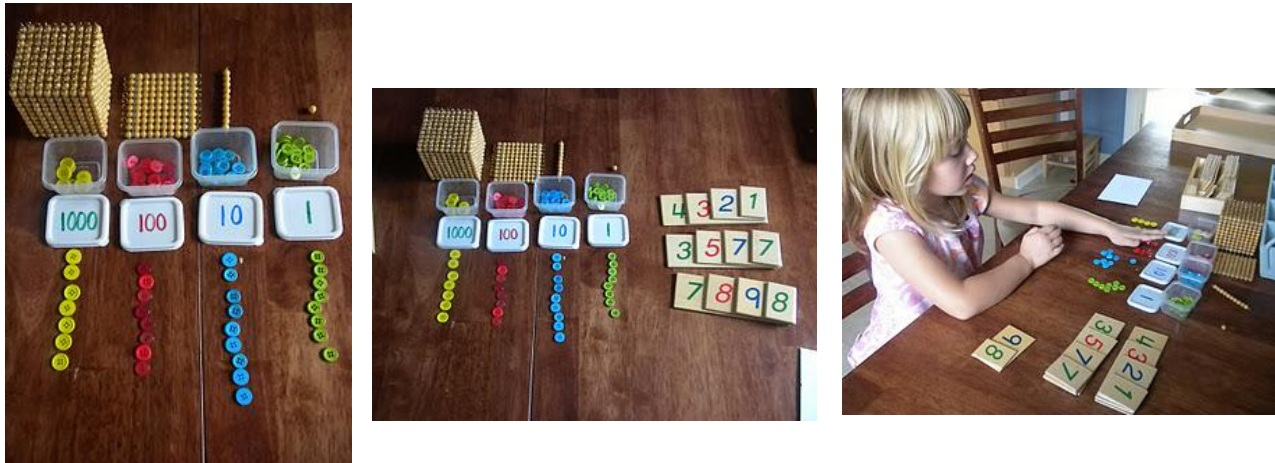
Materials:

- ~ Small Gardening station, table, picnic bench or shelf. (DIY Hint: cut the legs down on an outdoor table or garden shelf to make it the right height)
- ~ Plastic tote that is water resistant
- ~ Plastic school boxes
- ~ Montessori work (anything you want to do outside)
- ~ Pencils, paper, colored pencils, and sidewalk chalk
- ~ Natural elements (rocks, pinecones, acorns, etc)

*"This is an outdoor work environment that allows the child to **learn while outside!** In many Montessori books there are a great many pictures of Maria Montessori with kids learning outside. I wanted to make a space that would be just for that! All that you need to do is create the environment! At my house we had a garden station that was given to us and we cut down the legs so it was just the right height. Then I took some plastic school boxes and filled them with outside Montessori trays. One had story stones, parts of a leaf and plant, leaf rubbing, wire leaf (bending the leaf shape out of wire), clothes pins, long shoelaces, and material pieces to build tents, pencils and paper, and one with blank books! I then put these into larger water resistant plastic totes to keep out the rain. I also have scrub brushes and their watering cans out there for all manner of practical life work. I have natural objects for exploration and building, sidewalk chalk for scribbling out thoughts; and magnifying glasses for checking out all the stray insects that wander by! As I plan for more time out there, my boxes change with the season. I plan to do washing work in the warm summer, Bug nets and habitats in the spring, Leaf rubbing in the fall, and snowman building material there in the winter. Letter scavenger hunts, math with found objects, painting, and even exercise cards are all ideas that I want to add as I go! **This is our outside school room! The possibilities are endless!**"*

Stamp Game

Stephanie's post on this activity is at: [Montessori Stamp Game – a DIY Version](#)



“A Montessori Stamp Game costs about \$30 plus shipping. I was hoping to hold off on too much more school spending, and it just looked like it was too easy to make. To make it out of wooden tiles was going to cost me as much as buying, so I wanted another way. Then I saw the pile of buttons I had laying around from other Montessori works and I wondered if I could use them. I put each of the colored buttons in small containers with the number on the lid. Bunny really liked it! We built a number together and then she built one. Then we did an addition problem. The other good thing about the Stamp Game is that it takes less material, which means Bunny can move her work upstairs if she needs to. This means we can work even when Tadpole (who eats everything) is here.”

“One thing that I think is essential to doing Montessori at home is to realize that we are with our kids all the time, which means **we don’t need to create every learning moment, sometimes they just happen.** My girls have had the best lessons while we were baking or playing with play dough. If you have materials on hand, then when the moment arrives you can create a project or tray that will allow them to learn what they are experiencing in life! In my basement, I have a shelf that is full of all sorts of odds and ends that one collects as they put together Montessori lessons. I know where most everything is, so I can grab it in a second when it’s needed. **Learning is best when it is spontaneous and comes from the child; not planned out by mom!** So read up and know how to teach, then when that unexpected moment happens, it can be amazingly memorable!”

John: “You are an awesome homeschooling Mom, Stephanie! I love the frugal Montessori approach. You can do a lot with a little and some imagination.”

Washing Clothes By Hand

This fun post is at: [Handwashing Fun!!](#)



"I got out some buckets, some soap, some vintage hankies, clothespins...I'm sure you know where I'm going with this. There was washing, wringing, clipping, and folding. Not to mention the grace and courtesy that needed to be practiced. Bunny loved it so much she wanted to wash some of her real clothes."



Rachael from Little Red Farm

Rachael is a Mother of two. She blogs about applying Montessori principles in the home for under 3's at:

[Little Red Farm](#)

"My advice is to include your children in all the chores and tasks that you need to do around the house rather than worrying that you have to find something to distract them so that you can do it. If you have to hang the washing out let your child clip some pegs to a basket or if you have to peel potatoes let your child wash them for you. There are always ways to be inclusive if you are creative."

Button Chicken



See this oh so neat Practical Life and Arts & Crafts project at:

The Button Chicken

“I stumbled across Montessori by chance 6 months ago when I read a book given to me by a friend (*Montessori from the Start*). I was immediately captivated and found that my personal philosophy on parenting and education seemed to

fit very well with the concepts of Maria Montessori and I had no idea that this type of approach existed (or that it was so popular).”

“I absolutely adore the button chicken and Freddy really enjoys telling me which bit to remove and where to put it back (I'm hoping that soon he will have a go himself). The body has a piece of cardboard in it so it is easy to handle when you add or remove the feathers, foot or wing and the buttons are nice and big for toddler hands. It's a great way for children to practice their buttoning skills and so much cheaper than buying a Montessori dressing frame (and way more fun!).”

Colours



Start with wooden egg cups and eggs



Paint everything



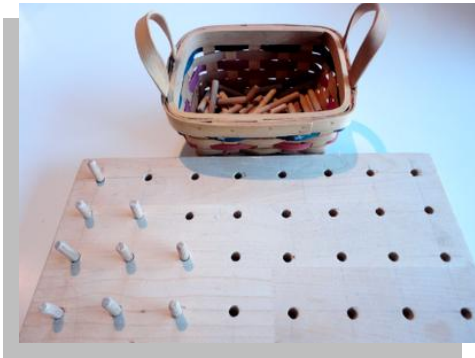
Match them up!

“Here is a little game that I made for Freddy (20 months) who is really into colours at the moment. He is pretty good with the primary colours and a few others in both Swedish and English but if he sees more than a few different colours together at the same time he gets a bit confused. So I decided to make a little colour matching game for him.” I bought a bag of wooden egg cups and eggs from Buttinette in France.

I needed 6 eggs and 6 cups so the spares went into the treasure basket that I am putting together for the new baby. I chose to paint each egg and cup in either red, orange, yellow, green, blue and purple using gloss finish acrylic paint. You can see from the photo that each egg had a small hole in the bottom which meant that I could use a wooden skewer to hold each egg as it was being painted. All of the eggs could then be stood up in a cup to dry. By the way you can see from the photos that I did all the painting in the middle of the night because I just couldn't sleep."

See at: [Learning Colours](#)

Wooden Dowel Toy



See at: [Handmade Wooden Dowel Toy](#)

"Being married to a Swedish man means that we have our fair share of IKEA furniture around the house (it also means that they are assembled in minutes without instructions). It has been clear to us that Freddy (20 months) is currently in the inserting-dowels-into-holes sensitive period and we have several Billy bookcases without their full quota of dowels to testify to this fact.

What to do about this? How to harness it? Introducing the dowel inserting into hole activity! Farfar knocked this activity up in minutes from an off-cut of beech kitchen worktop and a drill just slightly larger than the dowels (which were purchased in a pack of 100). After a gentle sanding with coarse and then fine sandpaper the block was complete and ready to hold lots of the little 6mm wooden dowels.

The activity is completed by adding the lovely little American flag inspired basket from our recently received cultural exchange package from the USA to hold all of the dowels.

At the moment we are using the block in its current form but there are many additional things that could be done to add interest such as:

- *Painting the block in rows or sections and colour coding the dowels to match*
- *Inserting pipe cleaners or thin sticks standing upright in the holes for a lacing or beading activity*
- *Using rubber bands or ribbons to trace out shapes with all of the dowels in place*
- *Using screws instead of dowels (Freddy will love inserting screws with a screwdriver).
An excellent fine motor skills and concentration activity for a toddler!"*



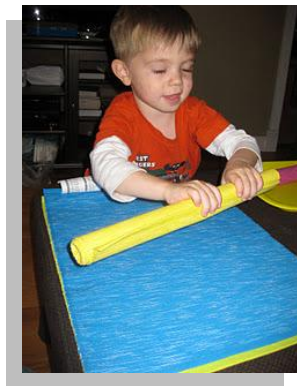
Amanda

Amanda is a stay-at-home mom to two little ones. She writes and shares their reading and learning adventures at:

Nursery Rhymes and Fun Times

"I'm fairly new to Montessori and have been inspired by a lot of the early childhood blogs I read. I've been trying to slowly incorporate Montessori activities into our tot school/preschool. My best advice is to **choose one activity a week and see what your child is interested in**. John's book has been very helpful for me in choosing activities-- the chart of a typical progression of activities has helped me choose activities from different "categories" and decide what activities my children may be ready for."

Rolling



See this post at: [Rolling a Mat](#)

*"This past week we tried a new practical life activity: rolling place mats. I put four colored IKEA placemats on a tray and the goal of this exercise is that Jonathan would learn to gently unroll the placemats and then roll them back up. You can see detailed instructions about this exercise [here](#) at **Info Montessori**.*

Unrolling the mat was fairly easy, but rolling the placemats took a bit more concentration. Jonathan would get overly excited and try to hurry through the exercise, just to find it didn't look correct. So not only did this help him develop fine motor control, but it also helped us learn a little bit more about being patient as well!

*Jonathan really enjoyed this activity and **returned to it several times during the week**. His friend A. (3 years) also was really drawn to the activity. Both children found it **challenging, but not overly so**. I think this will be in our Tot School rotation frequently!"*

Author's Note: It is wonderful to see all the Mom Bloggers with infants and toddlers who are doing Montessori at home. The community keeps growing! *John*

Name of Activity: **Rolling a Mat**

Curriculum Area: **Practical Life**

Materials: **four placemats**

1. Put four rolled placemats onto a tray.
2. Show your child how to gently unroll the placemat and lay the placemat flat.
3. Show your child how to fold the end of the mat over and begin to roll the mat, turning the ends over gently.
4. Repeat motion until mat is fully rolled.
5. Place mat back on the tray.

Purpose: **Preparation for future exercises, Fine Motor Skills, Concentration, Patience**

Sponging

Read about this wonderful activity at: [Montessori Monday: Wringing a Sponge](#)



*During one afternoon while I was attempting to get some cleaning done, I pulled out this activity. I got the idea from the book **Small Beginnings** by Barbara Curtis. I purchased a small two-compartment cat dish and put water in the left side of the dish. I gave Jonathan a sponge and showed him how to use the sponge to soak up the water. Then, we moved the sponge over to the right side of the dish and squeezed our hands to wring the sponge out. To extend the activity and give me some more cleaning time, I had him "wash" his fruits and vegetables."*





Jen

Jen is a Stay at Home Mother who worked professionally with young children for over ten years. She blogs about Montessori activities for toddlers and preschoolers, creating homemade Montessori works, and other fun ideas for young children and families at:

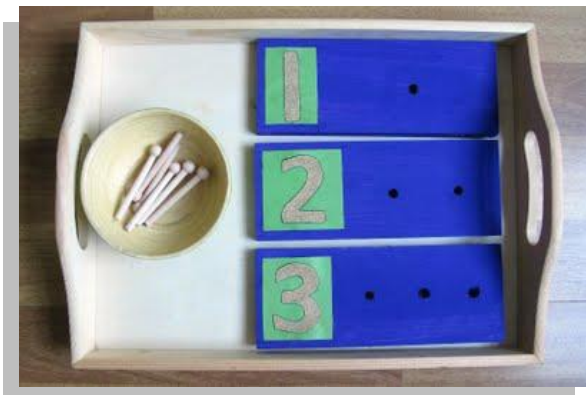
Peaceful Parenting

“Up until a year and a half ago, the only thing I knew about Montessori was a description by a woman I used to nanny for. She told me that Montessori was, “*Where the kids sit on rugs and do work and no one can come into their space unless they're invited*”. I envisioned quiet, sterile, rather depressing rooms that didn't seem to be fun for young children at all and I didn't care to learn anything more about it. Like so many people, I held onto these myths and misconceptions about Montessori for years.

Soon after my son was born, I had a nagging feeling that I needed to investigate Montessori more closely. When he was nine months old I finally used Google to investigate and fell in love with what I was reading. I headed to my library and **started checking out every book they had on Montessori, eager to learn everything I could**. I also **discovered the blogs** of other parents doing Montessori in the home, which boosted my drive and inspiration to begin. I continue to learn from books (especially John Bowman's!), Montessori teachers and all of the wonderful blogging mothers out there! Montessori has been a perfect fit for my son and our family.”

A DIY Math Project

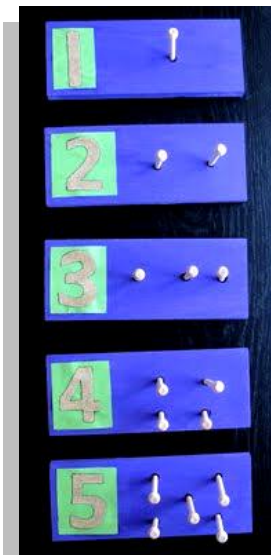
See Jen's post on this fun project at: [DIY Counting Boards with Sandpaper Numerals](#)



*“I've had this idea in my head, and most of the materials in-hand, for a couple months now. I'm not sure why I didn't start on it earlier, but I'm glad that I waited. **Ty is just coming to a really sensitive period with numbers** so this is just in time!*

Several months ago, Ty wanted me to count everything for him, all the way up to the 60's and 70's. He then started touching each object

to count to himself silently, as he didn't have many words and didn't even want to attempt a verbal try with numbers. In the last few weeks however, **Tyler has absolutely exploded with language.** The other day he took my hands and counted each of my fingers up to nine! I had never heard him utter a single number so this was a shock! Now he is counting objects and pictures in counting books up to ten and sometimes higher. He gets several numbers from 10-19 and understands if I say twenty one, twenty "two" and twenty "three" come next etc. and he will say them. He's really starting to show us what he knows with words, which is fun and rather amazing to us. Today he chose between two shirts and decided quickly upon a shirt with numbers on it, staring at the numbers for a long time, thinking. **"Here comes Mama to follow your lead, Ty!"** So, on to the project...



Ta Da !

See post for step-by-step instructions on how to create the boards:

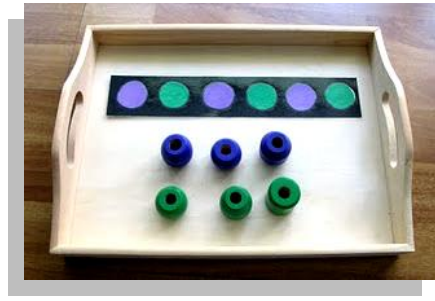
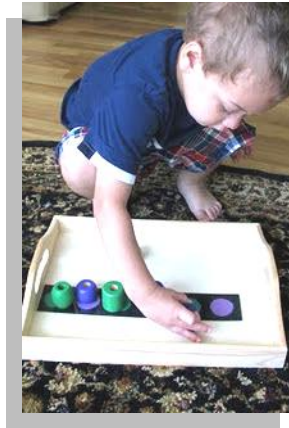
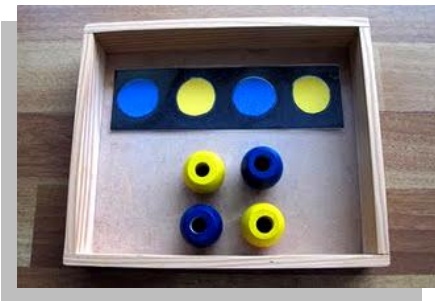
If your child doesn't yet recognize numbers 1-3, you may wish to do a three period lesson (explained in "Montessori at Home") with the numbers before working on quantity awareness with this activity. You can use the sandpaper numbers you made before or after you glue them to the boards.

To demonstrate use of the boards, have board "1" in front of you as well as one peg in a small bowl. Trace the number with your finger while saying "one". Slowly insert the peg into the hole while counting "one", then trace the number again saying "one". Let your child try. You can keep with one board for now or continue on to boards "2" and "3". If you plan to demonstrate all three boards at once, fill the bowl with the exact number of pegs needed (five) before you start. When you feel that your child knows the numbers and is understanding the idea of quantity, you can move on to number 4-6 etc.

“My advice to parents just starting to do Montessori at home would be to **really observe your child in their play and free time to see what sorts of things they like to do and are interested in, then develop many of your activities around that.** This will give you and your child more success with the work and your child will learn with joy! In addition, if a young child is only working on an activity for a couple minutes, try not to get too discouraged. Keep trying and remember that the attention span of young children can be quite short, so this is normal! However if a child is throwing materials, it's usually due to the work being too easy or too challenging. My advice would be to make the work more difficult in some way, try the next step up in that area, or simply put the work away for a few weeks and try again if the child doesn't seem ready.”

Pattern Strips

Check this activity out at: [New on Our Montessori Shelves](#)



Materials:

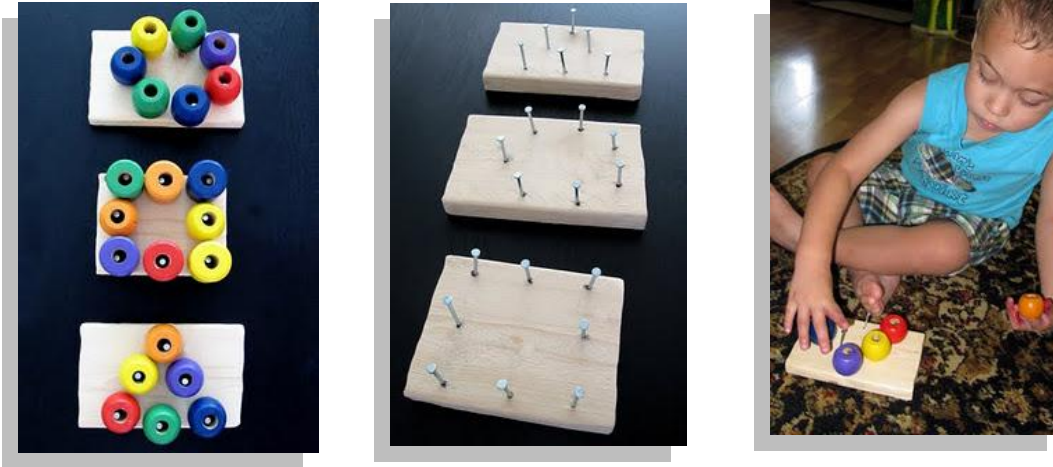
- At least 3 colors of card stock or construction paper, scissors, glue stick
- Melissa & Doug Jumbo Lacing beads, or other objects with solid colors
- Laminator (optional or use cold laminating pocket sheets)

“To create the pattern strips, cut the amount of circles needed for your desired pattern from your colored paper. Next, glue the circles in your pattern onto black or white paper, leaving some space in-between the circles. Laminate if desired.

To demonstrate this work, have a strip and the exact number of beads (or whatever object you've chosen) needed in a small bowl in front of you. Going from left to right, point to the first color, and name it aloud. Then look at your beads and find the correct color to match, again naming the color as you pick it up and place it in the correct place on the strip. Continue this until the pattern is full. Intentionally making a mistake and correcting it can be a very helpful way to help the child learn as well. Next, let your child give it a try!”

Creating Shapes

Another crafty project from Jen at: [Creating Shapes](#)



“I explain how to easily create these shape boards within my post (above). To demonstrate this activity, place one board and a bowl with the exact amount of beads in front of you. Take one bead from the bowl and slowly place it one of the nails. I suggest starting at the tip with a triangle, the top-left with a square, and at the top middle nail with a circle. Continue placing beads in a clock-wise fashion until all of the nails are covered. Then, with your finger, trace around the shape and state the name of the shape you’ve created. Now it’s time for your child to try!”

Author’s Note: Other options include wood screws left halfway out, gluing in wood doweling cut to size, or even those wood dowels shown in Jen’s first activity. A grid of attachment posts would create a Geo Board with enough space for the beads or big rubber bands, increasing the possibilities. The first activity could space the rods out to allow the beads to slip on, too.

DIY Graduated Length Rods

Montessori Red Rods are cool. They are also expensive and use a lot of space. There are alternatives:

- Buy 2 yardsticks in a paint dept. (usually under \$1 each). Use the inch lines to make 10 rods in 1” increments, starting with 1” long, up to 10” long. Paint them or just leave them as is and turn them to the blank side for grading. Making them in 2” increments will require 3 yardsticks. *Sand the edges smooth before use.*
- Buy wooden crafts rods, 1/2” wooden doweling rods, or even straight tomato sticks and do as above using these, either painted or natural.
- Get 1” or so wide blue & red tape and wrap the yardstick rods in alternating colors to make **Montessori Number Rods**.

John



Ashley

Ashley is a mother of three energetic little men. She blogs about her family's crazy adventures in life and homeschooling at the wonderfully named:

Pirate Ships and Sealing Wax

Grinding, Baking, Language & More

Visit this great post at: [Who Will Help Me Grind the Wheat?](#)



A free online version of [The Little Red Hen](#) with vintage images from The Baldwin Project was the inspiration for this wonderful activity. After reading the book, the children decided to help the little red hen, and Ashley wisely arranged for that to happen! After grinding the wheat and baking bread, they extended the activity with a 'From Plant to Food' printable. Nice!

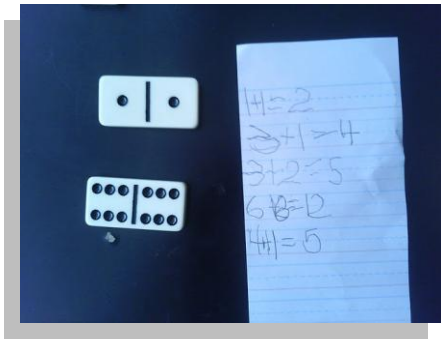
"I used to help my mother (who was trained in the Montessori method and ran her own small preschool for many years) prepare her materials when I was a little girl. I would sometimes go with her to the preschool where she was being trained. **I vividly remember clipping colorful clothespins to the rim of a bowl and transferring droppers full of blue water between glass bowls and the intense feeling of well being I felt, even as a grade-schooler.** After graduate school, my mother and I worked together to teach a small group of children in her home. When my mother moved on to bless other children at a private school, I inherited her preschool and taught on my own for a few years. I am now focusing on educating my own sweet boys at home and enjoy sharing my experiences, whatever they are worth, with other mothers."

Domino Math

See this post at: [Dominoes: It All Adds Up to Fun!](#)



"The other morning when my oldest woke up and found the dominoes he had left out after our game night he was reluctant to go up stairs to begin school work. So rather than fight him on it, I incorporated the game into our work. I went through and choose all the dominoes with up to 9 dots on each side. (For my younger little man I would only include dominoes with up to 3 or 4.) I placed the dominoes in a little wooden box and included several sheets of lined writing paper.



My son chose a domino and counted the dots on the left side and recorded the number on his paper. Then he counted up the right side and wrote out a simple addition problem. At this point he can add most numerals under 10 in his head but I had him count up the total number of dots on each domino to self-correct his work. (This would also be a very visual introduction to addition for younger children who would simply count the left side, right side,

and then the total number of dots on each domino. Children need not even record the problems until they are ready to do so.) By the time my son was done he had filled at least one sheet, front and back, no prompting from me. And he thought he was simply playing a game. Proof again that Montessori inspiration can come from anywhere. :)"

"Recently I've been approached by several friends and acquaintances who tell me they would love to home school or practice Montessori in their homes but they just don't think they can do it. It really is a pity and I repeat myself over and over again; **"YES, you can!"** I've even found myself panicking at the beginning of a new school year because I haven't got a plan all laid out. With the wealth of information out there **it is easy to get overwhelmed** trying to understand the Montessori methodology and the "correct" way to present traditional Montessori materials. But if we **take a deep breath and take it one step at a time** our families will find great satisfaction as the "magic" of the method naturally unfolds. **I would advise families looking to incorporate a Montessori lifestyle in their homes to simply find one small space, be it a cupboard, closet, or bookshelf designated for the special use of your child. Fill it with child sized but functional cleaning supplies, dishes, cleaning supplies, etc. As your budget or space expands, add more shelves and add hands on educational materials that children can choose on their own.** Your first shelf may simply hold a jar of colored pencils or crayons, paper,

scissors, two bowls—one filled with beans—and a spoon to transfer from left to right. **Don't get hung up on whether the work is traditional "Montessori" or get bogged down reading all the books out there about the methodology.** There will be plenty of time to master this at your own pace and to expand as you go. All you really need to begin are the basics. Then **add a new activity every week or few days.** There are so many free ideas online and free video clips that demonstrate how to present more traditional Montessori work. Don't forget to follow your family's interests and make the activities your own. I find so many wonderful homeschooling materials that can easily be customized for a Montessori inspired education. I simply adjust the material to make it hands-on and as self-directed as possible and then place it on our shelves. **You can do this!"**

The following is from a guest post by Deb Chitwood at: [A Nation of Moms](#)

Top 3 Montessori Principles You Can Use with Your Preschooler

Dr. Maria Montessori brought a new method of education to the world in the early 1900s. Children are still benefiting today. Whether or not your preschooler attends a Montessori school, you can help your child by following some basic [Montessori](#) principles at home.

Here are the top 3 Montessori principles you can use with your preschooler:

1. Observe and follow your child.

Dr. Montessori based her system of education on observation of the child. The Montessori Method is about observing the child's needs and interests and following the child in response. If you follow your child's interests, you'll find your child loves learning ... and learns more easily than he or she would otherwise.

2. Encourage your child's independence.

Montessori education is known for the saying "Teach me to do it myself." One of the best things you can do to foster your child's independence is to demonstrate new tasks, breaking the tasks down into clear steps. Here's an article I wrote about demonstrating tasks to encourage independence: [How to Help Your Preschooler Help Himself](#).

Anytime you can provide child-sized materials for your child will help your child's independence and enjoyment of a task as well. Not only are child-sized materials easier for a child to handle, but they also reflect an attitude of respect for the child.

3. Help your child develop a sense of order and self-discipline.



Child sized materials made cleaning fun for my daughter, Christina, as a preschooler

Colors, shapes, numeral and quantity identification, and a phonetic introduction to reading are just a few of the concepts preschoolers learn in Montessori schools. More important, though, are the sense of order and self-discipline children can develop.

You can help your child develop a sense of order and self-discipline by having a place for everything and encouraging your child to take care of his or her home environment. Low shelves with an orderly arrangement of toys on the shelves are very helpful for your child's independence and sense of order.

Practical life, or daily living, activities give your child the opportunity to develop order and self-discipline as he or she works through steps in a task and concentrates on that task. When your child is concentrating on a task, don't interrupt. It's that absorption in a task that will develop your child's self-discipline and ability to concentrate for progressively longer periods.

Online, you'll find a lot of help with practical life activities. There's a wealth of information and resources for [practical life activities](#) you could easily make available for your child at home. Also, every Monday, I have an [activity of the week](#) featuring activities I find online that are appropriate for use in the home.

Note: The activity of the week became part of [Montessori Monday](#), the weekly link-up of Montessori lessons/activities started by Nicole at [One Hook Wonder](#). Montessori Monday is now co-hosted by Nicole and me.

Each Monday, I focus on a particular activity or group of activities within a theme for my activity of the week. I typically link to many Montessori-inspired posts.

At the end of my Monday post (and Nicole's Monday post) is the Montessori Monday link-up. Please join us to link up your activity trays, Montessori lessons at home or school, and posts with Montessori ideas. The Montessori Monday post and linky is published each Monday morning at 6:00 a.m. EST, but you may link up any time throughout the week. *Deb*



Author's Note: Nataša's wonderful Sink /Float was featured in my [Activity of the Week – Sink and Float Plus Extensions](#). You'll find more ideas and extensions there as well. *Deb*

Aggregate States of Water See at: [Aggregate States of Water](#)



"Before breakfast we poured water into the ice mold and put it into the freezer. Before Circle Time, we retrieved our ice mold. We talked about what happened to the water, why it is no longer water, but ice. All the children felt the ice and some licked their fingers. We concluded after discussion that the water turned into ice; that water can be in solid form."



"I put the bowl with ice on a radiator. I told the children that after our circle time we will go for a walk, and when we return we will look at what happened to our ice. I showed the children the bowl with liquid water. They easily concluded that it was again liquid water."



"I asked the children their opinion about whether water can be converted into a gaseous state. They unanimously concluded that it cannot. I poured water into our electric kettle and told the children to wait and see themselves. When the water boiled steam rose from the kettle. We concluded that water when heated up can change from a liquid to a gaseous state."



"When I lifted the lid of the kettle, water droplets appeared on it. I explained to the children that this is due to the sudden temperature changes – the stove is boiling, and at room temperature is much cooler. I reminded the children to look at the same phenomenon at home in the kitchen. When lunch is cooking, the windows may also 'sweat'."



Carolyn

Carolyn Hadsell is a Montessori school owner and teacher for over 30 years. She blogs about creative curriculum at:

[Inspired Montessori and Arts.](#)

A Montessori ‘Mom to Many’ for over three decades, Carolyn is a graduate of MECA-Seton Montessori training in Chicago and has a BFA in Art Education, and certification in Early Childhood Education. Montessori has been the perfect vehicle for interests in art, music, science and curriculum planning. We are so pleased to include Carolyn in this ebook! You can visit her school at the [Montessori learning Center of Dundee](#).

*“I would love to share with teachers and homeschoolers how to start a biology unit using actual specimens. Nature specimens are all around us all the time. **One only has to observe, collect and expand on it.** I would like to direct you to three of my blog posts that display many ideas and versions how to teach biology using real creatures. The first is on Insects.”*

Insects

See at: [Huge Unit on Insects](#)



"Insects are everywhere and I suggest you begin with one bug in a box. Now, cut out pictures from magazines, get black line pictures of the creature by googling it in "images" and then make "Parts of" cards. Next, find a good art project that corresponds and a cooking project for fun."

Note: Be sure to visit Carolyn's [Huge Unit on Insects](#), because, well, it's HUGE! Carolyn also very thoughtfully provided links to: [Photographs](#), line [Drawing for 'Parts Of' cards](#), a fun [Crafts Project](#), a [Great Recipe](#), and [Bugs in Resin](#). Thanks, Carolyn!

Skeleton

See at: [Bone Unit](#)

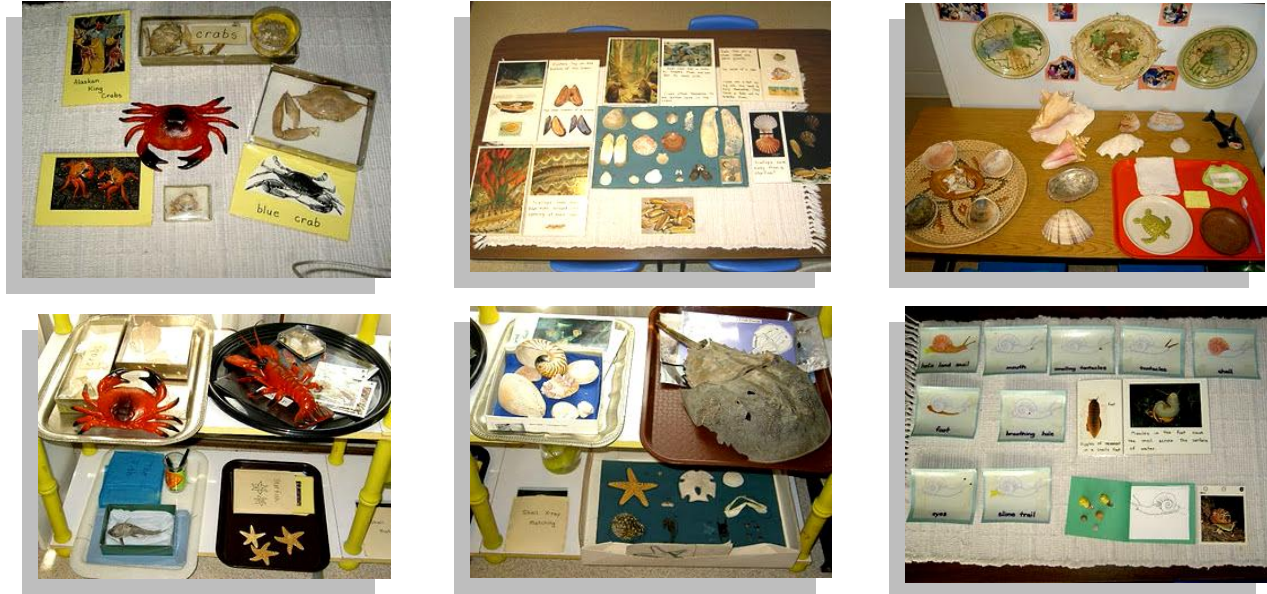


"This bone unit can start with the wish bone from your baked chicken dinner and then the leg, breast, and wishbone from a turkey dinner. Lay the bones in the sun for many days in a place where the raccoons won't get them and then scrub with bleach water. My cow bones came from a farmer's field, the rabbit skeleton was in my yard under a bush, and antlers can be found at estate sales."

Specimens from the Sea

See at: [Ocean Life Unit](#)

“I envy you who are near an ocean. Take advantage of it to collect creatures and create matching cards, vocabulary cards, and hands on lessons. Most of us can find shells to match to cards, or at least a plastic crab from a party store.”



“My past students have told me that these science experiences are what they remember the most from my Montessori school. It leaves a lasting impression!”

We can see why, Carolyn!

Author’s Note: AMAZING units! Carolyn’s Huge Unit on Insects was featured in my [Montessori-Inspired Insect Unit for Summertime Learning and Fun](#). Her Ocean Life Unit was featured in my [Montessori-Inspired Ocean Unit for Summer Learning and Fun](#).

Another of Carolyn’s posts was featured in a Montessori Monday post: [Montessori Monday – Sensorial Size Extensions](#). Carolyn has many photos of extensions of pink tower, brown stair, and knobless cylinders from years of teaching in a Montessori school. It’s truly inspirational to see the awesome extensions that are possible using three sensorial materials!

In addition to being a Montessori teacher, Carolyn is a certified art teacher. She has many wonderful videos and [posts with clay projects](#). Inspired Montessori and Arts is definitely the first place to check when you’re looking for an idea using clay! *Deb*



Ms. Shelley

Shelley Bevilacqua is a Mom and Montessori Teacher. She blogs about bringing the Montessori method into your home at:

[At Home Montessori News](#)

“In 2006 my husband and I were blessed with our son, Giuseppe. We were thrilled to be blessed (again) seventeen months later with our daughter, Giuliana. Giuseppe was enrolled in a Montessori school near our home the spring semester of 2008 (just two months shy of his second birthday). I did something a little different from the rest of the mommy group—after I saw how Giuseppe enjoyed his school, and the great joy his development under the Montessori Method brought me, I decided that I, too, wanted to be a part of a Montessori school. Three nights a week for two years, starting in August 2008, I attended PBCC to obtain my Montessori Teacher Training Certificate. I finished my internship in June 2010, and was immediately offered my own classroom by the owners of the Montessori school. The following August they offered to send me back to school, and in December I graduated and received my Director Credential!”

Fabric Box



FABRIC BOX

Age: 3 to 5 years old

Tactile Sense

Matching

Left to Right Progression

Material

An open basket containing six squares of material of different makes. They include: denim, polyester, nylon, striped, flannel and cotton. A control set (placed in another open basket) is included in the form of a pocket. Both baskets are on a tray on the shelf in the sensorial area.

Shelley’s Money-Saving Tip: “You don’t have to buy fabric to make this lesson. When you’re cleaning out your child’s closet and discarding things that they’ve grown out of, don’t throw

them away! Instead, cut squares from them for your fabric box.”

Presentation 1

1. Invite the child to work with the fabric baskets. “We will match fabrics of similar textures.”
2. Show the child where the fabric baskets are located on the shelf. After the child selects the fabric baskets say the name of the lesson.
3. Indicate the proper procedure for carrying the lesson (one hand on each side of the tray while holding close to the body).
4. Place the tray on the lower right hand corner of the rug.
5. Say, “I will match fabrics of similar textures.”
6. Begin with the “control basket” or the basket which is cut out in the form of pockets. Remove the top pocket shaped fabric, feel it, and place it in the upper left hand corner of the rug.
7. Continue with the remaining five pocket shaped fabrics by laying this control set from left to right at the top of the rug in a straight line.
8. Working with the second basket (rectangular shaped fabric), remove all the fabric and place them in mixed order in a straight line at the bottom of the rug.
9. Starting with the upper left hand corner of the rug., feel the first pocket and find its match at the bottom of the rug.
10. When the match is found, place the match below the pocket shaped fabric (control set).
11. Proceed with the remaining rectangular shaped fabric; matching similar textures from left to right. Always put the match below the pocket shaped fabric (control set).
12. Read work by saying, “I have matched fabrics of similar textures.”
13. When the material has been completed, return the rectangular shaped fabric one at a time to the basket, beginning at the left and continuing along the line.
14. Return the six pocket shaped fabrics to the second basket, one at a time, beginning at the left and continuing along the line.
15. Return the material to the shelf in the manner described in step #3.

Variation #1

Blindfold: Proceed as in Presentation #1. Using a blindfold, assure the use of the tactile sense in matching the fabrics.

Variation #2

Match to children’s clothes: As a group activity, have a child select fabric from the box and match the material to a child wearing the same fabric.

Purpose: Direct

Discern similarities and differences in textured patterns.

Development of concentration, order, coordination, and independence.

Development of the tactile sense.

Purpose: Indirect

Left to right progression for reading and writing.

Development of organization of work.

Development of problem solving techniques.

Control of Error

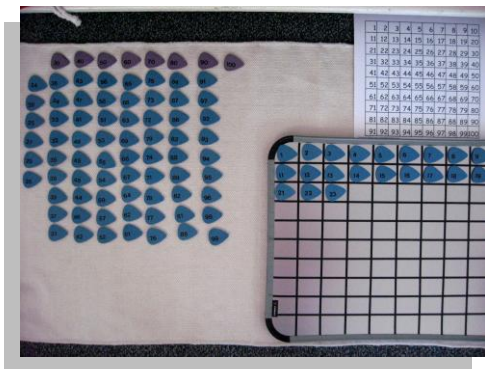
The second basket holding the pocket shaped fabrics.

Point of Interest

The different textures and patterns of the fabric.

*“To teach Montessori at home, you’ll need to find **a place within the house** to have “school”—a place **where the child cannot become distracted** by television, pets, or non-Montessori playthings. This is where the child will do language, mathematics, and some sensorial activities, but the entire home will become a classroom for some exercises. If you’re going to teach Montessori at home, **be sure not to isolate the child—take him or her on outings and play dates so that he or she can develop the necessary social skills and niceties.** Also remember that **you are the observer in the Montessori Method**, not the teacher—**the child will guide you** in his or her learning by the activities he or she chooses to engage in. Make sure that everything in your prepared environment in the home is **low and easily reachable by the child.** This includes hooks, cupboards in the kitchen for practical life exercises, and all lessons. Your Montessori materials can be kept on a bookshelf, preferably a low three-shelf bookshelf.”*

100 Board



“Here is my version of the 100 Board. Since I have a background in music (I have been playing the alto saxophone for 22 years) I enjoy having my homemade lessons be on a musical theme. The actual board I used is a shiny metallic, magnetic, dry erase board from Office Depot. I then used dry erase board tape to create the lines on the board. I went on eBay and ordered 100 guitar picks. I also purchased small black numeral stickers from Office Depot to put on the guitar picks. Finally, I bought a roll of adhesive magnets and cut them small to fit the back of the guitar picks.”

Note: Preparation for this material includes the amount & numeral activities for 0-100.

Material

magnetic board & black board tape
 100 guitar picks (blue and purple) basket
 100 numeral chart

Presentation

1. Bring the silver, magnetic dry board, basket containing guitar picks (blue and purple), and 100 numeral chart to a large rug.
2. Place the silver, magnetic board on the lower middle of the rug.
3. Place the basket containing guitar picks in the lower right hand corner of the rug (to the right of the silver, magnetic board).
4. Place the 100 numeral chart in the upper right hand corner of the rug.
5. Say to student, "Remember when we did the ten boards and numerals to 99 with the beads and board? Now we are going to work with just the numerals to 100."
6. Look in the basket for the purple colored guitar picks. These are the numerals for the multiple of ten (10, 20, 30, 40, 50, 60, 70, 80, 90, and 100).
7. Place these purple guitar picks in a row across the top of the rug.
8. Take one guitar pick (blue) from the basket and place it under the correct multiple of ten purple guitar pick. Here, the guitar pick with the same number of tens. The purple guitar pick for 100 goes to the right of the 90 guitar pick and the guitar pick for the numerals less than 10 go in a column to the left of
9. Continue with the blue guitar picks by taking them out one at a time and placing them in the correct column until all of the guitar picks have been placed.
10. Begin to place the guitar picks on the silver, magnetic board, beginning with numeral 1 (blue) in the upper left-hand corner. Say to the child, "What numeral comes next?" Then, ask the child to find that numeral and place it on the silver, magnetic board.
11. After all of the guitar picks (numerals) have been placed in rows (1-10), (11- 20), (21-30), (31-40), (41-50), (51-60), (61-70), (71-80), (81-90), and (91-100), say to the child, "Now we are going to read our work. Can you read the work to me?"
12. Beginning with the 1 (blue) and the multiples of ten (purple) return the guitar picks to the basket. The remaining guitar picks may be placed in random order into the basket.
13. Return the silver, magnetic board, basket, and 100 numeral chart back to the shelf.

Points of Interest

The silver, magnetic dry erase board
 The colorful guitar picks
 The sound of the magnet onto the silver, magnetic board

Purpose: Direct

Development of sequential order in thinking (logical thinking)

Vocabulary enrichment

To further develop the mathematical mind

To develop the concept of concrete and abstract

Purpose: Indirect

Creative thinking

Oral expression

Recognize the order of the numerals

Multiplication preparation

Counting

Points of Emphasis

Taking out of the basket multiples of ten

Placing the purple guitar picks (multiples of ten) at the end of each row on the magnetic dry erase board (as you get to each of them).

Variations

Skip Counting. Have the child color the numeral chart to reinforce different lessons. For example, have them select a color and color all the squares that are multiples of two the same color. Repeat for number patterns for counting by fives and tens by selecting a different color. The chart becomes a great visual for skip counting by 2's, 5's, and 10's. NOTE: Have several copies of the numeral chart available with colored pencils.

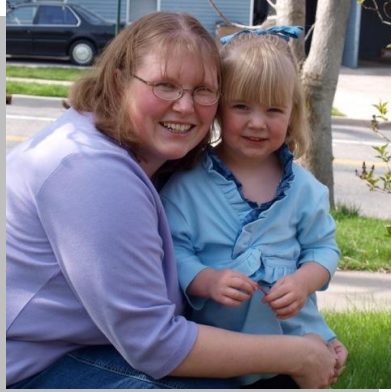
Multiplication Tables. Have the child color code the numeral chart for math factors and multiplication tables. The directress may print a different chart out for each number set, or work off of one chart. For example, color all multiples of three the same color. Ask the child if they see a pattern. Then, color all multiples of four a different color from multiples of three. NOTE: Have several copies of the numeral chart available with colored pencils.

Author's Note: I love that Ms. Shelley used her interest in music to prepare a creative version of the 100 Board. I think it's too easy to forget that we can be a positive influence on our children by following our own interests as well as theirs. It's similar to the concept of helping our children become readers by modeling reading ourselves.

Maria Montessori stressed the importance of the teacher's inner preparation:

"The training of the teacher who is to help life is something far more than the learning of ideas. It includes the training of character; it is a preparation of the spirit."

As moms and teachers, I think we'll be most effective if we follow our own interests and also find a balance, difficult as that may be. I wrote [Take a 30-Minute or a 5-Minute Me-Break](#) about techniques that always helped me. *Deb*



Heidi

Heidi Indahl is an experienced teacher who blogs about homeschooling her four children using primarily the Montessori method at:

Work and Play, Day by Day

Heidi has been blogging at Work and Play Day by Day for just over three years, sharing Montessori-inspired home school activities for infants and toddlers, children's house, and elementary age students. She and her husband (AMS 6-12 trained), have over 20 years combined experience in general education and Montessori. They have chosen home as the preferred place to teach their four children and integrate Montessori philosophy into many aspects of their daily life.

*"Applying the Montessori method at home is a challenge that offers rewards for both parents and children alike. **Montessori is not a one-size fits all approach.** There will be things that are popular with other Mom Bloggers that don't work for your family; and there will be aspects in which an alternative approach is more appropriate for your children. I encourage you to take what works for you and leave the rest. **Through the learning and growing process your relationship with your child will be strengthened and they will grow in ways you could not have imagined. Empowering a child is an indescribable wonder to be a part of!**"*

Writing Names



See this great activity at Heidi's two posts:

Writing Names

Learning to Write Names

"The top post has instructions to make a re-useable name for practice writing. The bottom post has instructions for making a rainbow name for tracing. Both use the same template (instructions in the second post), representing

different ways to use the same information. In the top post I also refer to a third tool for learning to recognize and write names, a sandpaper name."



"I think it is good to learn how to spell names correctly BEFORE getting too far into phonics and wanting to spell it the wrong way because it doesn't "sound like those letters"... I think learning it correctly early helps set the stage for sight words and rule-breakers (words that don't follow a phonetic pattern) later."

*"In addition to teaching Kylee how to make a rainbow name as I did with Caleb, I also made her a **name writing practice folder**. I printed a blank rainbow*

name and laminated it inside of a file folder (previous photo). She can write her name again and again with a dry erase marker and just wipe it away when she is done. You could do the same thing with a dotted name. She is young for this and I had fairly low expectations to be honest; but I am of the opinion that names make the best first writing experience. Clearly she was ready."

Multiplication & Elementary Math



Check out these posts from Heidi:

[Teaching Elementary Math](#)

[Multiplication Mastery](#)



These two posts are a collection of activities and description of materials designed to apply the Montessori method to the mastery of basic math facts. I discuss types of materials that we use from beginner activities through more advanced. My focus is on keeping the number of materials down; and I share tips for using materials in more than one way with alternatives where appropriate. We don't need to resort to traditional drill and practice approaches in order to reach mastery. I am submitting this set of posts because I believe they can help parents feel more confident to do just that!

Remember that all of the manipulatives (Golden Beads, Stamp Game, and Bead Frame) allow for use and understanding without knowing the basic facts. The use of these materials, in fact, reinforces basic facts through repetition.

Note: [Living Montessori Now](#) has a wonderful post on the [Montessori Bead Materials](#).



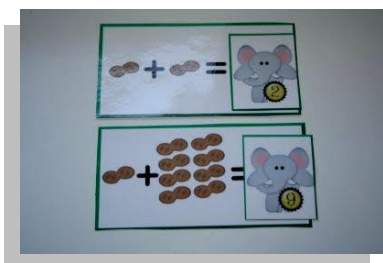
Lisa

Lisa is a stay at home mom of 4. She blogs about their learning adventures at:

[Our Country Road](#)

“I do not have a background in the Montessori Method. I learned about it before my children were born and looked into training, but it was not a feasible option for us at the time. I have learned what I know from reading online and asking questions of others. I have a lot more to learn; and look forward to introducing more of the Montessori Method of learning into our home and school as I do.”

Elephant Math



See these activities and more at:

[Letter E Preschool & Kindergarten Free Printable Pack!](#)

“This week we learned about the letter E – short e. I made a new printable pack to help with the concepts I wanted to teach. The pack can be downloaded here: **[Letter E Printable Pack](#)**.”

The pack includes Three Part beginning letter E sounds, Elephant and peanut cards & counters, Letter E sorting mats, Peanut addition strips, sight word cards, number match mat, elephant cutting strips, Word family car match game, Fable and elephant cards and a color match go fish game.

When I make my packs I am trying to make something for each of my children, as there are many levels in each pack. In case you do not have or want to get – or your child is allergic – I have included printable peanuts in my set.”

“My advice to a mom wanting to start using Montessori at home is to just give it a try. No, you are not going to get 'everything perfect' from the start, or ever for that matter. But, if you don't try you will never get there. There are so many great blogs and web-sites that will teach you everything you want to know about the Montessori Method; and great books you can read as well. My kids love the activities and have no idea if I 'did it right'.”

Word Family Fun



See this activity and many more at another of Lisa's fun-filled posts at:

B is for Bear Preschool and Kindergarten Free Printable Pack

I made up another pack of printables to use with my kids

and to share with you. I hope you like them! The package can be downloaded here: **B is for Bear Pack**.

In this set there are four tents: it, in, et, & en. The bears have words on them: sit, hit, bit, tin, sin, win, set, net, wet, ten, hen, and Ben.

The idea is to put the bears in their word family tent!



Author's Note: Lisa is one of the mom bloggers who generously shares beautiful free printables. I wish these sorts of resources would have been available when I was a Montessori teacher and homeschooler. They make it so easy to create attractive activity trays!

I have two posts with LOTS of links to free printables: **Free Montessori Materials Online** and **Free Preschool Printables for Activity Trays**. The first post is generally of more traditional Montessori printables, although there often aren't clear dividing lines. Montessori-inspired activities can be created from many different types of printables. And don't miss **Instructions for Montessori Materials** from Montessori Print Shop! You'll find great tutorials and tips there for preparing activities from printables. *Deb*



Shelly

Shelly Phillips is a Mom and Life / Parenting Coach. She blogs about Conscious Parenting at:

<http://www.awakeparent.com/>

“I was an Assistant Teacher in Montessori classrooms for five years. I have several blogs about things like getting kids to help with clean-up, and setting them up with independent activities and having them help with cooking.....”

Open & Close

See this blog post at: [Open and Close Activities are a Big Hit!](#)

PS: This post also has a [great video](#) in it.



“Have you ever noticed how much young children love to open and close things? And how they’ll repeat the opening and closing action again and again? If you think about it, we open and close things all the time in our daily lives, so why wouldn’t children want to learn this important skill? One of the things that continues to surprise me about open/close activities for children is how many times they’ll repeat the action. I’ve seen kids

absorbed in this work for well over thirty minutes at a time.

One of the great things about this activity is that it can grow with your child. Right now I have a couple of small metal tins, a small jar with a lid, and a plastic container with an attached lid in the activity for my 13 month old. But when she’s 3 years old, we’ll have a coin purse with a zipper, a box with a latch, and some other more challenging items.

Even if your child is 7 or 8 years old, you can find fun things to put in an open/close activity. Most 8 year olds I know LOVE figuring out how to lock and unlock padlocks or even the front door of their house. Of course you’ll have to decide what you’re comfortable with. Learning to open and close plastic baggies and food containers can be a fun challenge too. Remember diaries with locks?”

Note: This is a wonderful description of making activities more challenging as children grow.

Self-Serve Snacks



See this post at:

Serve-yourself Snack Gives You More Freedom

“When it comes to serving snack, the more the kids can help themselves, the better. This is true at home too. I mean, how many times have you been happily folding a load of laundry when your three year old whines,

“Mommy, I’m huuuunnngrrryyy.” Here’s the solution! If

you put out the necessary ingredients for a healthy snack on a child-sized table at say 9am every morning (or at 3pm if your kids are more hungry in the afternoon) your children can serve themselves whenever they’re hungry. This promotes independence while ensuring that your kids are eating a nutritious snack AND you don’t have to get up from your own work to serve them. Here are some snacks that I’ve seen work well for 3, 4, and 5 year olds”:

Cheese and crackers

Peanut or other nut butters with crackers

“Ants on a log” Celery with peanut butter and raisins

Carrot sticks with dip

Apples- you can provide a whole apple with an apple slicer or slice the apple for your child.

Granola

Rice and beans w/ salsa

Rice with soy sauce

Cucumber slices

Fruit salad

Strawberries and shortcake

“The trick is to set up the snack in a pleasing way providing everything they’ll need to grab a plate and napkin, serve themselves, sit down and eat, and then clean up after themselves. You may also want to include cups and a small pitcher of water, milk, or juice.”



Counting Coconuts has a post that includes these ideas for easy-to-access snacks. At left are refrigerator shelves, and at right a snacks drawer, both filled with quick snacks a child can get independently.

Excellent!



Defining a Workspace



See this post at:

A cure for clutter: using a rug to define a workspace

“Are you tired of tripping over your child’s toys or bugging the kids to pick them up off the living room floor? Using a rug to define your child’s workspace is a great solution that works well for everyone!”

You might even already have a rug that will work well. You want a rag rug, bathmat, or other rug that is about three feet by four feet in size and is easy to roll up. To keep it out of the way when it’s not being used, you can store your rug in a clean trash can, large vase, or other container when it’s rolled up. And when your child is ready to get out her dinosaurs, remind her to get her rug first.”

The Activity Cycle

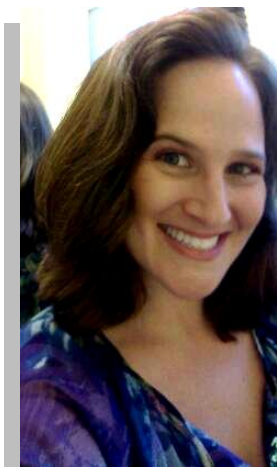
Maria Montessori believed that an orderly, aesthetically pleasing environment helps a child internalize a sense of beauty and order in their mind. She also intended for children to learn from each other as much as from the materials she created. But how to maintain order when many young children are busy sharing materials in the same space?

The **Activity Cycle** was an elegant solution. Montessori taught the children to follow these steps with every activity they chose to do:

1. **Create a work space by setting out a rug or table mat.**
2. **Bring the activity to the work space and use it.**
3. **Prepare the activity for use by the next child; and return it to its place on the shelf.**
4. **Put the rug or mat away.**

The children were never to disturb or touch another child’s work without permission or an invitation from the child using the work. When they used a material in their work space, it was their little domain that others had to respect. When finished, the children were required to put the material back clean and in an orderly condition, ready for the next child to use. Freedom and respect with responsibility – just like real life is supposed to work.

In one simple set of steps, Maria Montessori showed children using the Prepared Environment how to **live together respectfully and share resources responsibly**. She also taught them an **orderly approach to tasks**; and instilled a habit of **finishing what you start**. Wonderful lessons to learn during a person’s formative years! *John*



Share

Share Kelly is a Mom and philanthropist. She blogs about community and family health & wellness at:

PLAYFULPOST.COM

Share's graduate programs include Marriage and Family Therapy, with coursework in Play Therapy, as well as a separate degree program in Drama Therapy; a creative arts therapy program that emphasized the power of verbal and nonverbal communication via play, dramatic games, movement, dance, poetry, music, art, puppetry, dramatic interpretation, and an animal assisted therapy. To learn more, visit NADT.org, and [The Delta Society](http://TheDeltaSociety.com).

Share has a focus of assisting individuals of unique abilities / injuries, i.e., veterans, elders, children, individuals with special needs, TBI, MRDD, etc., of all ages. She works with organizations such as the Ronald McDonald House, hospitals, clinics, day services, residential services, homecare and hospice to allow these modalities to empower the individual and support system(s) to focus on abilities, strengths, and interests.

Thankful Cards



For a complete description, visit: [Thankful Cards](#)

"This activity is used each year to create personalized party invitations with matching thank you cards. For example for a Space Adventure, a stack of quartered fluorescent yellow card stock was included in the tray. Circles of varied size & color were available for children to glue on as planets. Star stickers were also provided. A photo of the Birthday child(ren) was glued in the center along with a printed label detailing the party time, date & rsvp information. For a Luau a stack of orange paper was included with multi-colored flowers and stickers printed from color printer depicting a favorite Hawaiian cast of characters. Again pre-printed labels from the





Anupama

The 'Mommy to the Princesses' is a mom of two daughters ages 4 and 1. She blogs about the education activities with her daughters at:

Kingdom of the Pink Princesses

"I came across Montessori education when I was searching for a school for my 3 year old daughter. She was enrolled in one for close to a year, but unfortunately it did not work out for us. We loved the approach so much that we pulled her out of school and started homeschooling her using the same method and for a fraction of what we were paying for the private school! Before I start on the steps to this approach some of the key points that all the resources that I have read so far stressed and one should remember are:

- *Kids are not empty vessels that we dump information into (basic Montessori principle). As far a language goes, the children start talking by themselves before school age. All we are doing by following a Montessori approach is to provide some organization, guidance and key symbols using which the child can freely immerse themselves into reading and writing.*
- *The basic idea that we let the child deal with one difficulty at a time. Small steps as preparation leading into a larger goal.*
- *Setting up the child for success at every stage and provide just enough challenge so that the child can discover the joys of reading and writing by their own exploration.*

For the complete steps in the reading sequence Anupama blogged about, see:

The Dwyer Approach for English Language Exploration

The steps detailed in this post are:

Preliminary Preparation

This includes all the activities and daily life experiences that make language an integral part of a child's life. This includes books, songs, games, picture activities, and encouraging exploration of the sounds of spoken language.

Sandpaper Letters

Now the child learns all the sounds of the Phonetic Alphabet.

Moveable Alphabet & Writing Activities

Now the child builds words and practices writing letters and then words.

Object Boxes and Activity Words



Left: Milk, nest, crab, & can

Right: Boy, goat, jar, shell



In this step objects with simple names are matched with hand written labels.

Puzzle Words

This step introduces non-phonetic words using Three period lessons.

Little Booklets

Booklets using the sounds and words the child has now learned promote a gradual adjustment to reading actual books.

Introducing the Names of the Alphabets

Reading Folders



Reading folders introduce the variations in spelling for the different phonograms.

Puzzle Words, Set #2

These include more non-phonetic words, such as those with silent letters.

Phonogram Dictionary

This tool further helps the child recognize words.

Dictation and Further Language Exploration

More games, free composition, reading analysis, words study, and definitions keep the child moving forward into reading.



Allison

Allison S. is a Montessori-inspired homeschooler to 3 children, ages 2, 4, and 7 (2 of her children have Autism Spectrum Disorder). She blogs about homeschooling, Montessori, and special needs at:

Barefoot in Suburbia

“I am a homeschooling mom who is Montessori inspired. We have always practiced Montessori principles even before we knew there was a name for it. Our children have been with us 24 hours a day since they were born and were always allowed to help in the kitchen or with other tasks. Our son went to a Montessori school for preschool through 1st grade due to having autism. At the same time, we homeschooled our younger daughter due to her own special needs. When the Montessori school was no longer working for our son, we took him out as well and began using Montessori-inspired principles at home, which he has responded to very well.”

Please Touch Table

See at: [Homeschooling The Montessori Way](#)



“Prepare the top of a small shelf or table by washing it and protecting the surface if necessary. Gather some seasonal objects from nature (or purchase some specimens from an education store). Better yet, go on a nature hike with your child in your own backyard or neighborhood and allow the *child* to gather interesting objects. Clean and disinfect any objects that may contain small insects or diseases (such as bird's nests or broken egg shells) Lay the objects on a table according to theme (examples of themes include "autumn", "butterflies", "birds", "trees", etc.). The table in the picture contains some abandoned bird's nests, a sanitized owl pellet, replicas of owl skulls, and various feathers. We have also done a butterfly theme with replicas of the butterfly life cycle and actual caterpillars in a butterfly pavilion. In a bowl or on a tray, arrange objects that the child can use to investigate the objects on the 'Please Touch' table, including

tweezers, tongs, magnifiers, and small jars. On the table, also include some paper and colored pencils in case the child would like to journal about his or her experiences with the table. Let

the child know that everything on the table can be touched and explored in any way he or she would like (any live specimens must be treated with respect though)."

Author's Note: I LOVE Allison's "Please Touch" table! A nature tray or table is a wonderful addition to any Montessori-inspired environment. I have a post discussing Montessori and Waldorf [nature trays and nature tables](#) along with some examples and helpful links. If you have a space set aside for a nature tray or table, you can easily change the items from season to season. *Deb*

We always try to involve our children in everything we do. One of the things we always allow the children to do is **help with preparing meals**. Almost daily, all three of our children, even the 2 year old, can be found in the kitchen scrubbing vegetables, cutting fruit, mixing batter, or setting the table. It definitely takes more time to do when you're giving jobs to 3 young children (and making those jobs age appropriate!), but it is so worth it to see the smile that comes across your 2 year olds face when she's sliced her own banana for snack, the 4 year olds face when she's scrubbed a pile of vegetables for soup, and the 7 year olds face when the cookies he helped made are finally ready for tasting! **Once a child is able to stand up reliably, he or she is old enough to do something in the kitchen...**scrubbing potatoes, slicing soft fruits with pate knives, or mixing batter are all things that toddlers love to help with!"

Shoe Polishing



Materials: On a tray, place a toothbrush, a nail brush, and another moderately stiff bristle brush (like a foot brush). You will also need a washcloth, a hand towel, two sponges, a bar of soap, a small bowl of water, and a small bowl of shoe polish. Because regular shoe polish is highly toxic, I wanted an all natural solution that is safe for skin and in case a little one accidentally got some in her mouth. We used a natural polish I made of two parts lemon juice and one part olive oil. You also need to have the child pick out a pair of shoes to polish. See at: [Barefoot In Suburbia](#).

"Prepare a tray by folding the washcloth and towel, lining up the brushes, adding polish to a small bowl, and adding water to another small bowl. Lay a sponge by the water and another sponge by the polish. Place a small bar of soap by the water. Have the child pick out a pair of shoes to polish. Use the various brushes to brush the loose dirt off of the shoe. Wet a sponge in the water and get the sponge soapy. Scrub the shoe with the sponge until the dirt is removed. If necessary, use the toothbrush to scrub in the crevices of the shoe. Wet the washcloth with the water and wipe off

the shoe to remove the soap. Use the towel to dry the shoe. Dip the other sponge into the dish of polish and then rub the sponge on the shoe using small circular motions to polish the shoe. Repeat the process with the other shoe.”



Jessica

Jessica is a Montessori-trained teacher and mom of two boys. She blogs about learning at home the Montessori way, with an emphasis on activities for infants, toddlers, and preschoolers, at:

Our Montessori Home

“I first heard of the Montessori philosophy while pursuing a degree in Secondary English Education. My professor did not give a favorable view of the Method. She introduced Montessori schools as a place where children ran free and there was little learning. Fast forward two years later and I find myself looking for a job. I ended up at a Montessori school impressed with what I saw and joined the staff as an assistant in a 3-6 classroom. After 3 years, I left the school to stay home with my new baby and pursue my Infant/Toddler training. It wasn't too long after I finished the course that I started Our Montessori Home as a way to chronicle our journey and share the Method with others.”

Lacing Cards



See this activity at: [Fine Motor: Lacing \(Sewing\) Cards](#)

“I made these lacing cards out of cardboard. I cut simple shapes, outlined in marker and colored in with crayons, and then used a hole punch to make the holes. For the string, I used what I had on hand (which is why they don't all match). At the end the child would be lacing, I wrapped it with packaging tape to reinforce and make it sturdier for the child to hold.”

Ages: 24+ months

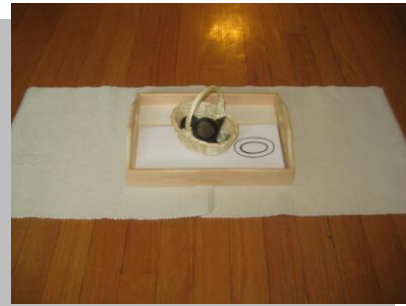
Materials: work mat, basket, lacing cards (with the string tied to the card)

Presentation:

- Prepare the work and get out the mat.
- Sit down with the work facing the child and the mat between you.
- Demonstrate the activity by taking a lacing card and showing the child how to “sew” by moving the string in and out through the holes.
- Invite the child to do the work himself. With this activity, the child will most likely need more instruction, especially understanding the in and out motion of sewing and remembering to pull the string tight.
- When he or she finishes, have the child return the work to the shelf.

“I wrote a guest post for a fellow Montessori blogger last month and shared a few ways to build a Montessori lifestyle. The main points were to **prepare the environment, give your children sensory experiences, slow down, involve the children in the everyday workings of the home, respect the child, and explore.** You can find the article here: [Building a Montessori Lifestyle.](#)”

Matching Numbers



See this activity at: [Matching Numbers](#)

Age: 18 – 24 months

Goal: To practice counting and develop fine motor skills.

Materials: mat, tray, objects to count, cards with numbers 1 to 3, numbers

Making the Materials

Numbers - To make the numbers I traced and cut out numbers 0-10 from black construction paper and had them laminated. *(For this activity, I started with 0-3 and will add numbers as his skill increases.)*



Number cards - I cut poster board into 5" x 12" sheets, traced the number at the top, and then traced the corresponding quantity of beads under the number. I prefer to have my numbers in 2 rows. This allows an even number to have two even rows and with an odd number the final counter goes in



the middle underneath the two rows. This provides the basis for introducing odd and even numbers.

Counters - I chose to use large, decorative beads I found in the floral section of a craft store. There should only be as many beads as needed. For example, in counting 0 to 3 there should only be 6 beads. This is the built-in control of error. If a child gets to 3 and doesn't have enough beads he or she knows (or can be directed) to check their work.

Safety note: *If your child is still in the stage where he or she puts things in their mouth, I would advise you to find a larger object to count with; only do this work with your child and then store it in a safe place out of little hands; or wait until they're past the everything-in-the-mouth stage.*

1. Prepare the work and get out the mat.
 2. With the work facing the child and the mat between you (or sit on the child's right-hand side), set the basket to the child's right.
 3. Lay the number cards on the mat starting with zero and continuing in sequential order.
 4. Take the numbers out of the basket (they don't have to be in order). Pick up the first number, name it, and place on its corresponding outline. Continue with the rest of the numbers.
 5. Starting with zero tell the child that zero means nothing and doesn't need any beads.
- ** In my experience, most children learn counting with 1, but when introduced to tens and hundreds they struggle because they don't know what zero is, but feel compelled to give it a quantity.**
6. Continue on with the next number. Count one. With two, count – one, two and so on. This is so that the child begins to understand that each number builds on the previous number and grows in quantity.
 7. Once you have completed one cycle of the work, return the numbers and counters to the tray and invite the child to complete the work on their own. If the child struggles then help, otherwise allow them to work quietly.
 8. Once the child has completed the work, have them return the materials to the tray and put the work back on the shelf.

Jessica's description contains a number of great tips. Quite often the little details - having just enough counting objects, tracing the beads on as a guide, including zero – make an activity a much more effective teaching tool. *John*

Pouring for Toddlers



See this activity at: [Practical Life: Pouring \(for toddlers\)](#)

Ages: 18 to 24 months

Materials: work mat, tray, 2 identical containers, objects to pour

Presentation:

- Prepare the work and get out the mat.
- With the work facing the child and the mat between you, make sure the container with the objects is on the child's left-hand side.
- Demonstrate two-hand pouring with one hand on the top and the other on the bottom of the container. Emphasize that we pour with two hands.
- Pour the objects into the container on the right. After setting down the container, pour the objects back into the original container completing the cycle.
- Now, invite the child to pour the objects. Help only if the child doesn't seem to know what to do.
- When he or she finishes, have them return the work to the shelf.



Extension(s):

For a greater challenge vary the **size of the containers** (use some with handles and a spout) and the **materials being poured**.

The last two photos show three graduated size containers.



Great activities, Jessica! In the Practical Life section of [Montessori At Home!](#) there is a sequence of pouring activities that moves a child along gradually from the first whole hand grasp all the way to holding a small spoon with a writing grasp. These activities prepare a child for holding a writing instrument. *John*

Family & co

Family & co blogs about homeschooling at:

Family & co

****Note:** Family& co's blog appears in French. Changes have been made to the activity description as needed with permission.

Pink Series

Activity Link: [Pink Series](#)

These are instructions on how to organize the boxes in the pink series and how to present them to the student. Here are the language shelves showing the order in the different stages of reading:



- The game "I guess".
- Sandpaper letters.
- Match objects with sandpaper letters.
- Match pictures with sandpaper letters.
- Match moveable alphabet.
- Pink Series on the bottom shelf.

Here are some explanations on how to present this material:



This series consists of a series of boxes (steps)
The words are to be written using the moveable alphabet.



The child opens the first box and places the objects on the table.



Make sure the child knows the names of the objects. If he does not know, use the 3-Period Lesson. The child then writes the words with the moveable alphabet.



He uses the pink cards to check and correct the words. We do not move to the second box if the child does not fully understand the first.



The second box is composed of images and words. The child places the images on the carpet.

NOTE: [Montessori Print Shop](#) has printable materials for the [Pink Series](#), and much more, for instant downloading. *John*



Then he takes the word and places in front of the picture that matches.



The third box follows the same principle as the first. (Objects and moveable alphabet)

The fourth box is the mystery box. These are verbs to read, act out and to guess what the other children or teacher is acting out.

Boxes 5, 6 and 7 are reading.

The last is a board game.

“I have been trained in the UK by a friend who is a Montessori teacher.

The best is to ask all the children to sit in the middle of the classroom. We start to tell them that they are going to work with the Montessori method and for that we need to make some rules together: talking quietly, tidy after you take a material, call the teacher or your mum by touching her shoulder and go back to your place until she comes. Empty the trash can at the end of the class. The children are invited to make some rules. We write them on a paper that we will put in the classroom. So anytime a child does not respect a rule, we take him to read the rule or we read it for him nicely.”

Conclusion & Resources

It has been a lot of fun bringing you glimpses into home learning activities created by these wonderful Moms. We hope you take away some meaningful insights for your own home early learning. We encourage you to find your favorite bloggers and visit them regularly. You can also set up an RSS feed, such as Google's Reader, to automatically collect blog posts for you to check out so you do not have to search the internet. We wish you all the best in your home early learning efforts!

Montessori At home! is a 296 page ebook containing a complete guide to doing Montessori Early Learning activities at home.

To give you more ideas, here are some great resources from Deb Chitwood from her blog post:

[How to Set Up a Montessori Homeschool Classroom](#)

My Main Montessori Classroom Posts

[Become a More Successful Homeschooler by Using Montessori Principles](#)

[How to Set Up a Montessori Preschool Classroom at Home](#)

[Setting a Montessori Homeschool Classroom Schedule](#)

[How to Add Godly Play to Your Homeschool](#) (if you want to add a Montessori-based religious education program)

Montessori Curriculum Areas

[Montessori Practical Life Activities](#)

[Montessori Sensorial Activities](#)

[Montessori Language Activities](#)

[Montessori Math Activities](#)

[Montessori Cultural Activities](#)

Where to Get Montessori Materials for Your Homeschool

[Free Montessori Materials Online](#)

[Where to Buy Montessori Materials](#)

[How to Make Your Own Montessori Materials](#)

Montessori Principles

[Top 10 Montessori Principles for Natural Learning](#)

[Your Young Child's Amazing, Absorbent Mind](#)

[Encourage Your Child's Sensitive Periods](#)

Montessori Techniques

[How to Help Your Preschooler Help Himself](#)

[Why is Analysis of Movement Important in Montessori Education?](#)

[How to Teach Your Preschooler Manners Using Montessori Principles](#)

How to Teach Concepts and Vocabulary to Your Preschooler Using the Three-Period Lesson

In What Order Should You Introduce Letters to Your Preschooler?

How to Manage Interruptions in Your Montessori Classroom or Homeschool

Ideas for Montessori Activities (Categories of Blog Posts)

Activities – Practical Life

Activities – Practical Life – Grace and Courtesy

Activities – Sensorial

Activities – Language

Activities – Math

Activities – Art

Activities – Cultural



Dear Parents and Educators,

The following 21 materials from [Montessori Print Shop](#) have been added to compliment the ideas included in the eBook, and assist you with your Montessori At Home! experience.

You can choose individual materials and print only the ones you require at the time by printing select pages. Look at each printable carefully before cutting the cards apart. Many of the materials come with "sorting cards" and a "control chart" that will assist the child in checking their sorting skills.

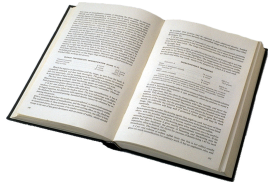
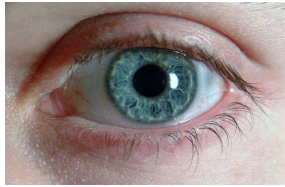
For more information, tips and and tutorials on how to prepare our materials be sure to visit our website and check under the "**Learn How To...**" tab.

To increase your collection of printable materials we offer over [50 free printable materials](#). Save them to your computer and then print and prepare them as your child is beginning to show interest in related topics.

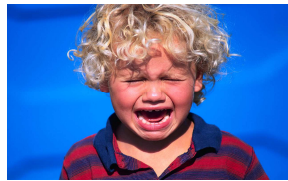
Within our [online store](#) we have over 1250 printable materials for children ages 18 months to approximately 9 years. You can download the materials quickly, print them as required, and have beautiful materials in your children's hands within minutes. **Click, Print, Teach. It's That Easy!**

The 5 Senses

sight



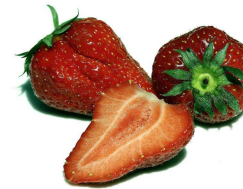
hearing



smell

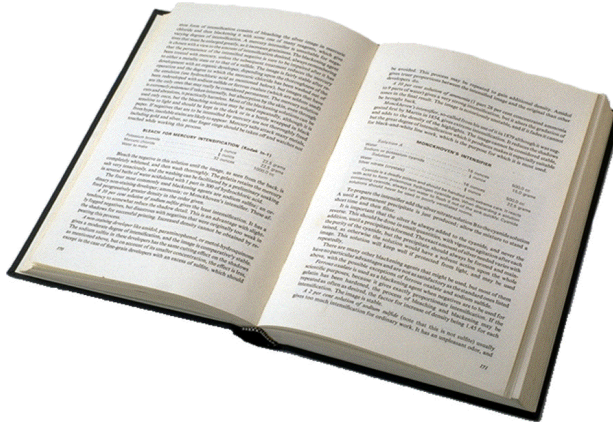
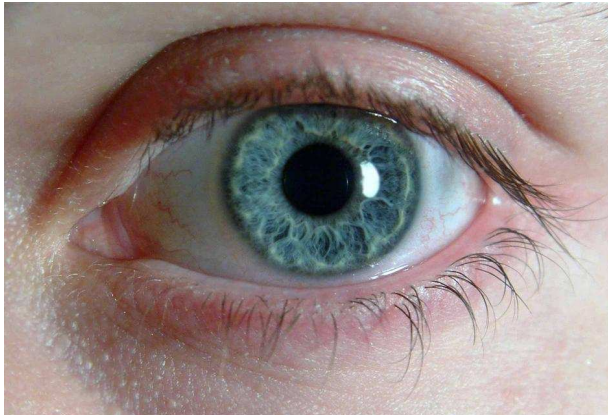


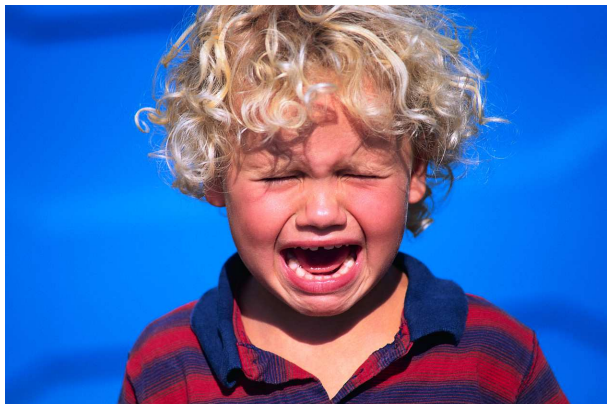
taste



touch











sight

hearing

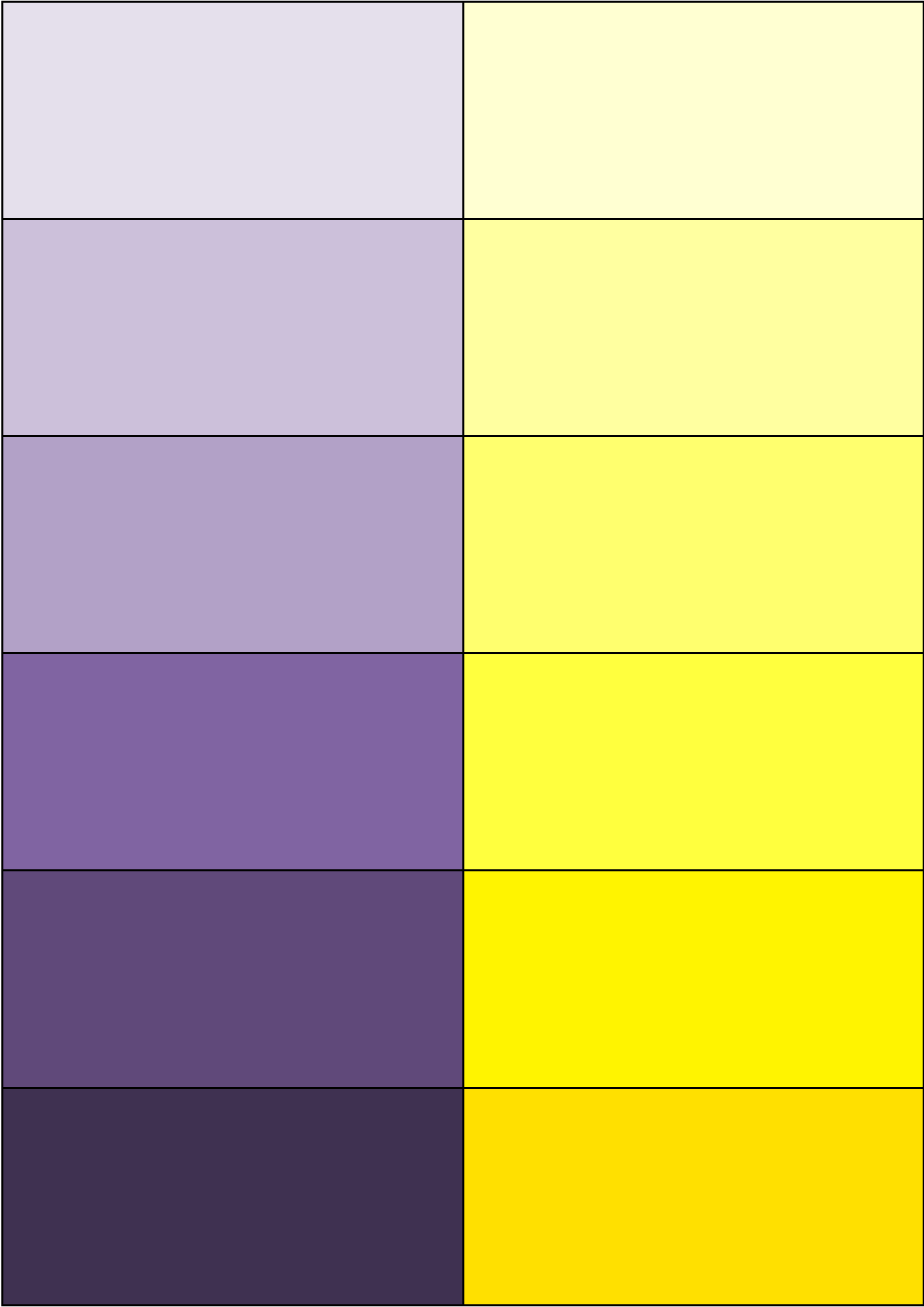
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taste

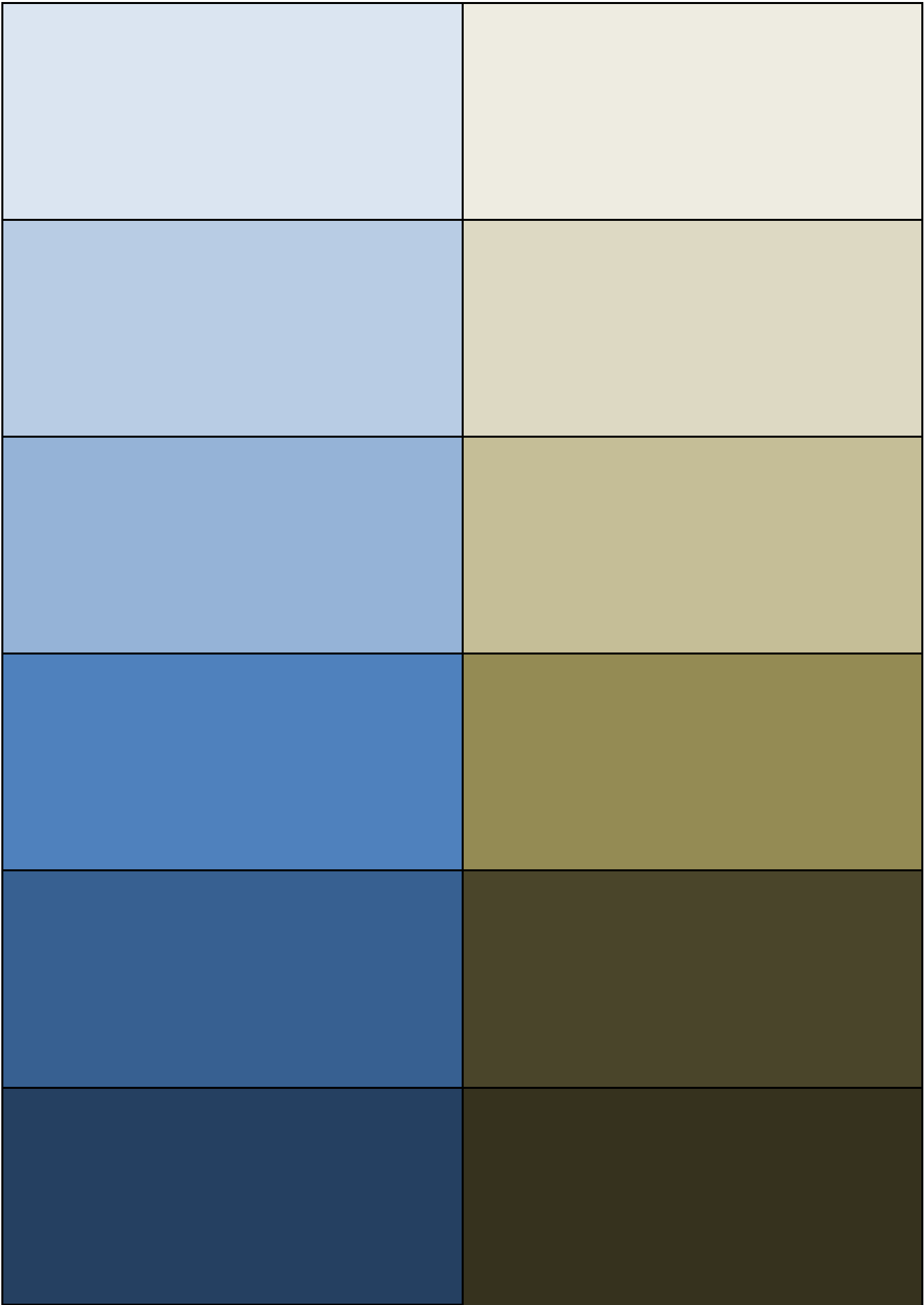
touch

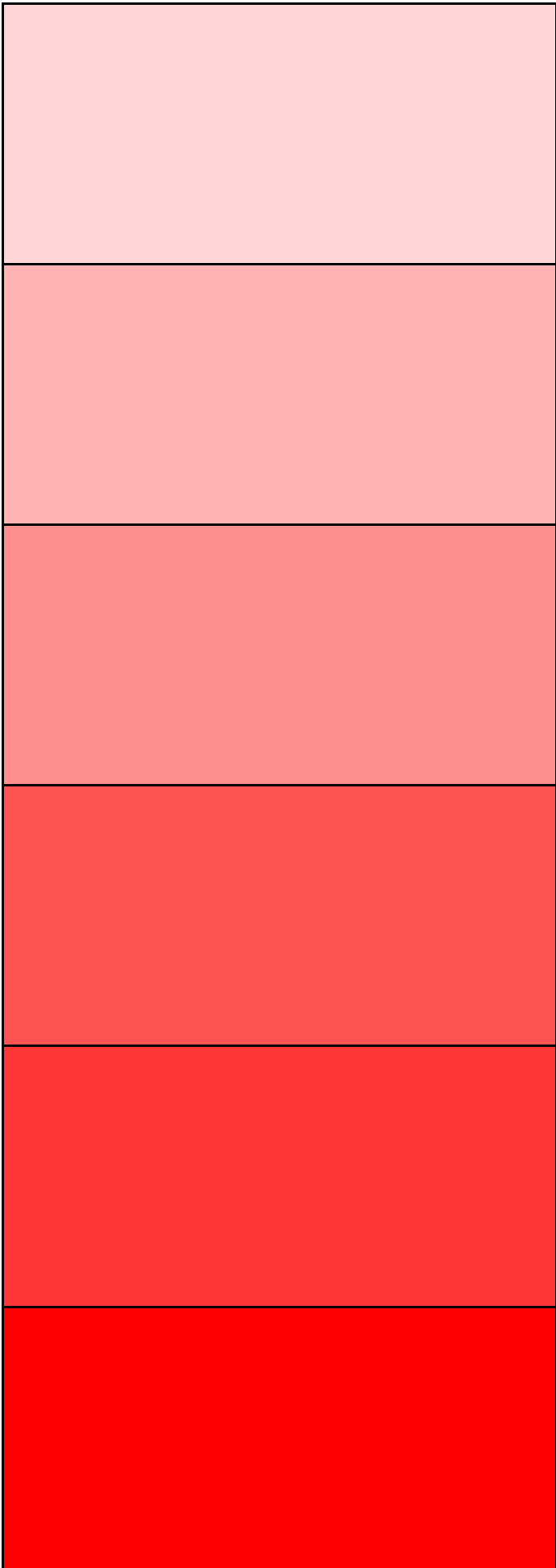
5 Senses











Plant



Animal





corn



horse



dandelion



snake



evergreen



bee



bird of paradise



elephant



grapes



fox



wheat



snail



poison oak



ant



red clover



frog



cacti



lion



apple blossoms



dog



tree



macaw



fern



butterfly



mushroom



wren



rice stalk



worm

A Plant ...

- make's its own food from carbon dioxide and water
- does not move
- takes in carbon dioxide and gives off oxygen
- does not have a nervous system
- can grow indefinitely, branching out in many directions

An Animal ...

- feeds on plants or other animals
- can move
- takes in oxygen and gives off carbon dioxide
- has a nervous system
- has a fixed growth and life span

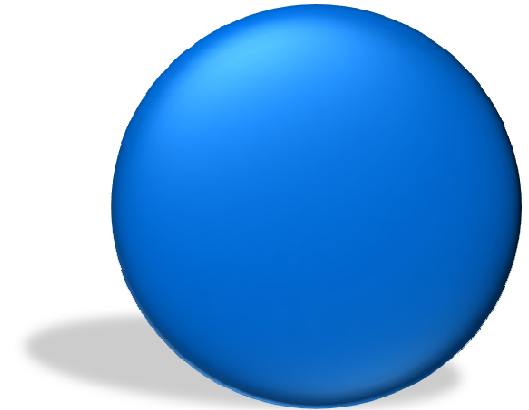
Plant

Animal

geometric solids



cube

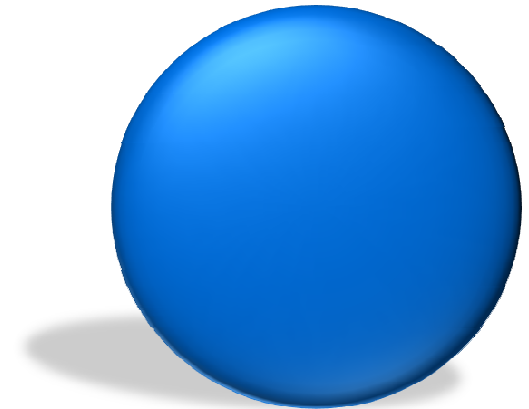


sphere

geometric solids



cube

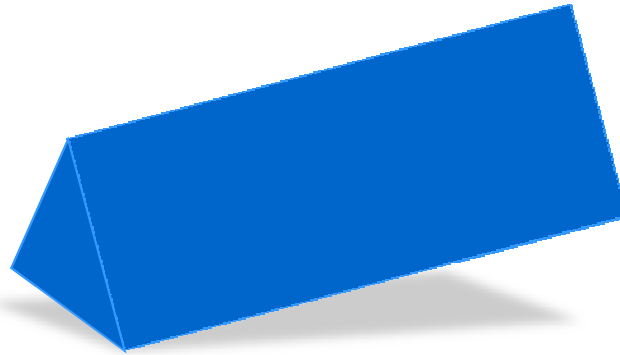


sphere

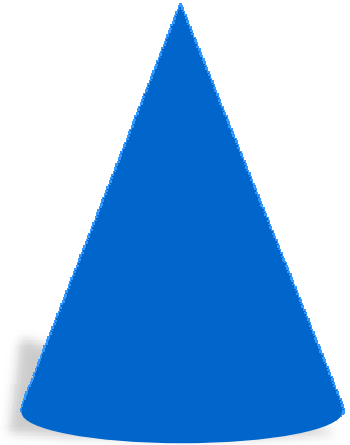
geometric solids



rectangular prism



triangular prism



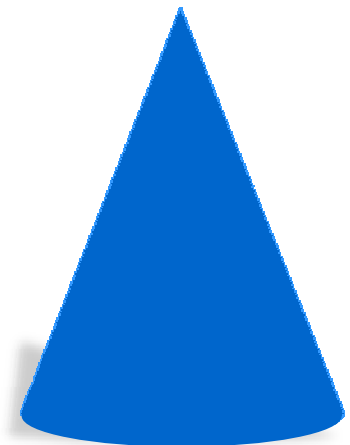
cone



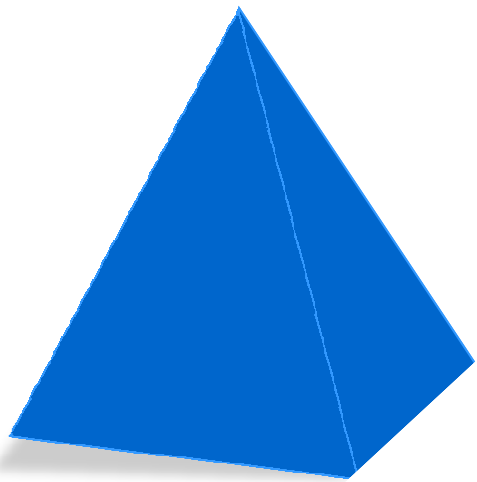
rectangular prism



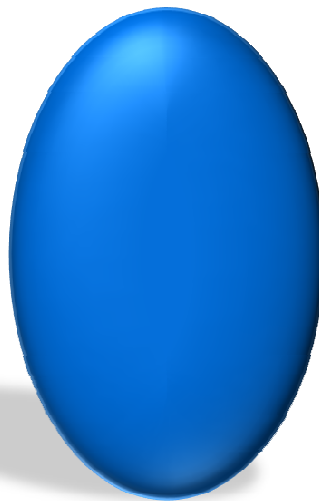
triangular prism



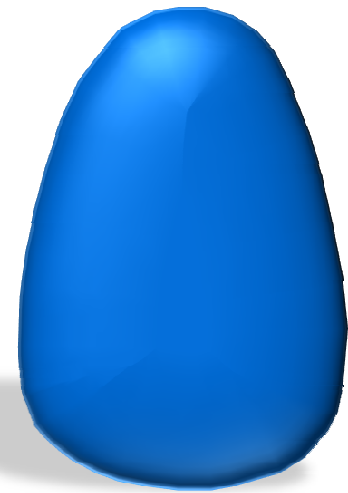
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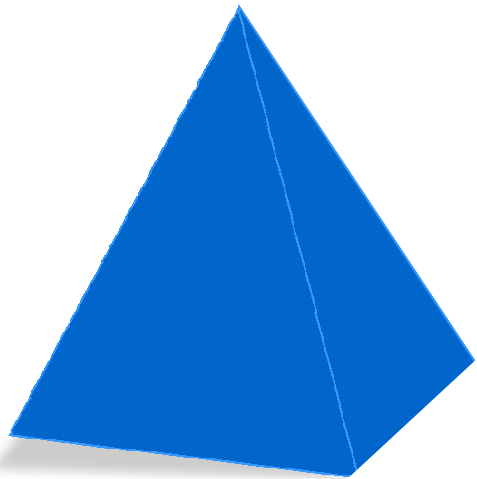
square based pyramid



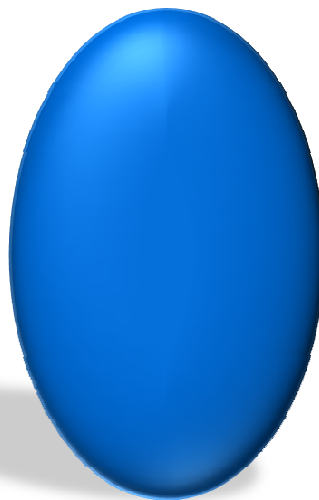
ellipsoid



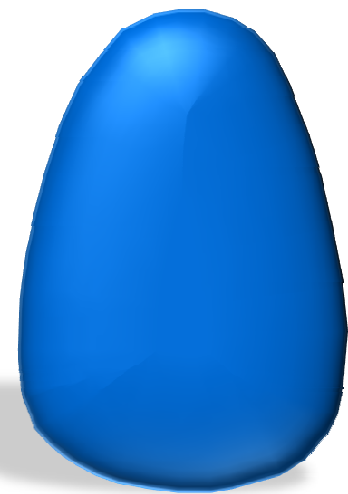
ovoid



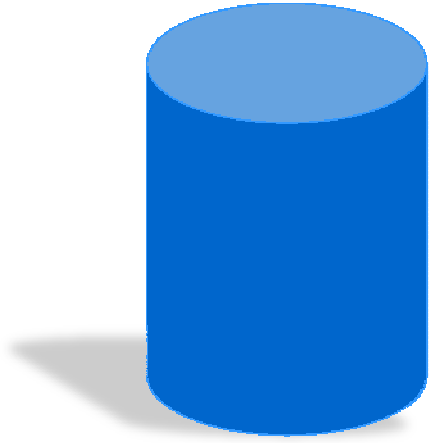
square based pyramid



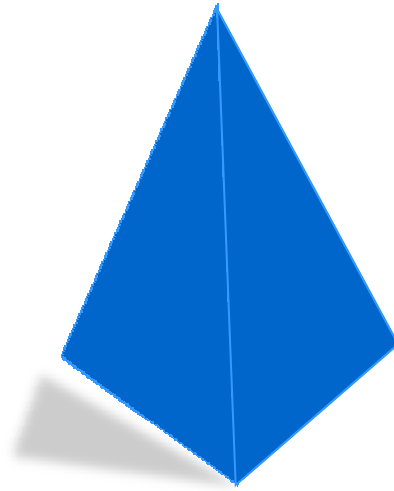
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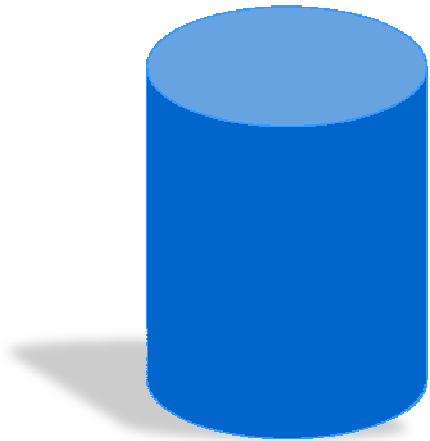
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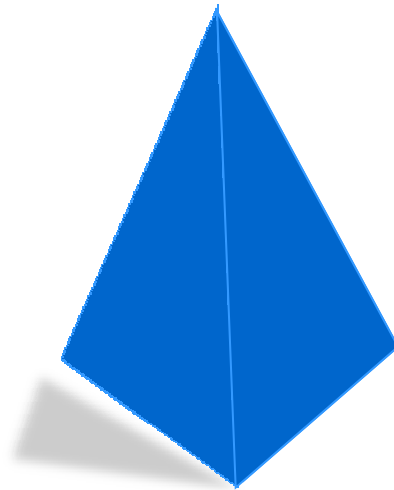
cylinder



triangle based pyramid

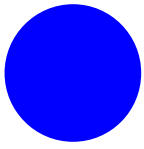
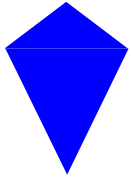
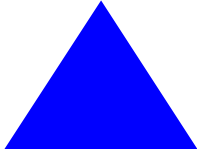
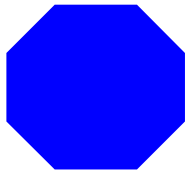




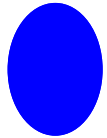

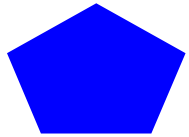
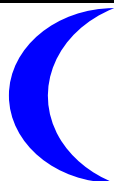



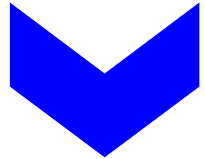
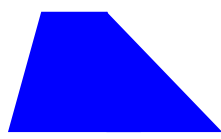
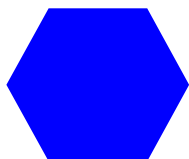


cylinder

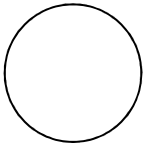
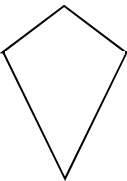
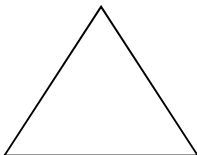
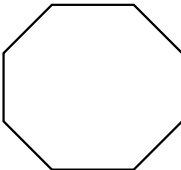

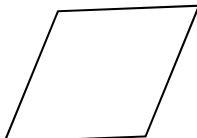
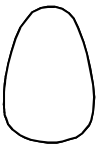
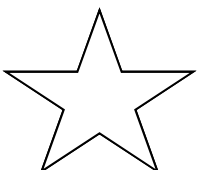
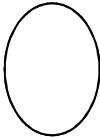
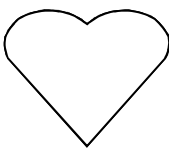
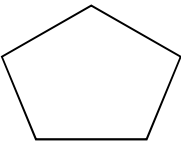
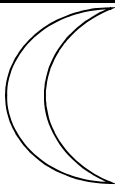
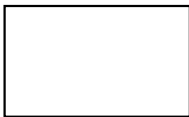
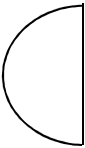

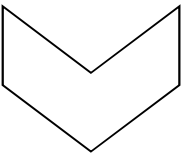
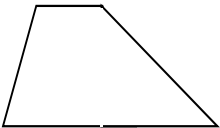
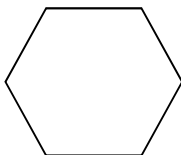


triangle based pyramid

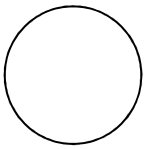
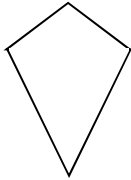
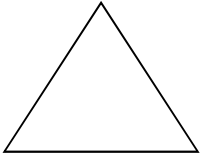
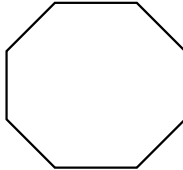

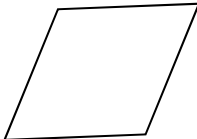
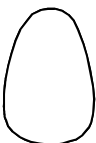
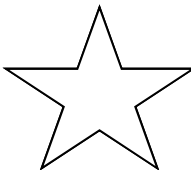
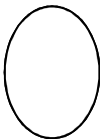
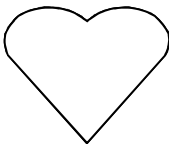
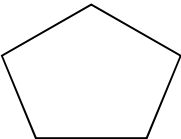
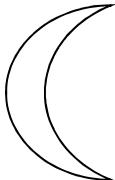
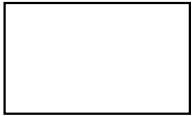
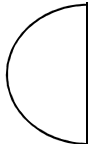
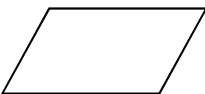
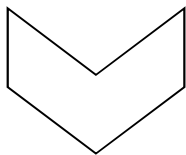
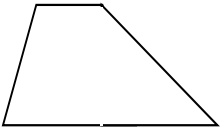
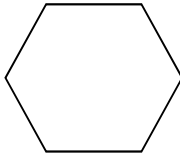
Geometric Matching Cards - Control Chart

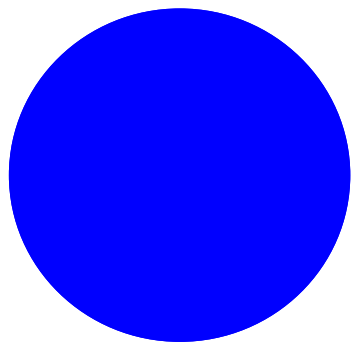
	circle	A simple closed curve. Every point is equally distant from the center.		kite	A quadrilateral with two pairs of equal adjacent sides.
	triangle	A three-sided polygon.		octagon	A polygon with eight sides and eight angles.
	square	A polygon with four equal sides, four right angles and parallel opposite sides.		rhombus	A parallelogram with four equal sides.
	oval	A simple closed curve. It is shaped like an egg.		five pointed star	Has five points of equal length and angles of 36° at each point.
	ellipse	A simple closed curve. Both ends have the same shape.		heart	A plane figure with rounded sides curving inward at the top and intersecting at the bottom.
	pentagon	A polygon which has five sides.		crescent	A curved shape resembling the moon in its first or last quarters.
	rectangle	A four-sided plane figure with four right angles.		semicircle	A half of a circle.
	parallelogram	A four-sided plane figure with opposite sides parallel.		chevron	A v-shaped pattern.
	trapezoid	A quadrilateral having two parallel sides.		hexagon	A flat figure with six angles and six sides.

Geometric Matching Cards - Control Chart

	circle	A simple closed curve. Every point is equally distant from the center.		kite	A quadrilateral with two pairs of equal adjacent sides.
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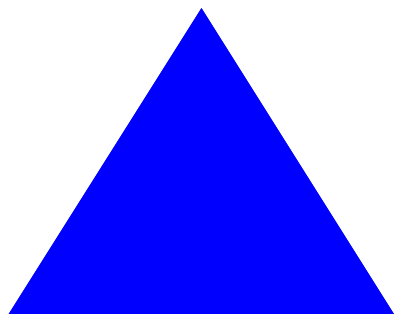
Geometric Shapes Worksheet - Draw the Shape

	circle		kite
	triangle		octagon
	square		rhombus
	oval		five pointed star
	ellipse		heart
	pentagon		crescent
	rectangle		semicircle
	parallelogram		chevron
	trapezoid		hexagon



circle

A simple closed curve.
Every point is equally
distant from the center.



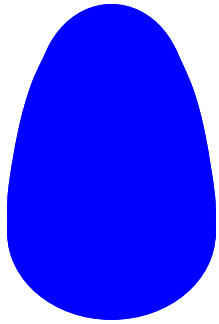
triangle

A three-sided polygon.



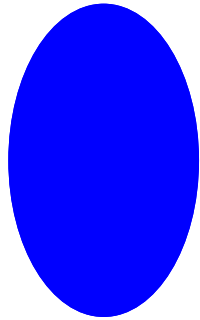
square

A polygon with four equal
sides, four right angles and
parallel opposite sides.



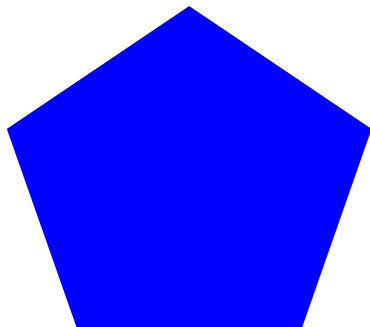
oval

A simple closed curve. It is shaped like an egg.



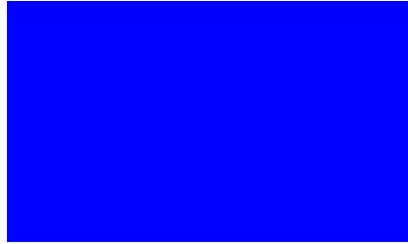
ellipse

A simple closed curve. Both ends have the same shape.



pentagon

A polygon which has five sides.



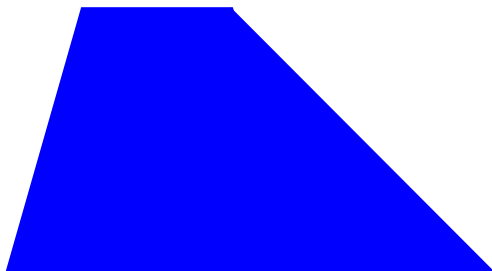
rectangle

A four-sided plane figure
with four right angles.



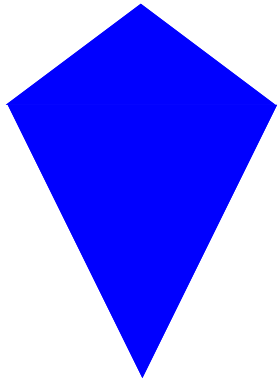
parallelogram

A four-sided plane figure
with opposite sides parallel.



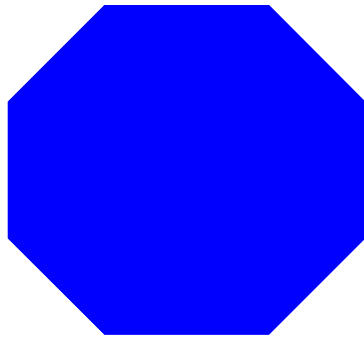
trapezoid

A quadrilateral having two
parallel sides.



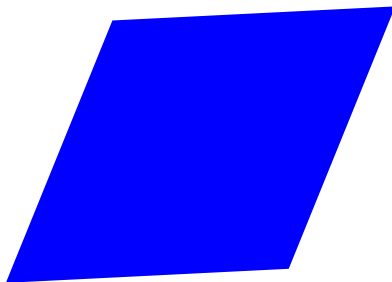
kite

A quadrilateral with two
pairs of equal adjacent
sides.



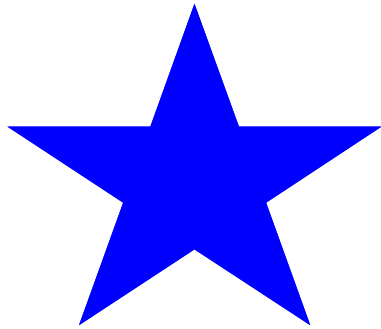
octagon

A polygon with eight sides
and eight angles.



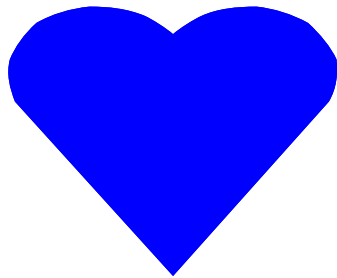
rhombus

A parallelogram with four
equal sides.



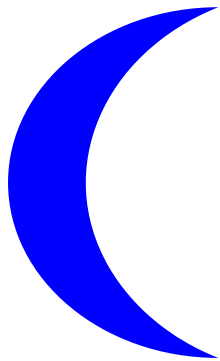
five pointed
star

Has five points of equal length and angles of 36° at each point.



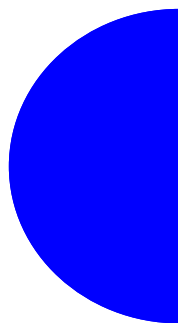
heart

A plane figure with rounded sides curving inward at the top and intersecting at the bottom.



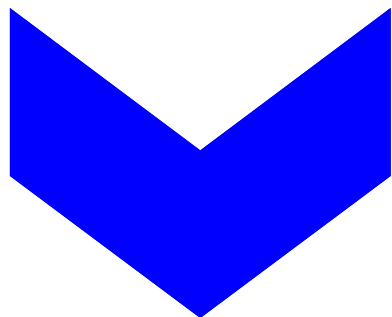
crescent

A curved shape resembling the moon in its first or last quarters.



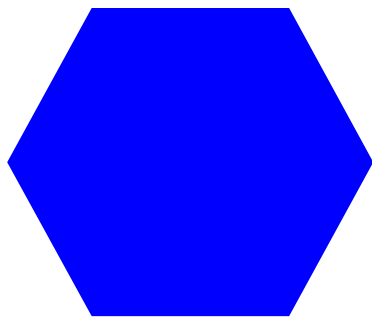
semicircle

A half of a circle.



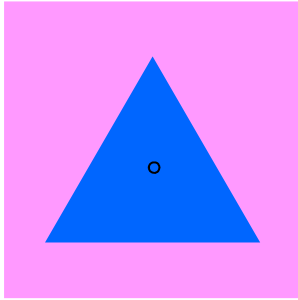
chevron

A v-shaped pattern.



hexagon

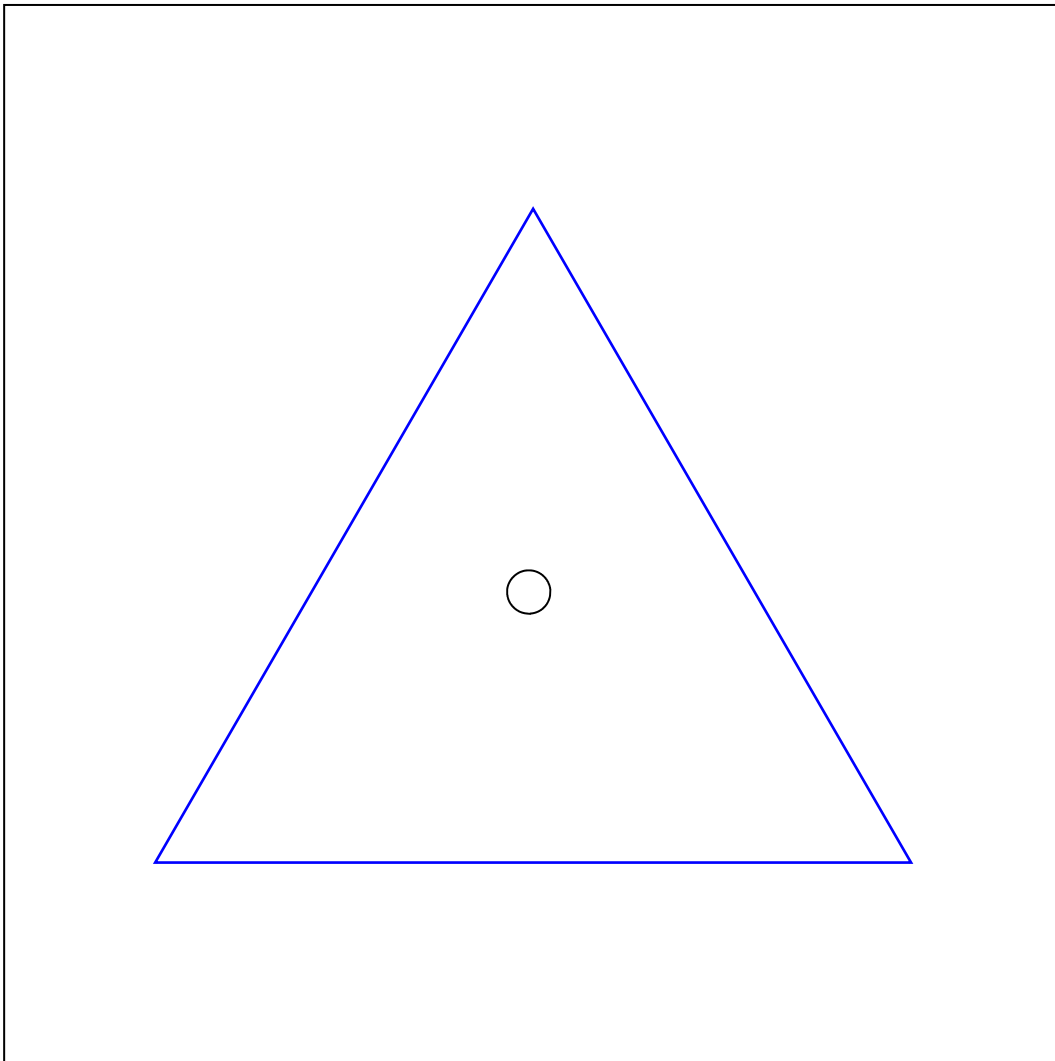
A flat figure with six angles
and six sides.

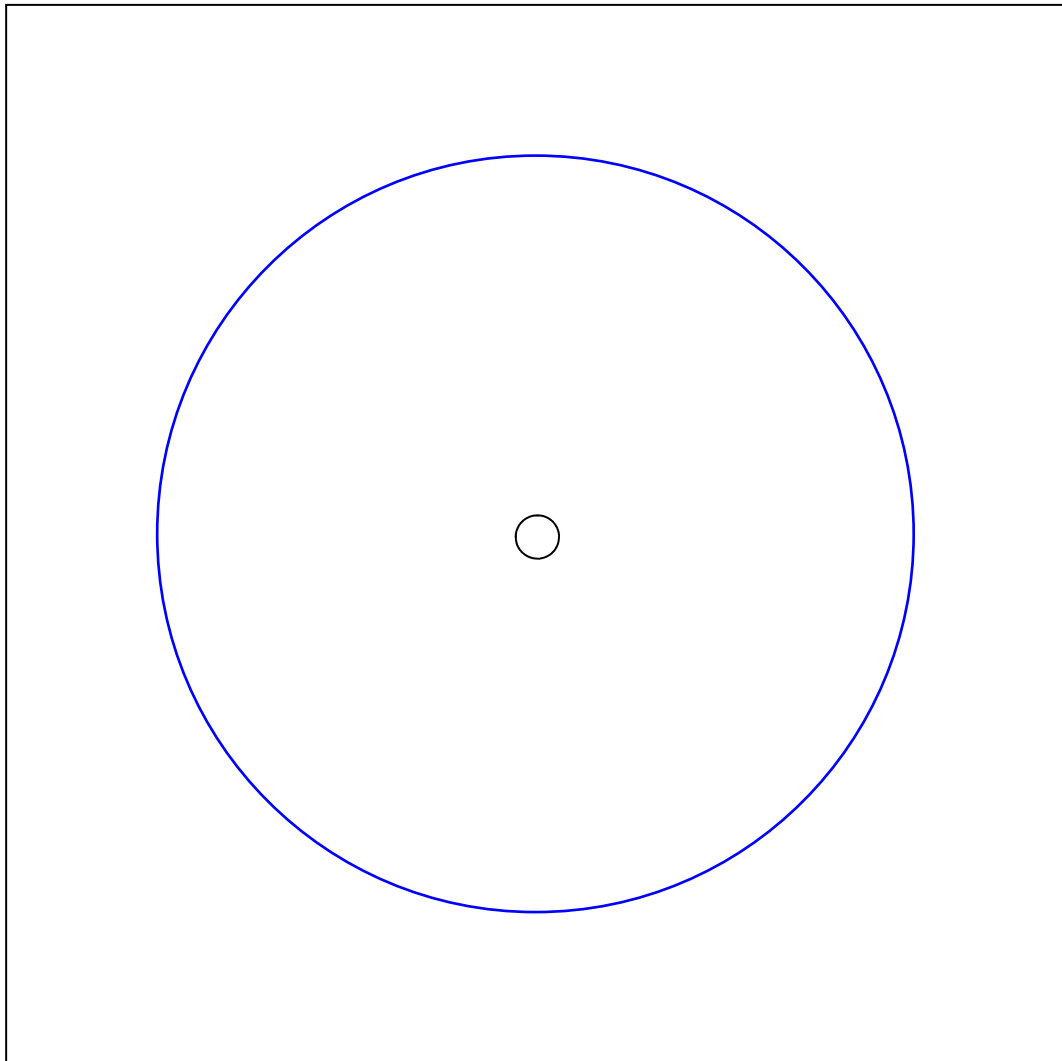


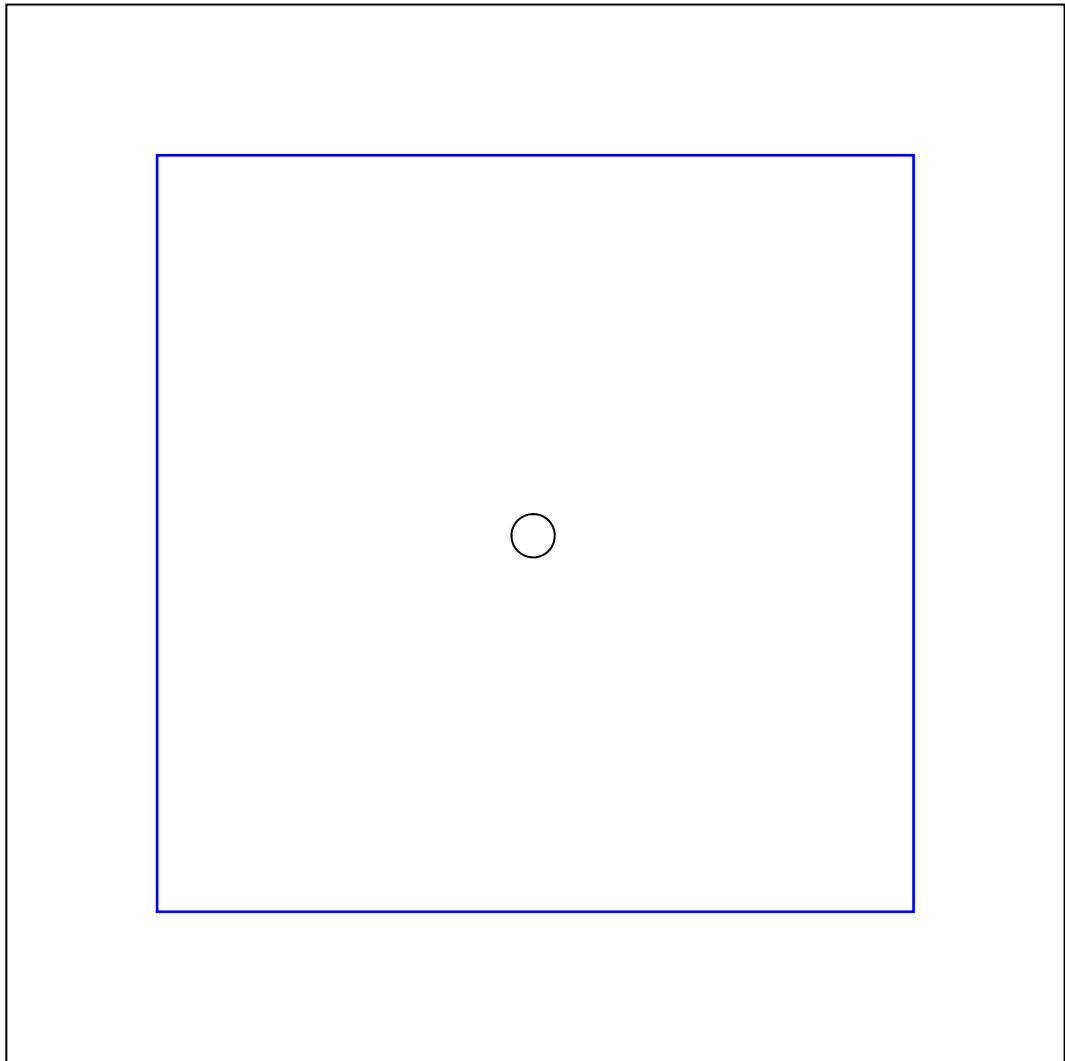
Dr. Montessori analyzed the movements which are connected with writing and developed the Metal Insets for directly preparing the child for handwriting. The Metal Inset exercises strengthen the three finger grip and coordinate the necessary wrist movements. The exercises also advance proficiency in lightness of touch and evenness of pressure through drawing activities.

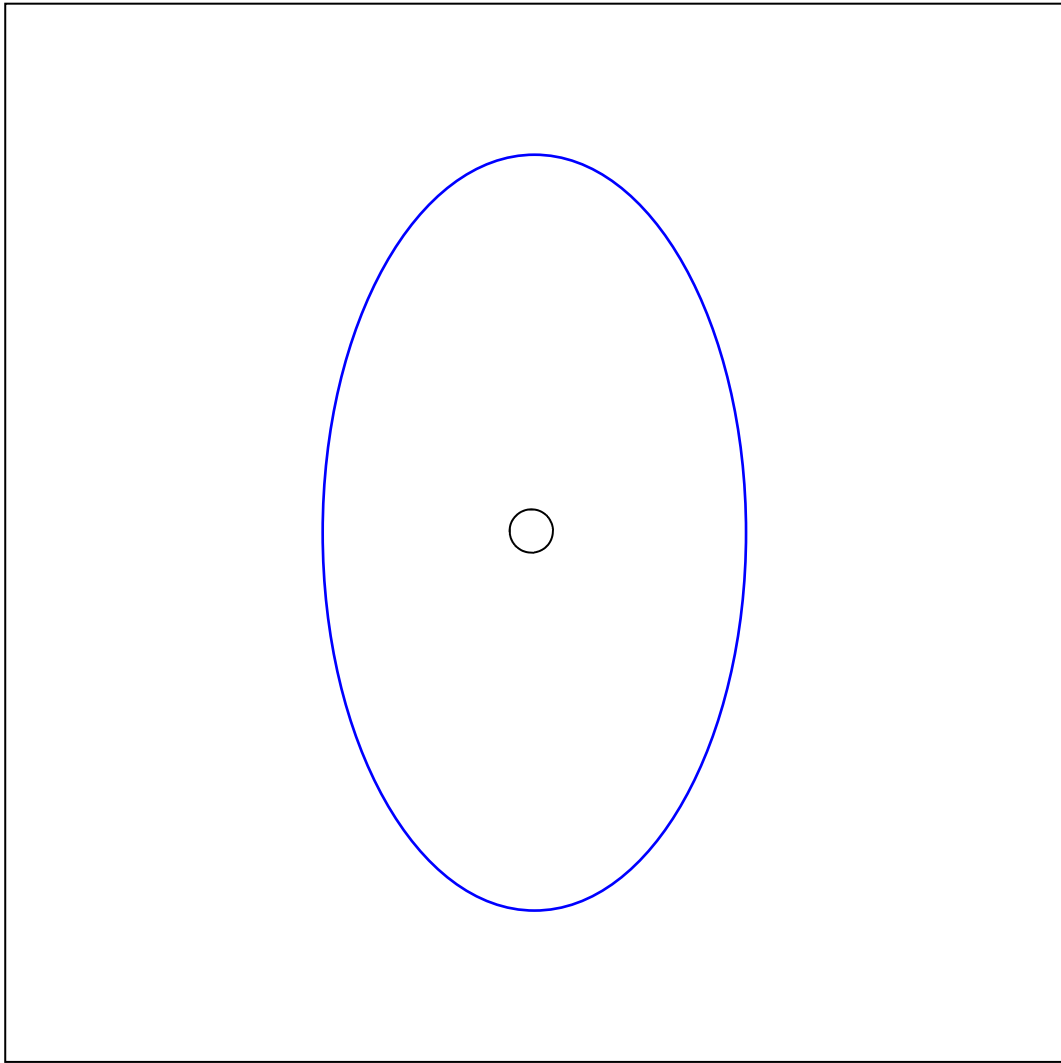
The Metal Insets invite unlimited geometric design possibilities. The Metal Insets consist of 10 insets and frames, each being 14cm x 14 cm.

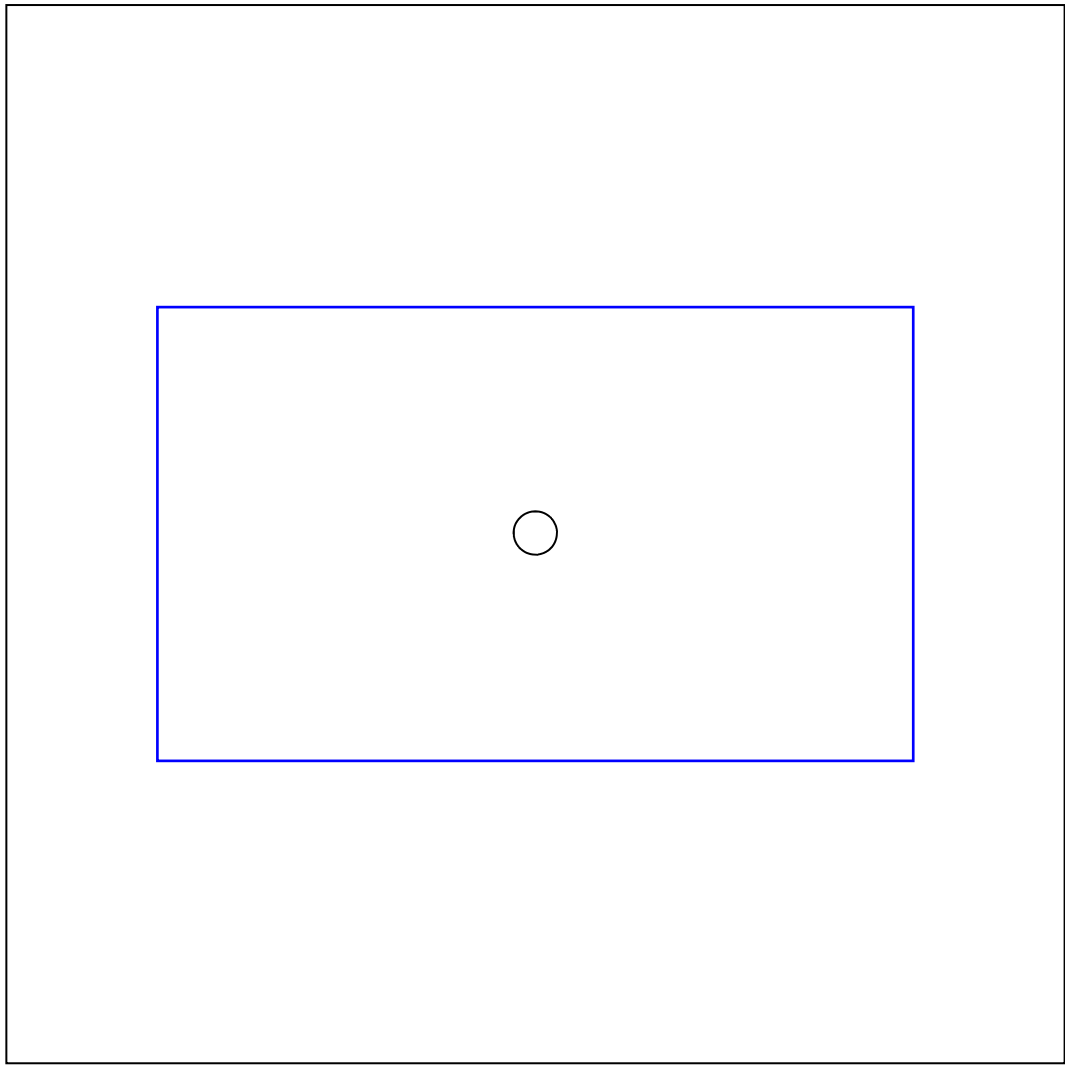
They are traditionally made from metal, with the frame painted pink and the inset painted blue.

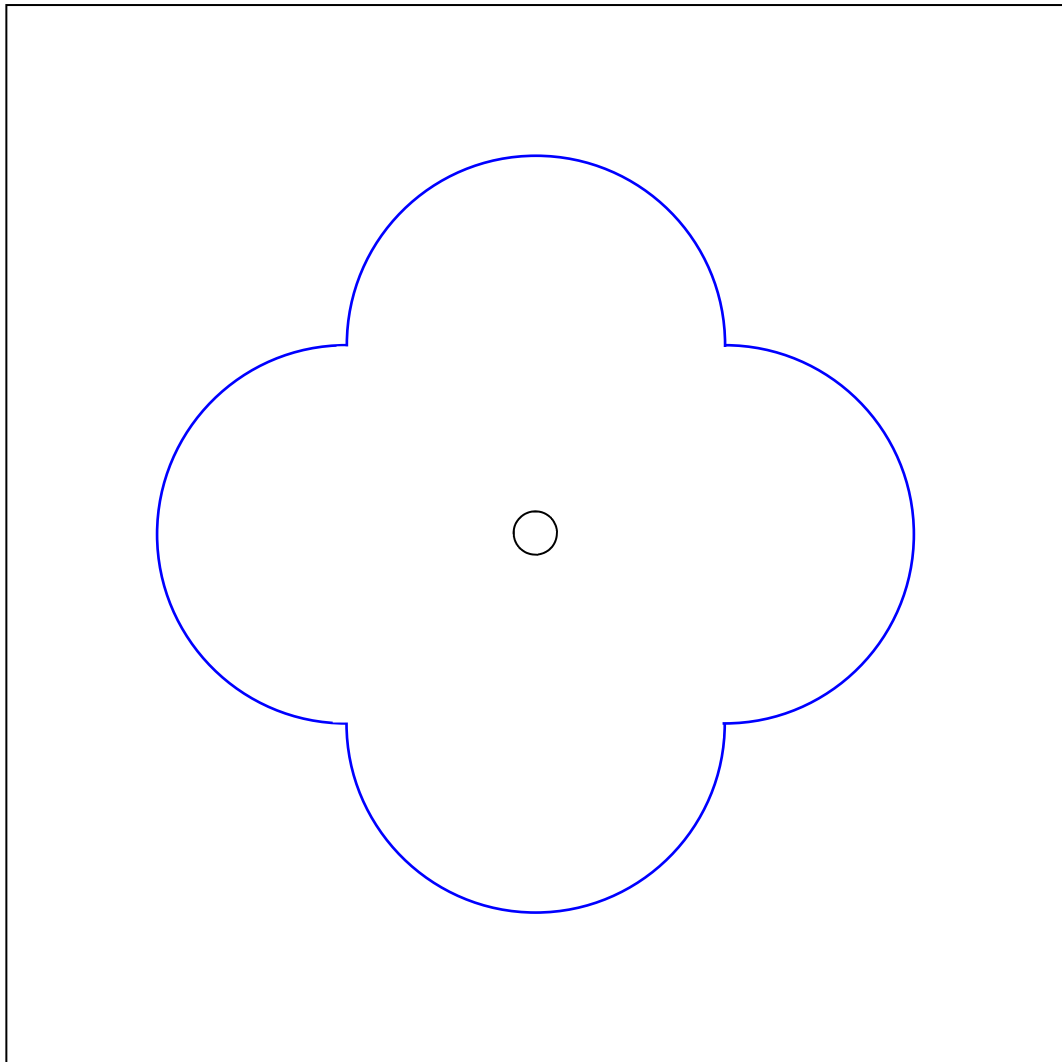


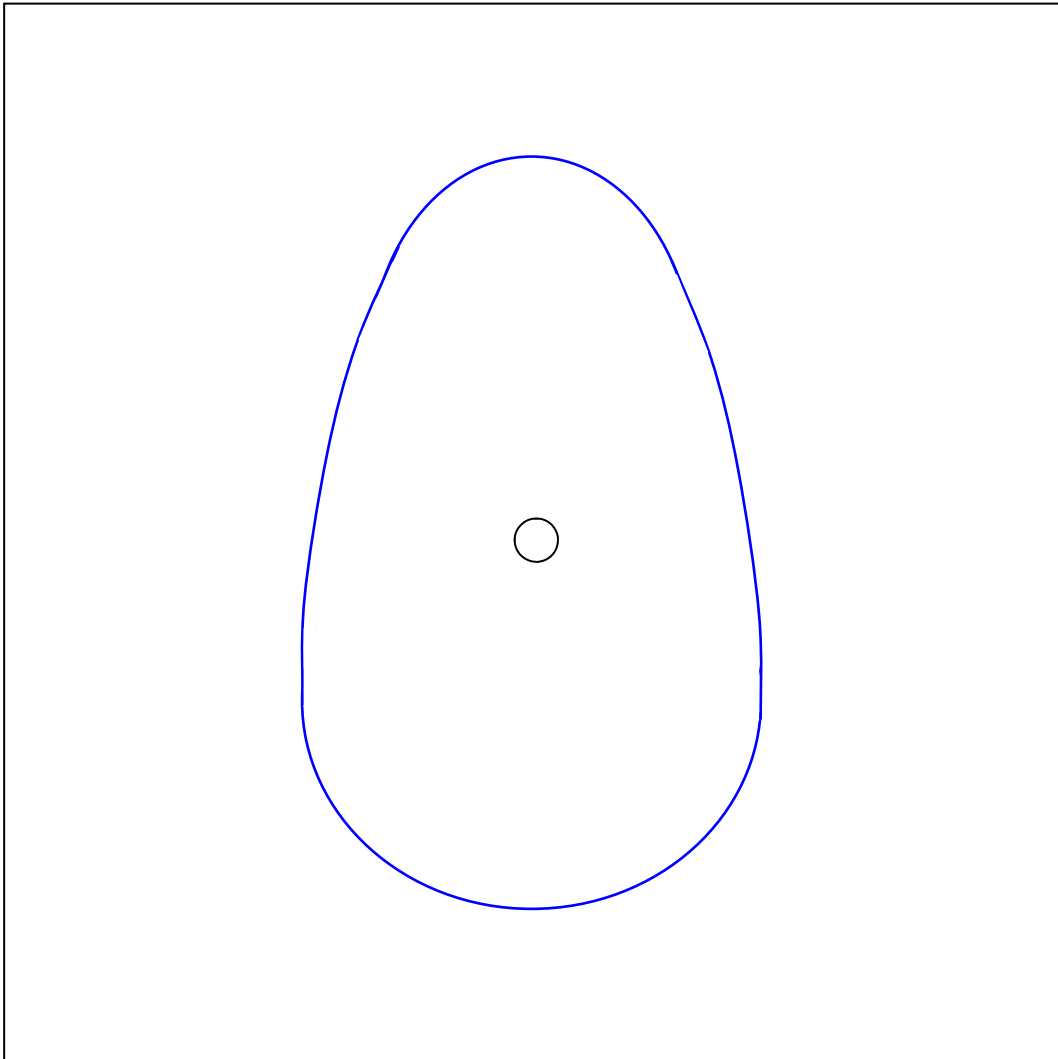


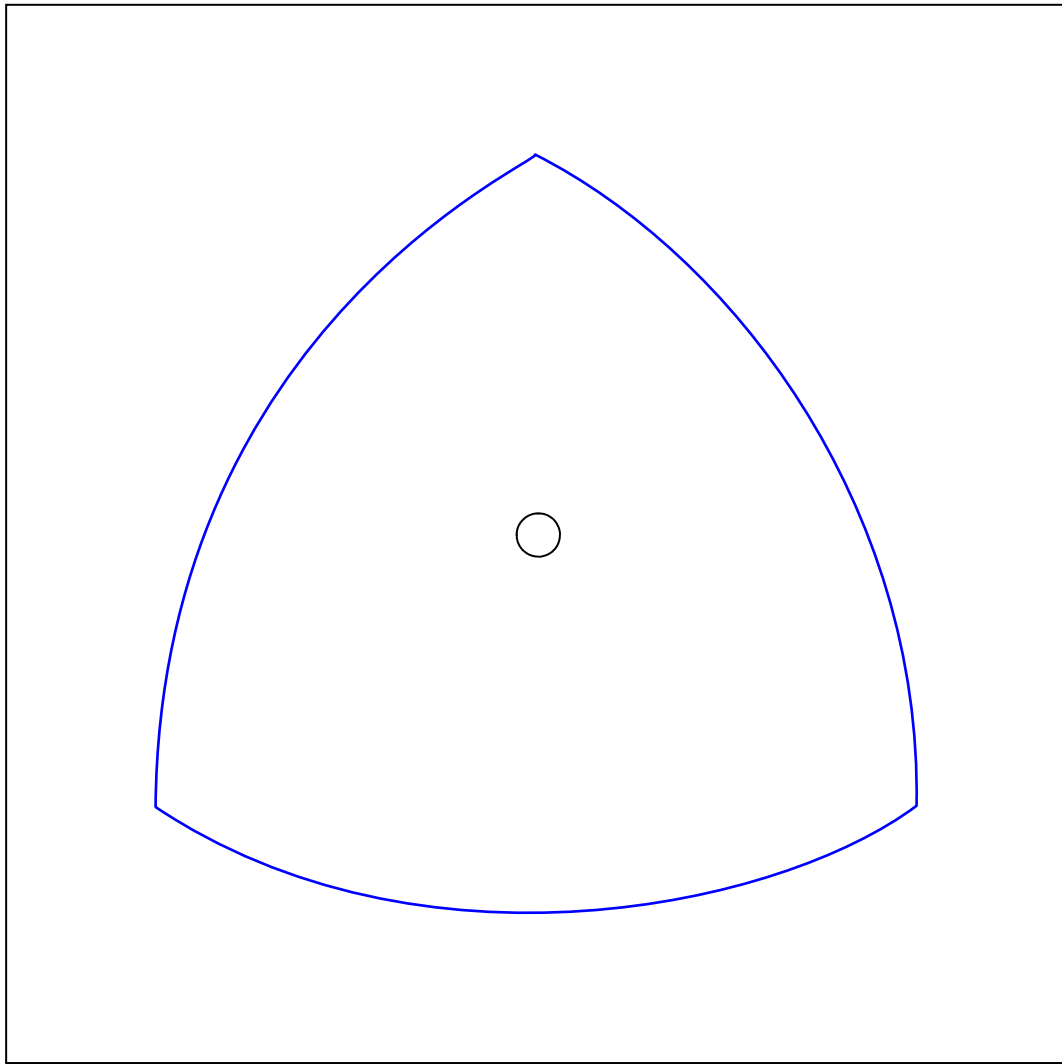


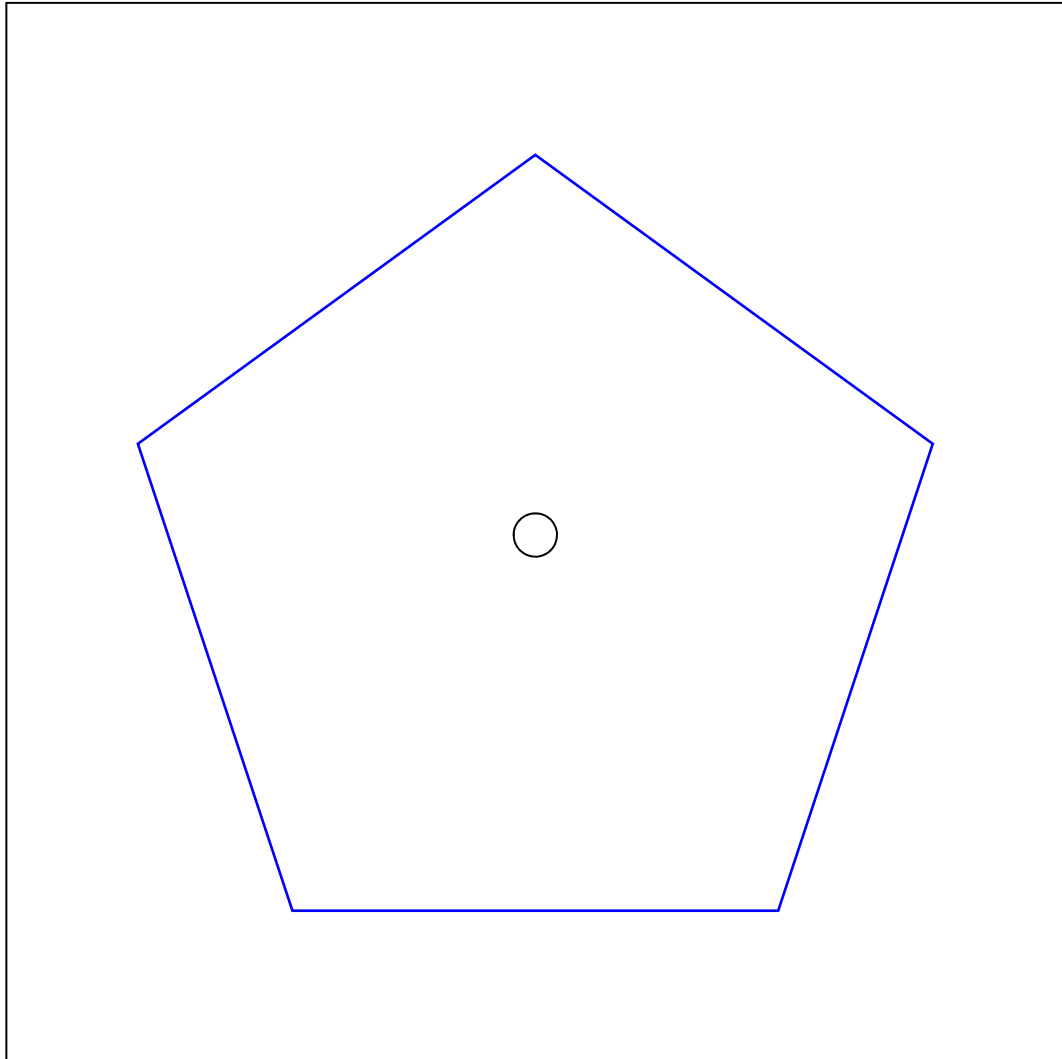


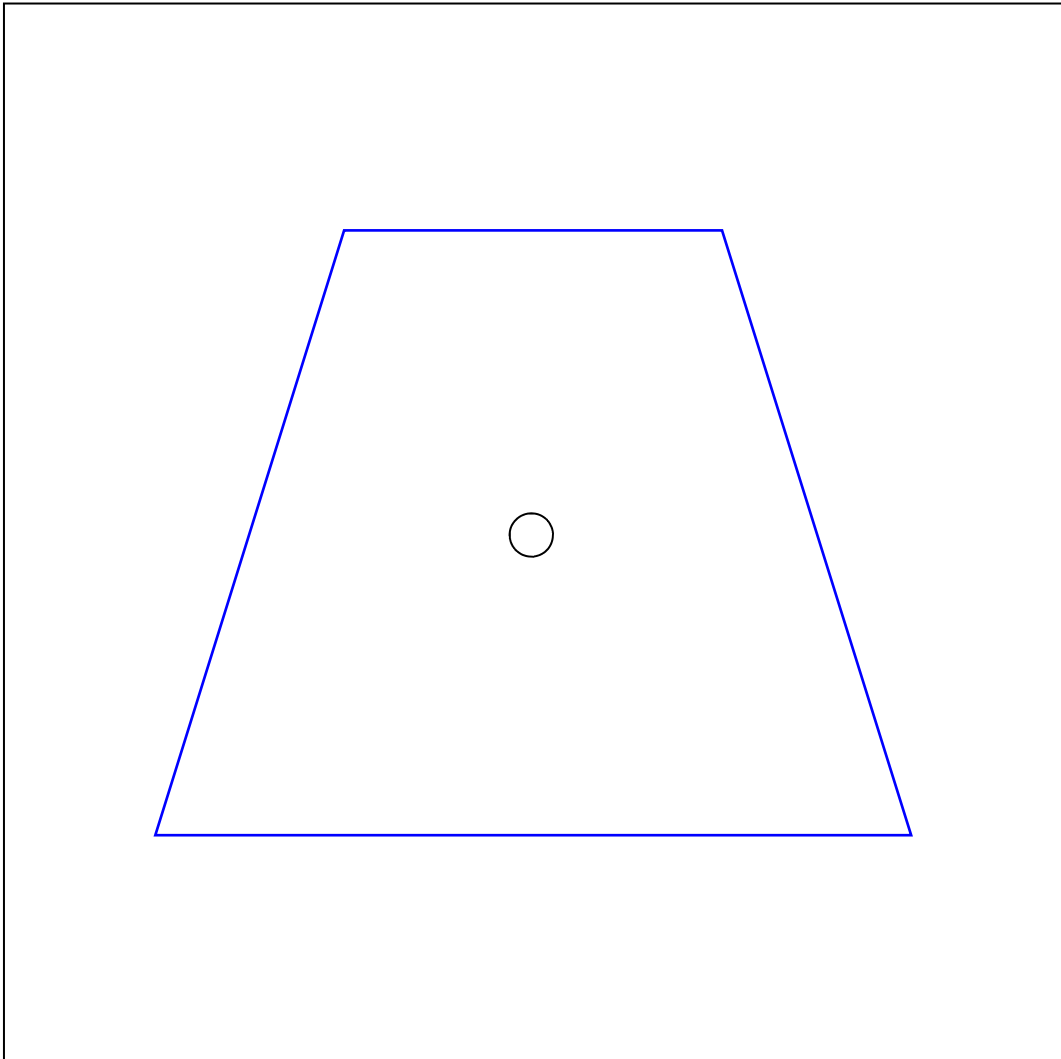






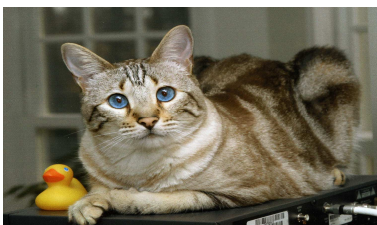




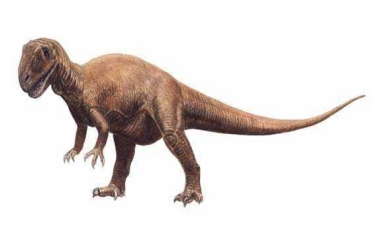












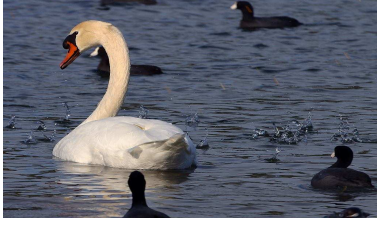











<u>Name</u>	<u>Animal</u>	<u>Male</u>	<u>Female</u>	<u>Baby</u>
Alligator		bull	cow	hatchling
Antelope		buck	doe	calf
Bear		boar	sow	cub
Bee		drone	queen	larva
Cat		tomcat	queen	kitten

Chicken		rooster	hen	chick
Crow		cock	hen	chick
Dinosaur		bull	cow	hatchling
Duck		drake	duck	duckling
Ferret		hob	jill	kit
Fox		regnard	vixen	kit

Goat		billy	nanny	kid
Grasshopper		male	female	nymph
Hedgehog		boar	sow	piglet
Horse		stallion	mare	foal
Human		man	woman	baby
Kangaroo		buck	doe	joey

Lion		lion	lioness	cub
Peafowl		peacock	peahen	peachick
Sheep		ram	ewe	lamb
Swan		cob	pen	cygnet
Tiger		tiger	tigress	cub
Turkey		tom	hen	poult

<u>Name</u>	<u>Animal</u>	<u>Male</u>	<u>Female</u>	<u>Baby</u>
Alligator		bull	cow	hatchling
Antelope		buck	doe	calf
Bear		boar	sow	cub
Bee		drone	queen	larva
Cat		tomcat	queen	kitten

Chicken



rooster

hen

chick

Crow

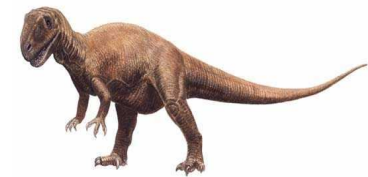


cock

hen

chick

Dinosaur



bull

cow

hatchling

Duck



drake

duck

duckling

Ferret



hob

jill

kit

Fox



regnard

vixen

kit

Goat



billy

nanny

kid

Grasshopper



male

female

nymph

Hedgehog



boar

sow

piglet

Horse



stallion

mare

foal

Human



man

woman

baby

Kangaroo



buck

doe

joey

Lion



lion

lioness

cub

Peafowl

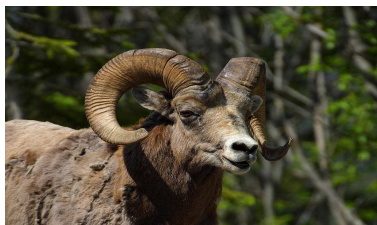


peacock

peahen

peachick

Sheep

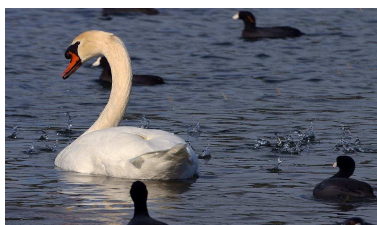


ram

ewe

lamb

Swan



cob

pen

cygnet

Tiger



tiger

tigress

cub

Turkey



tom

hen

poult

North America



Black Bear



Snowy Owl



Elk



Beaver



Armadillo



Bald Eagle

South America



Two-toed Sloth



Poison Dart Frog



Macaw



Guanaco



Ocelot



Andean Condor

Asia



Clouded Leopard



Giant Panda



Asian Elephant



Peafowl



Bengal Tiger



Orangutan

Africa



African Lion



Ring-Tailed Lemur



Giraffe



Mandrill



Spotted Hyena



Rhinoceros

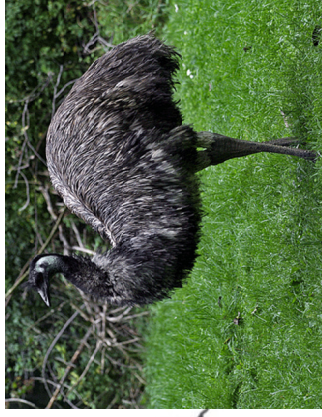
Australasia



Kangaroo



Kookaburra



Emu



Echidna



Koala



Tuatara

Antarctica



Skua



Sperm Whale



Wandering Albatross



Adelie Penguin



Orca Whale



Leopard Seal

Europe



Camargue Horse



Brown Bear



Rock Partridge



Wolverine

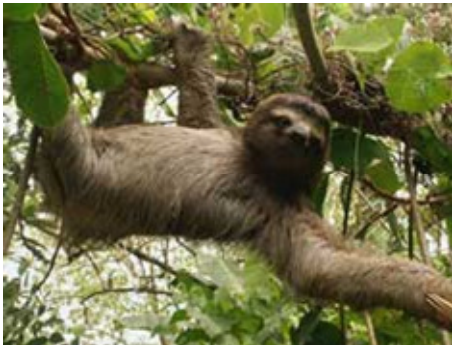


Red Fox

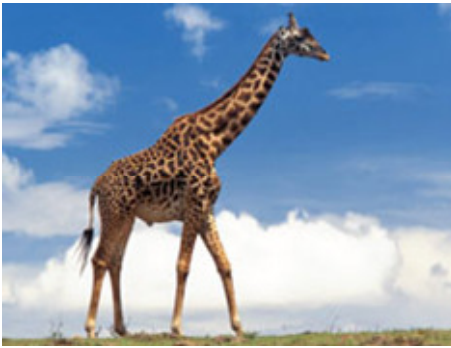


Hedgehog

Cut in to individual picture cards and have the children sort them on to the blank sheets.



Cut in to individual picture cards and have the children sort them on to the blank sheets.



Cut in to individual picture cards and have the children sort them on to the blank sheets.



North America



South America



Europe



Asia



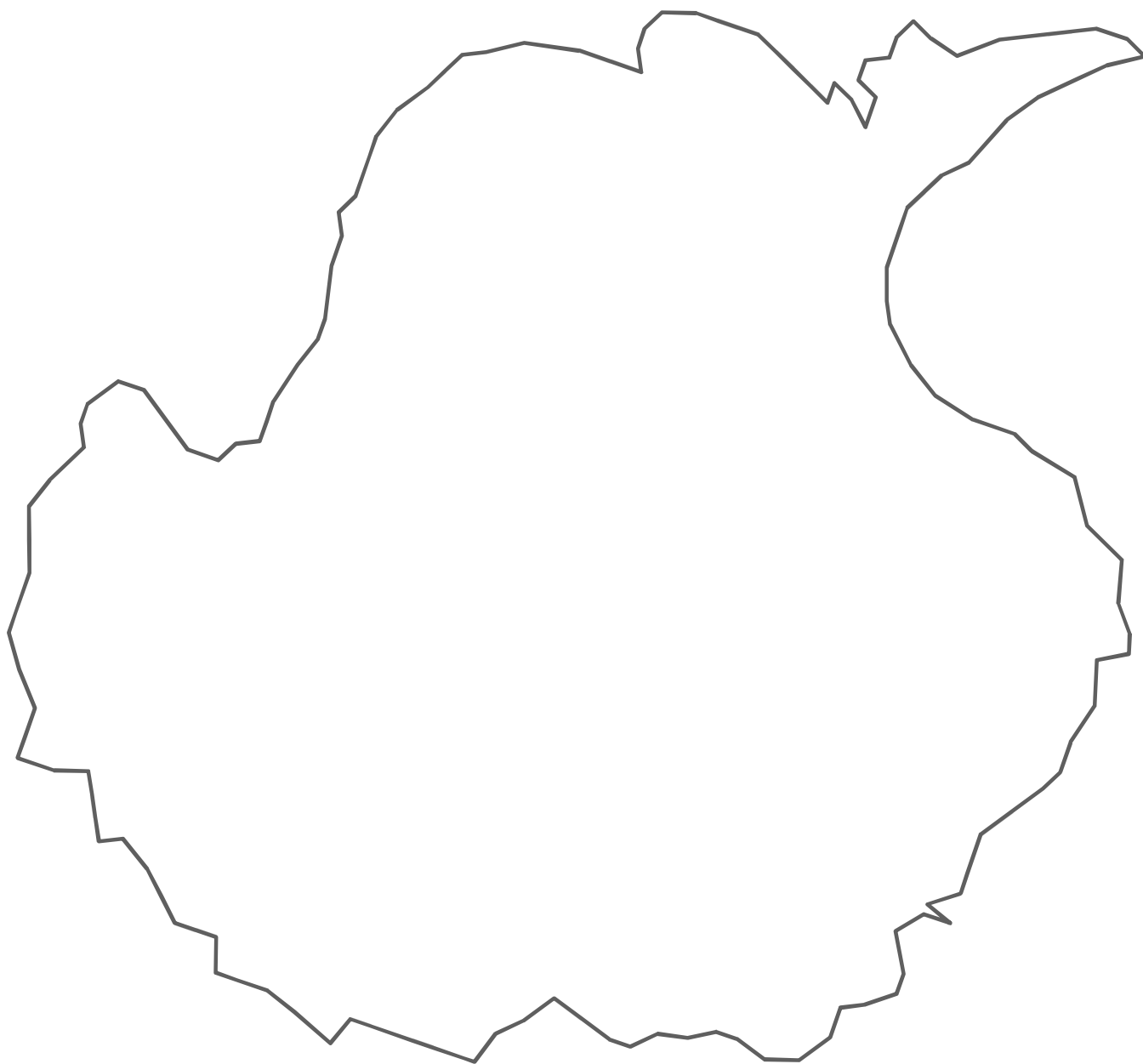
Africa



Australasia



Antarctica

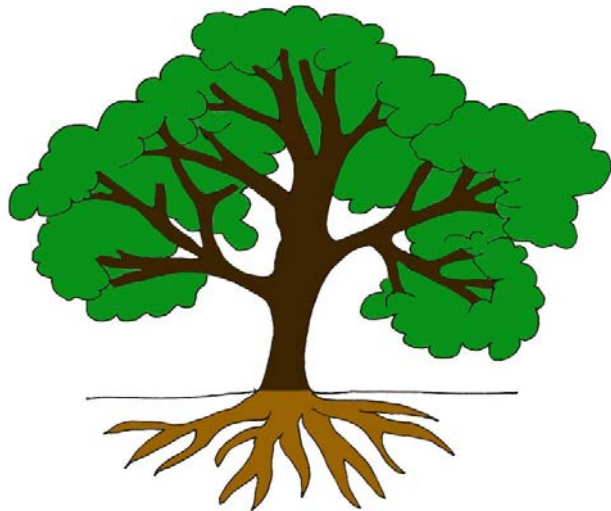




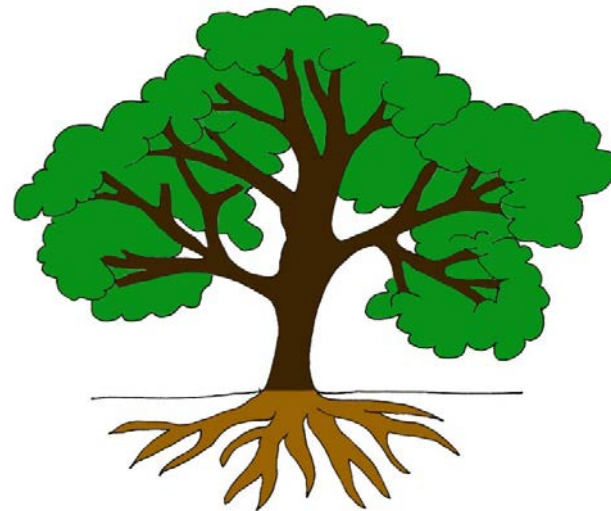
The Tree

The Tree

The Tree



tree



tree

card #1 (card with label attached)

card #2 (card without label)

card #3
(label)

This material contains 3-Part Cards for each item in this set. Use the solid lines as cutting guides for each of the 3 cards.



roots



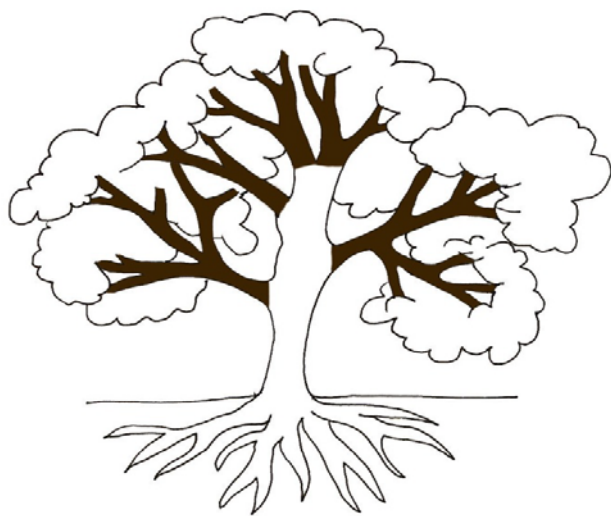
roots



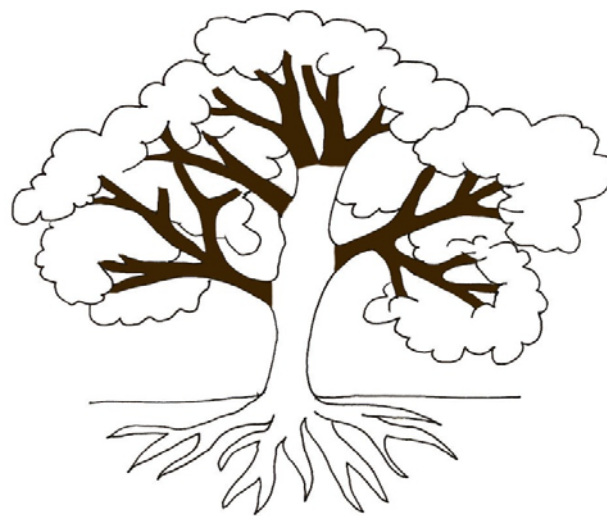
trunk



trunk



branches



branches

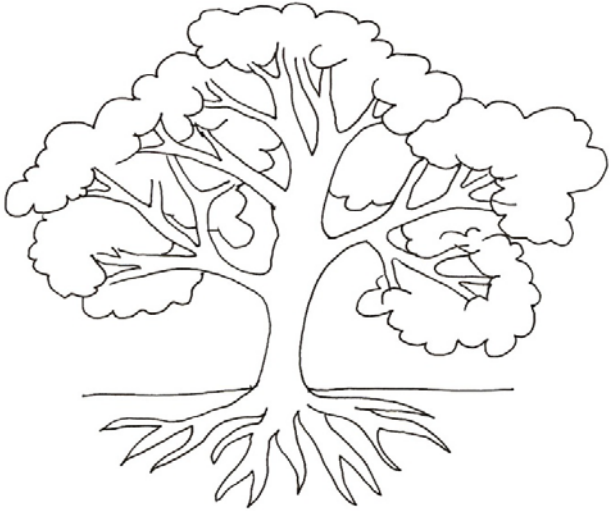
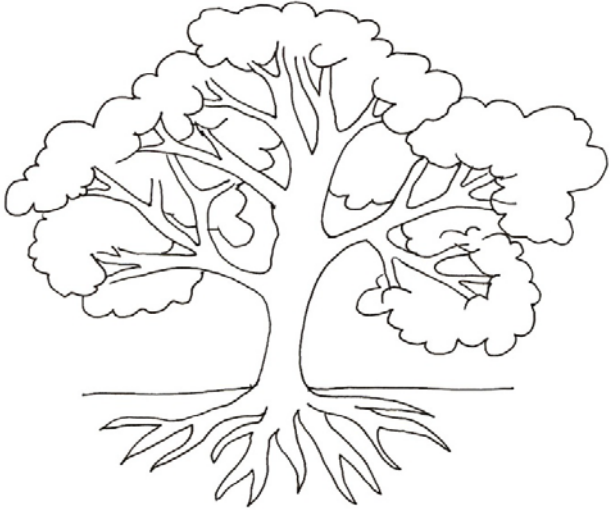
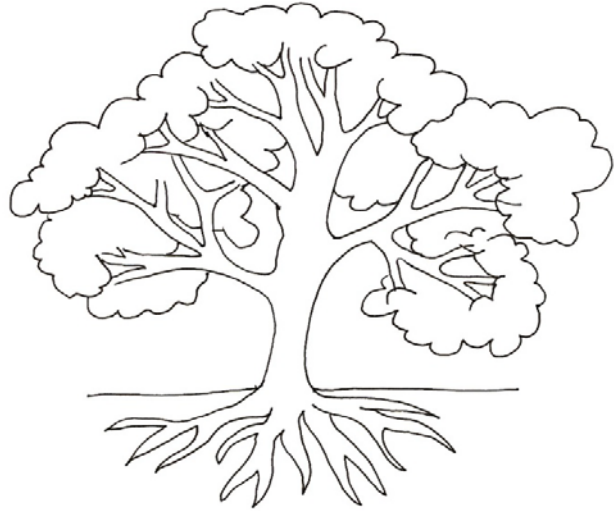
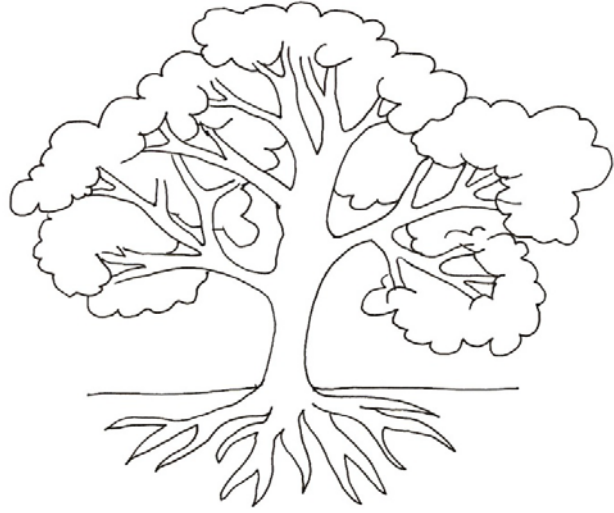


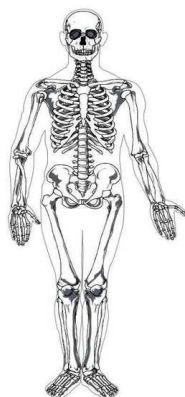
leaves



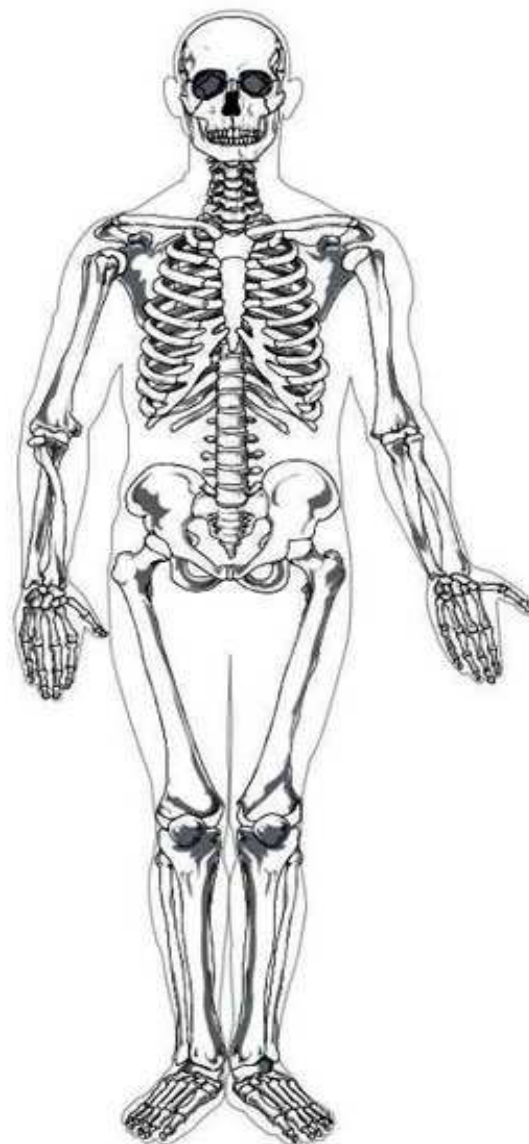
leaves

This page of blank pictures is your Black-Line Master. You have permission to reprint/copy this page for your students to use. Have them color each part, label it and make a booklet.

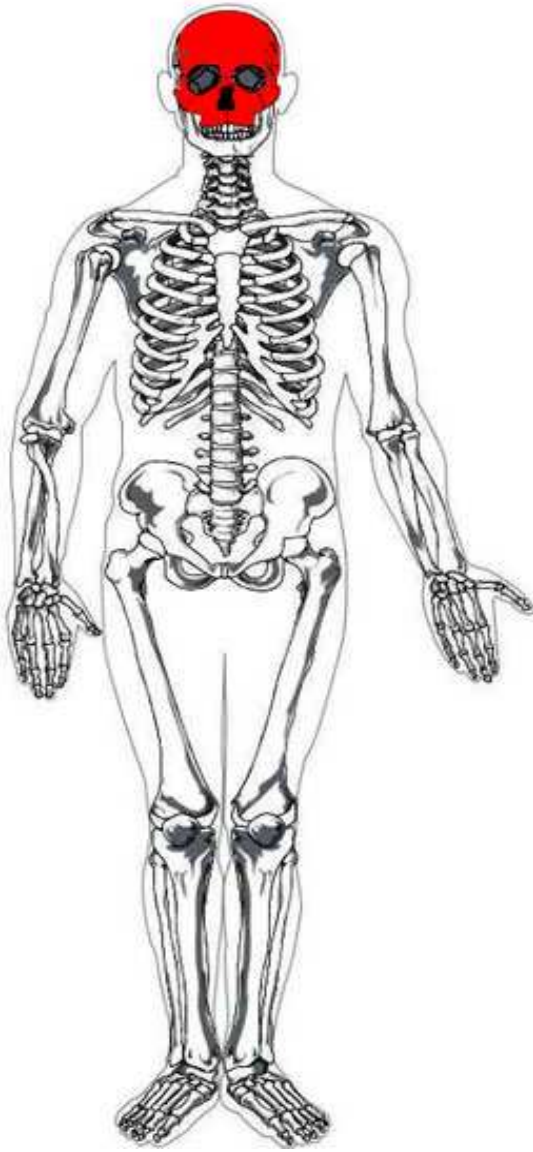




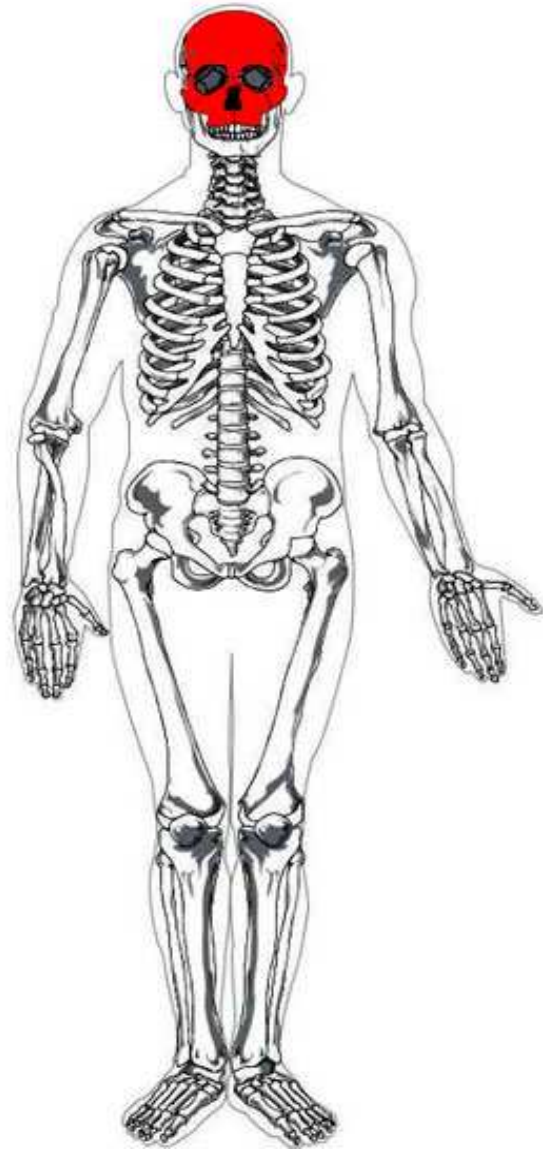
The Human Skeleton



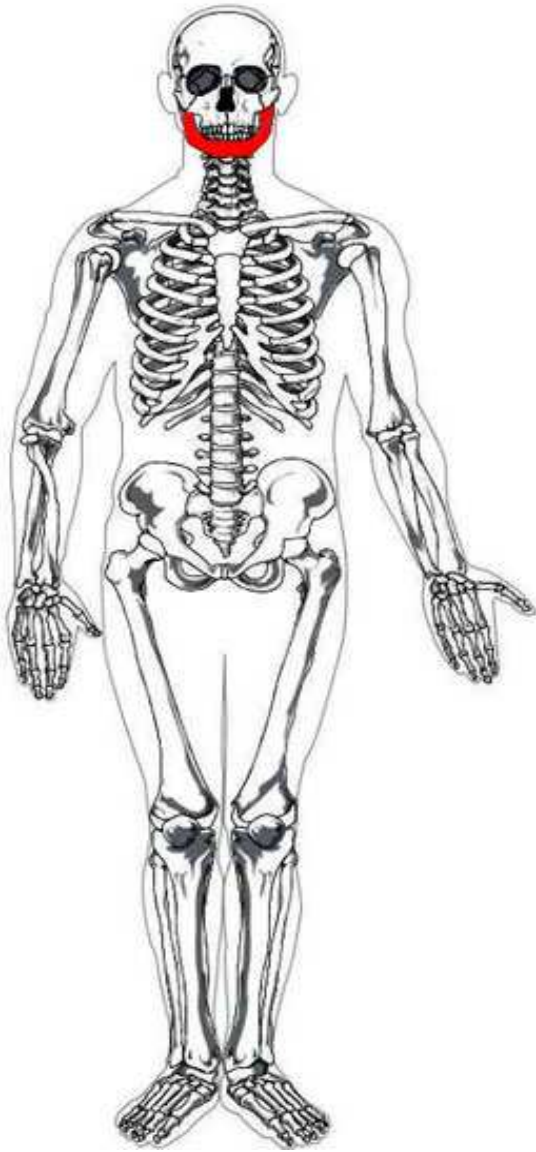
The Human Skeleton



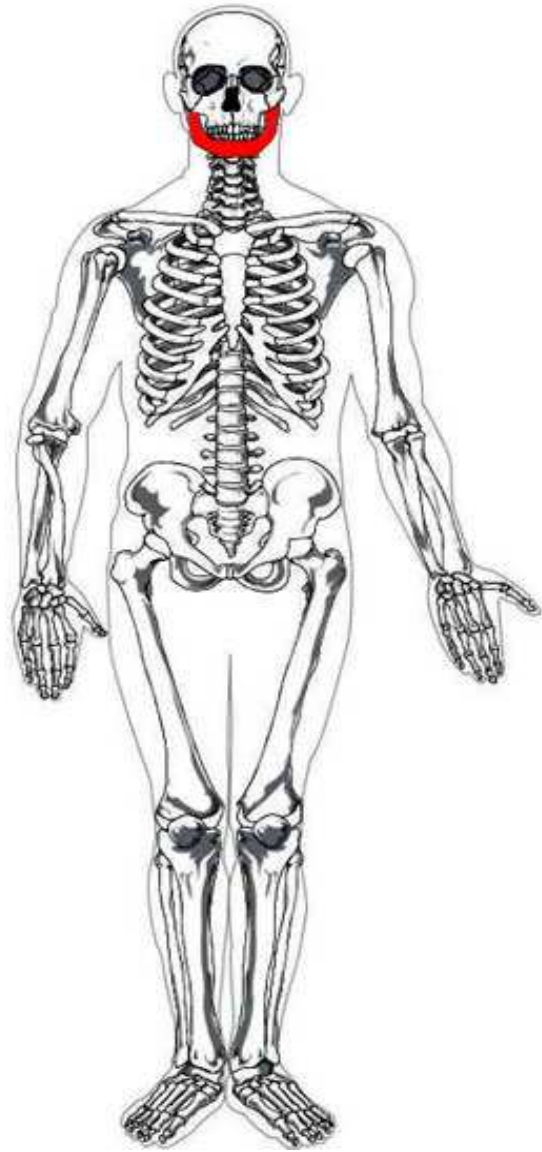
cranium



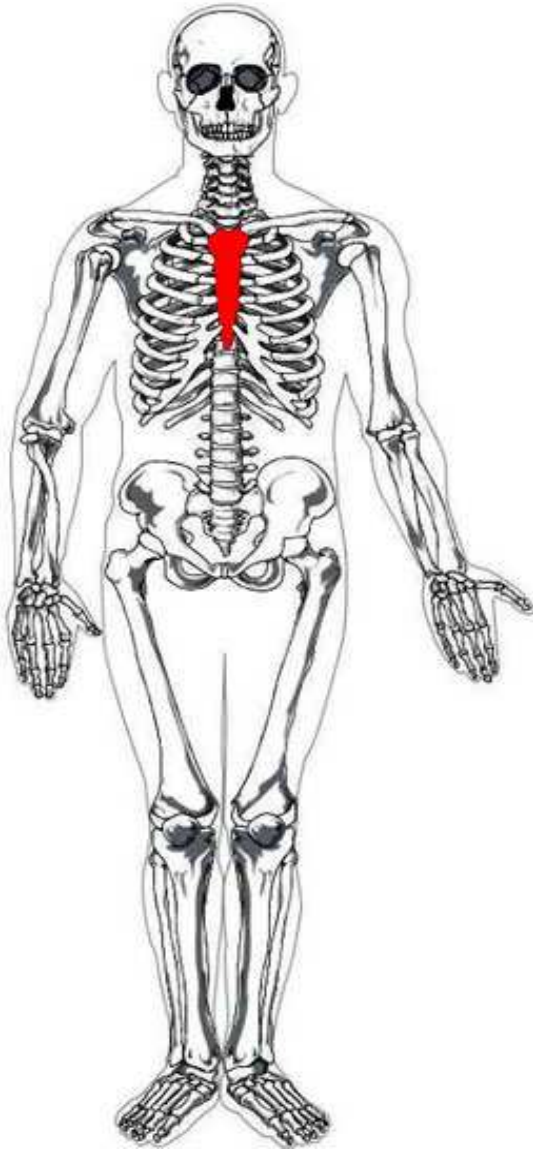
cranium



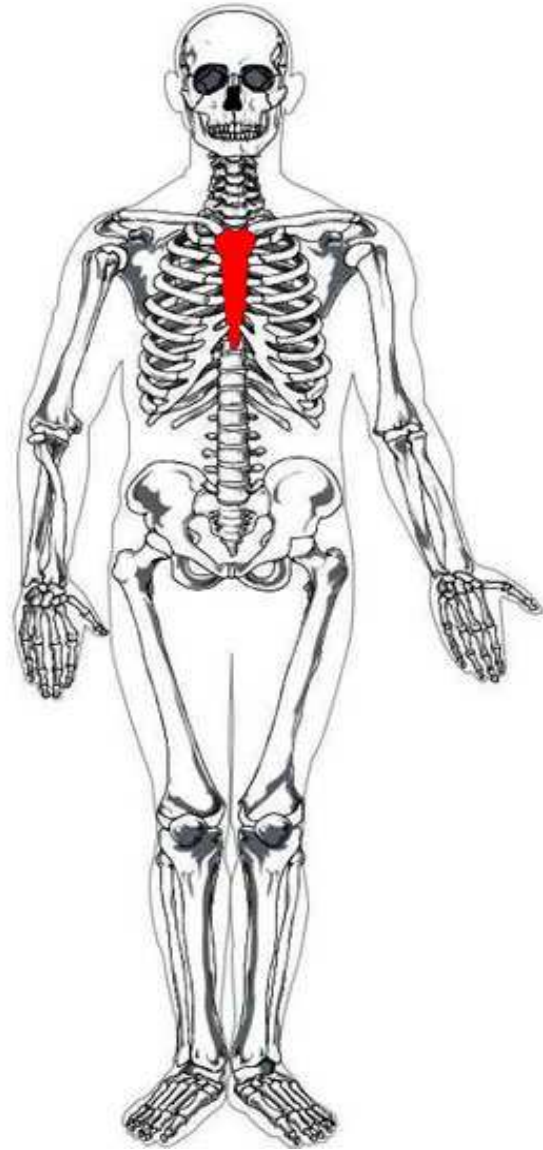
mandible



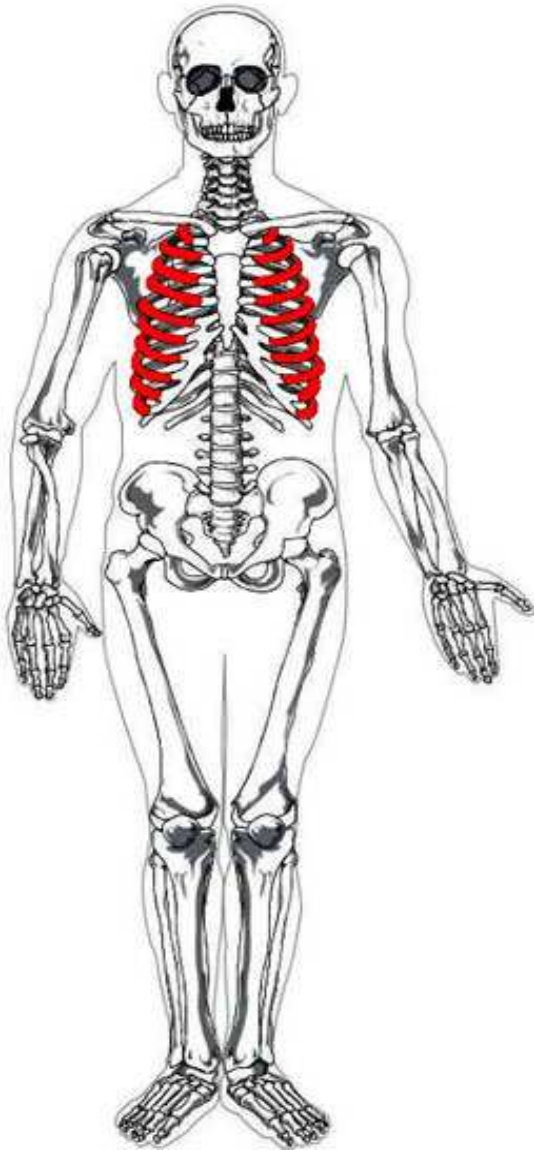
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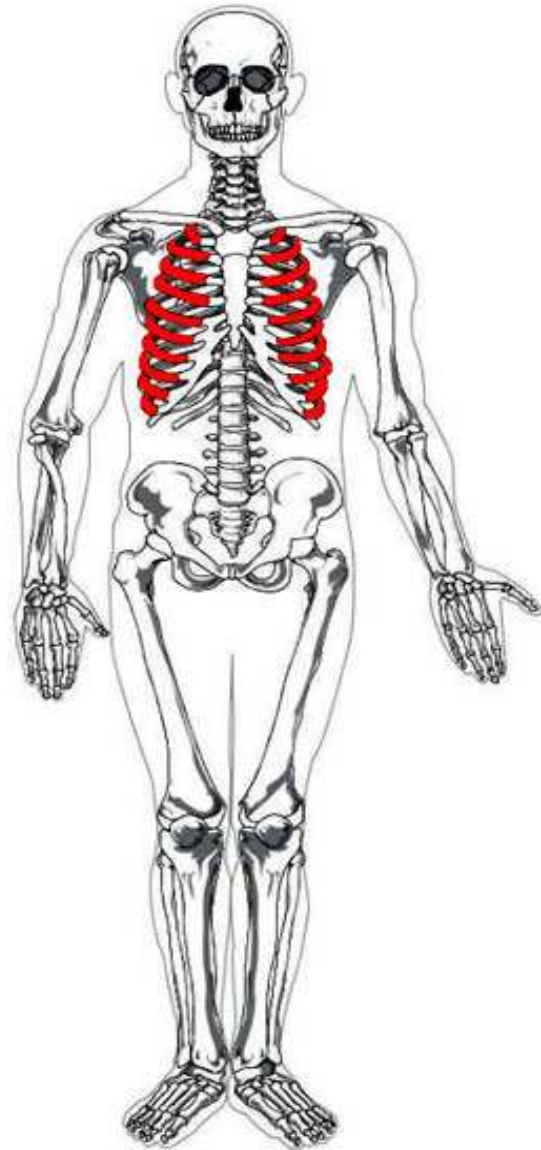
sternum



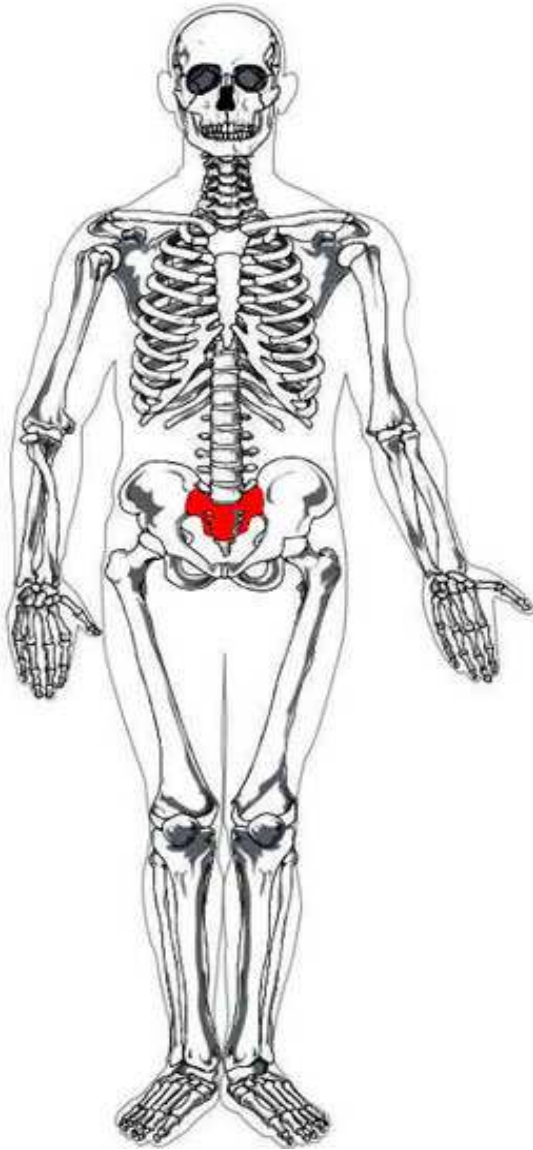
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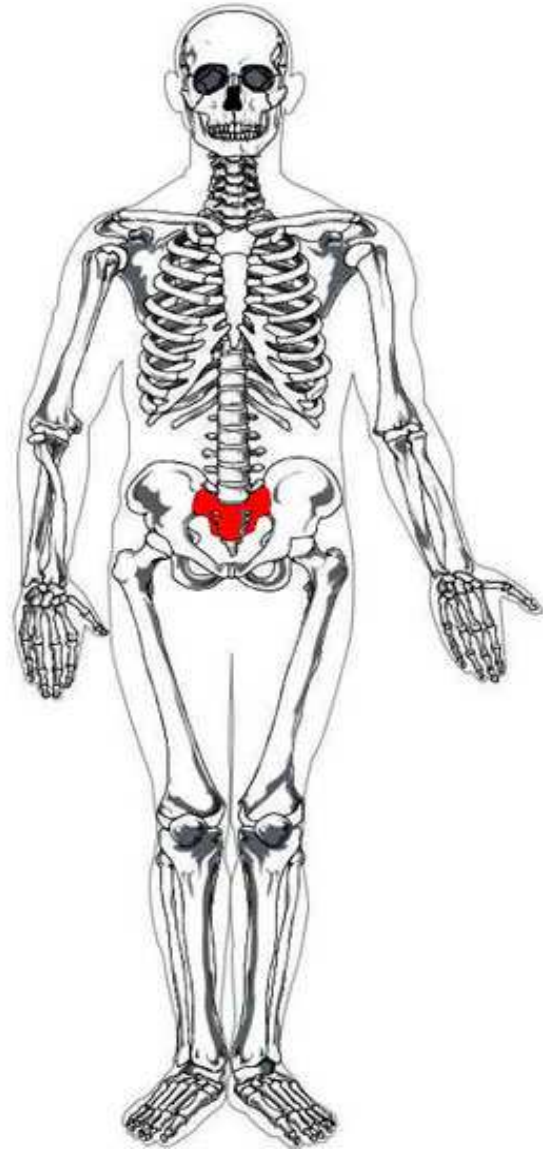
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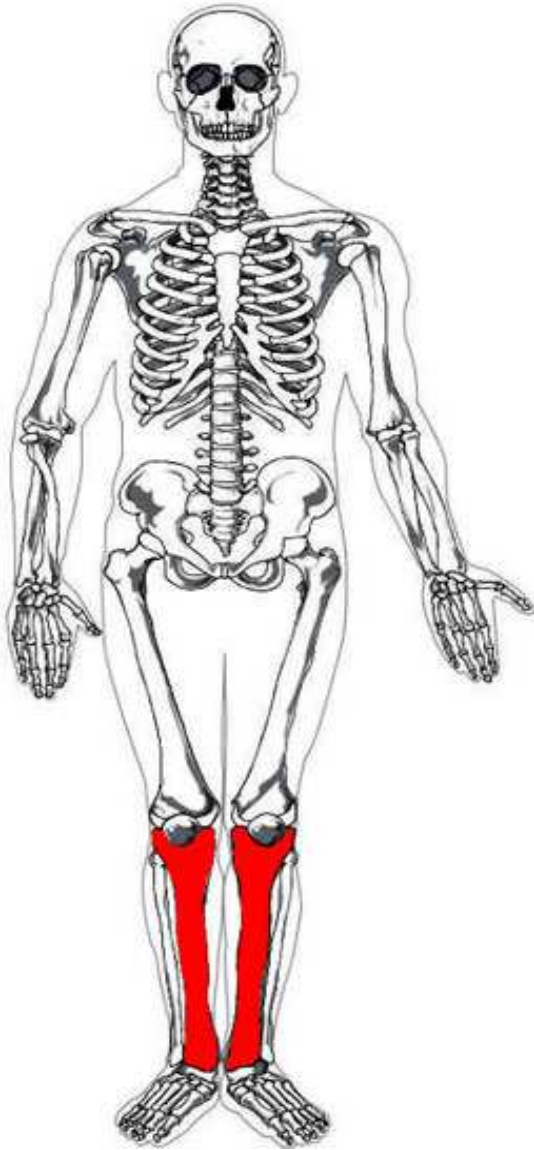
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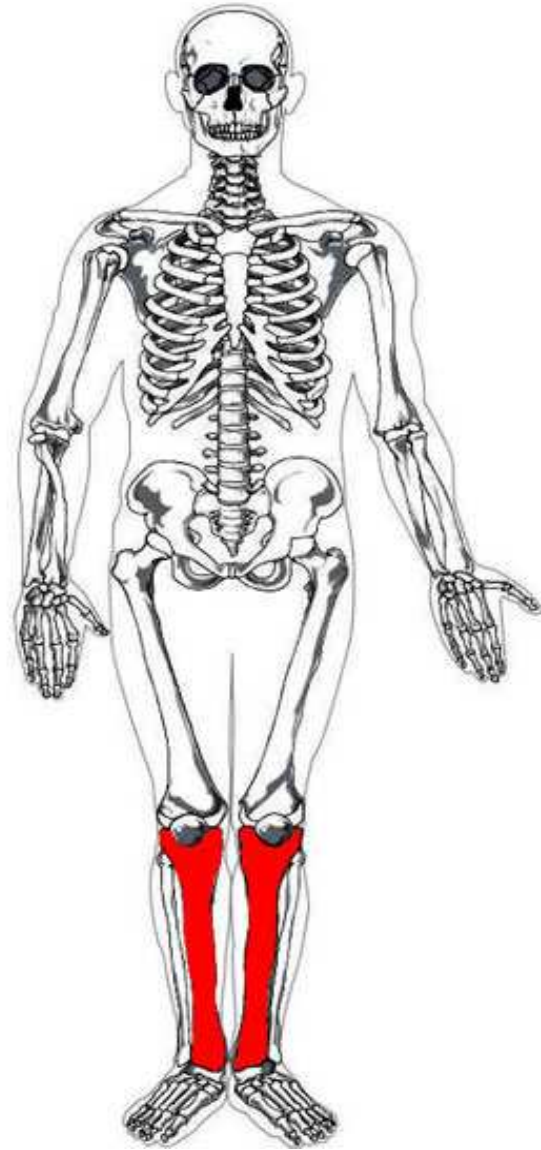
sacrum



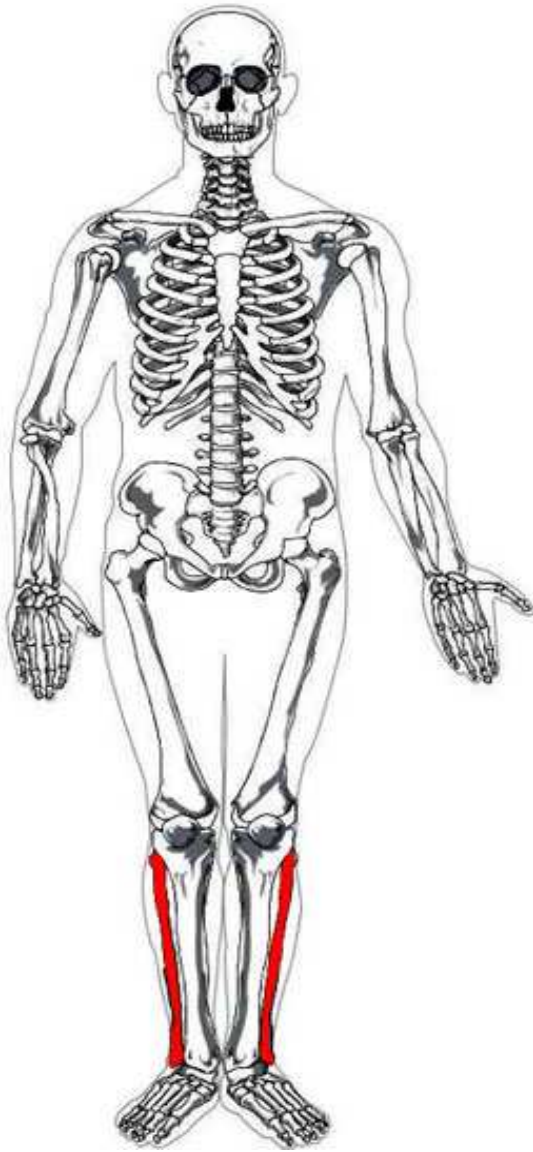
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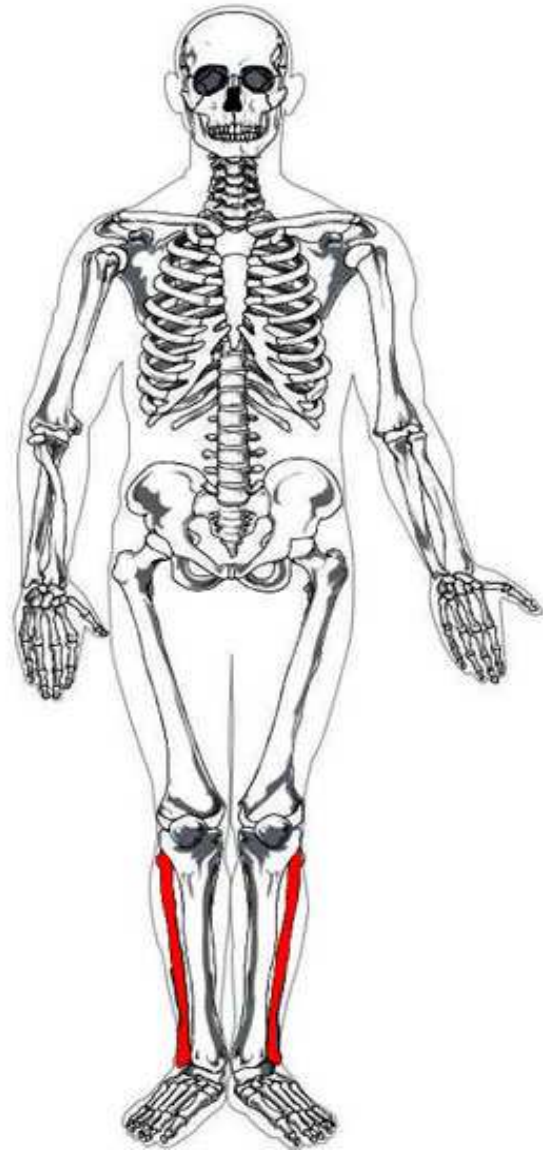
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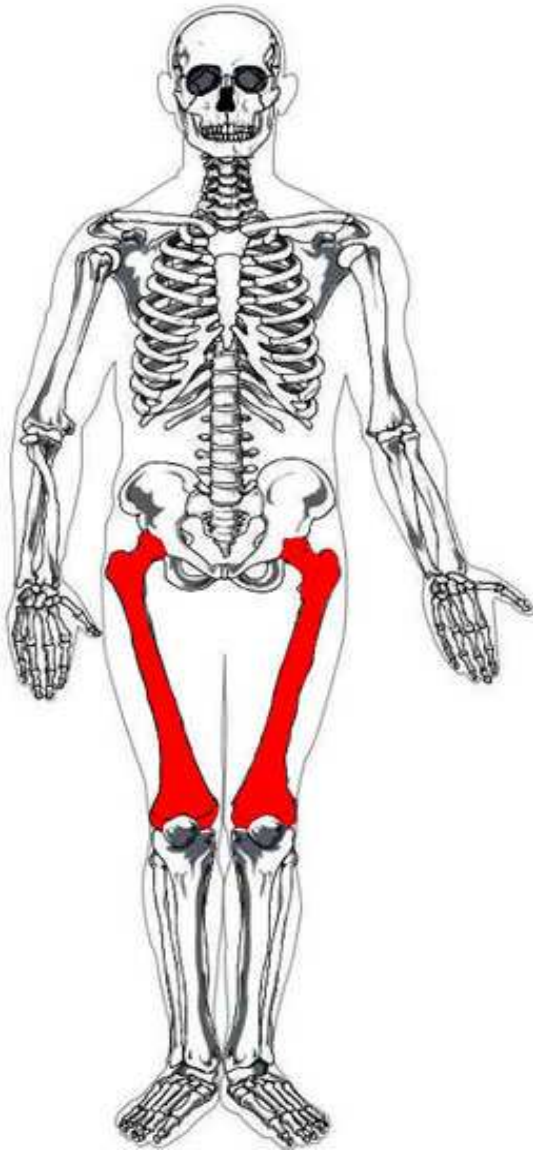
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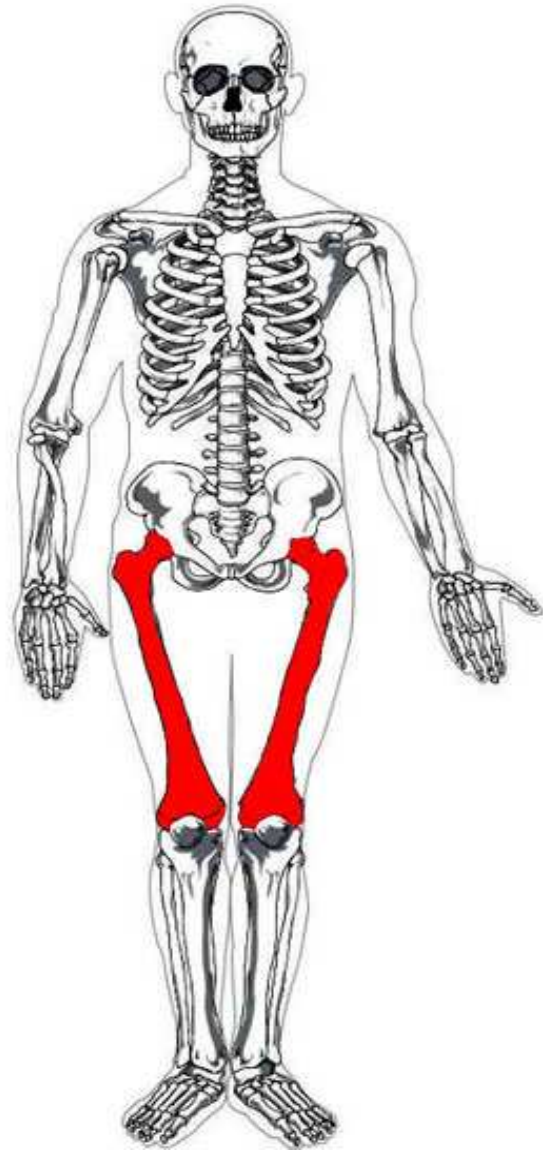
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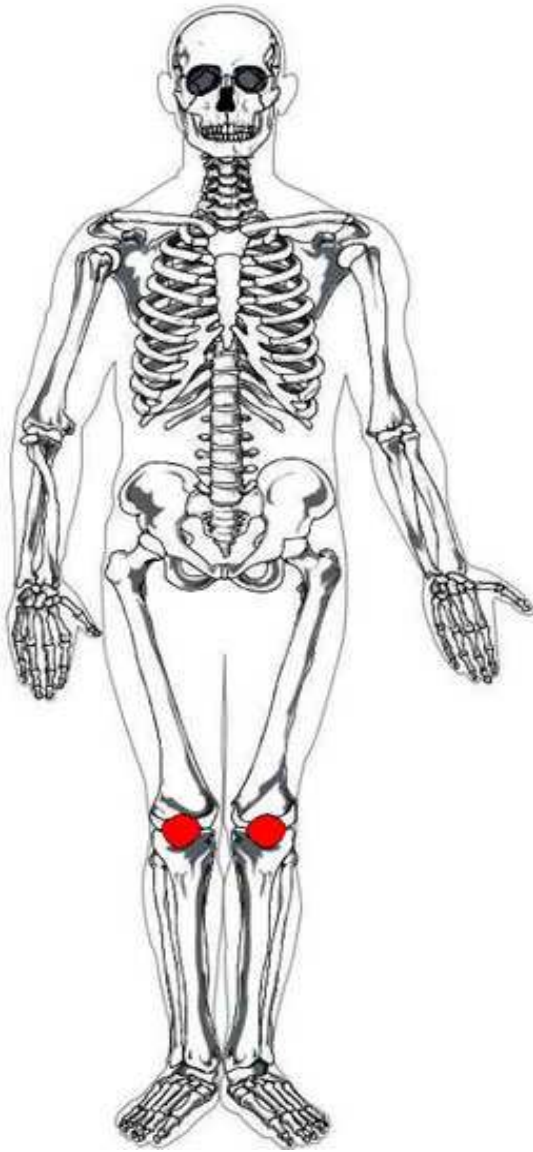
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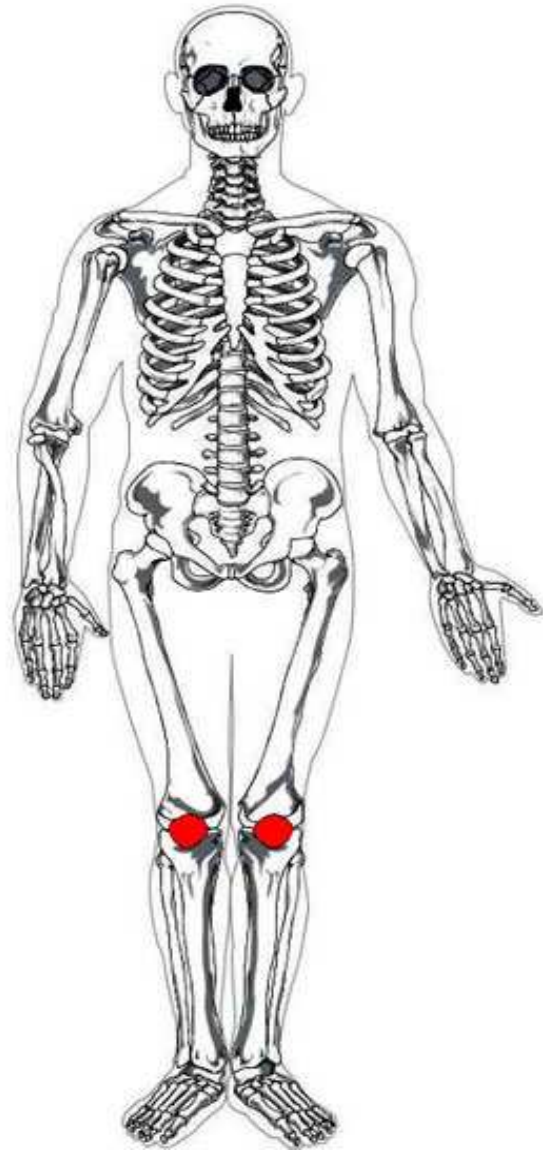
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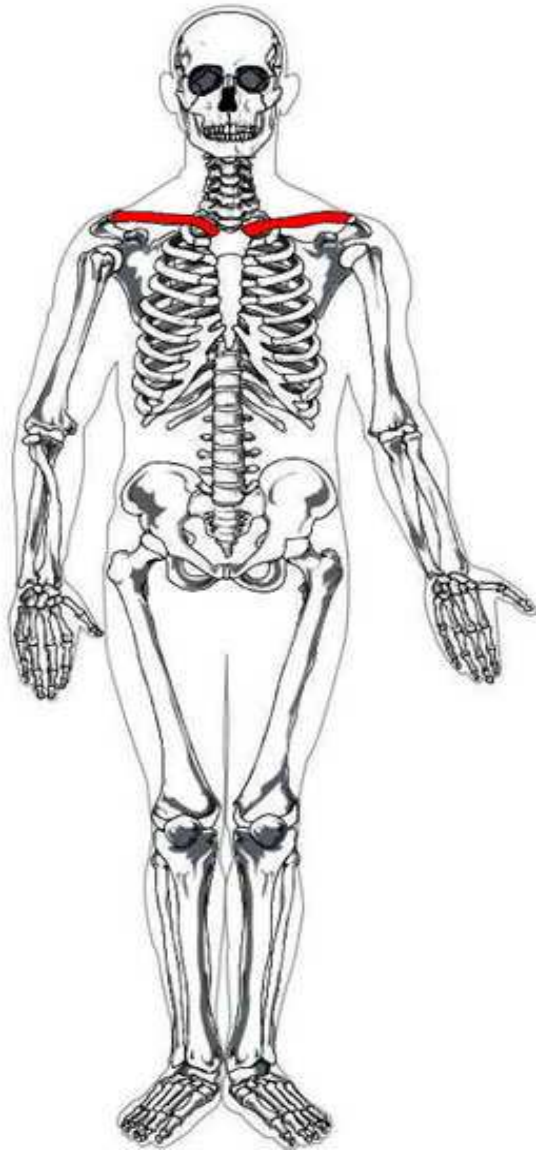
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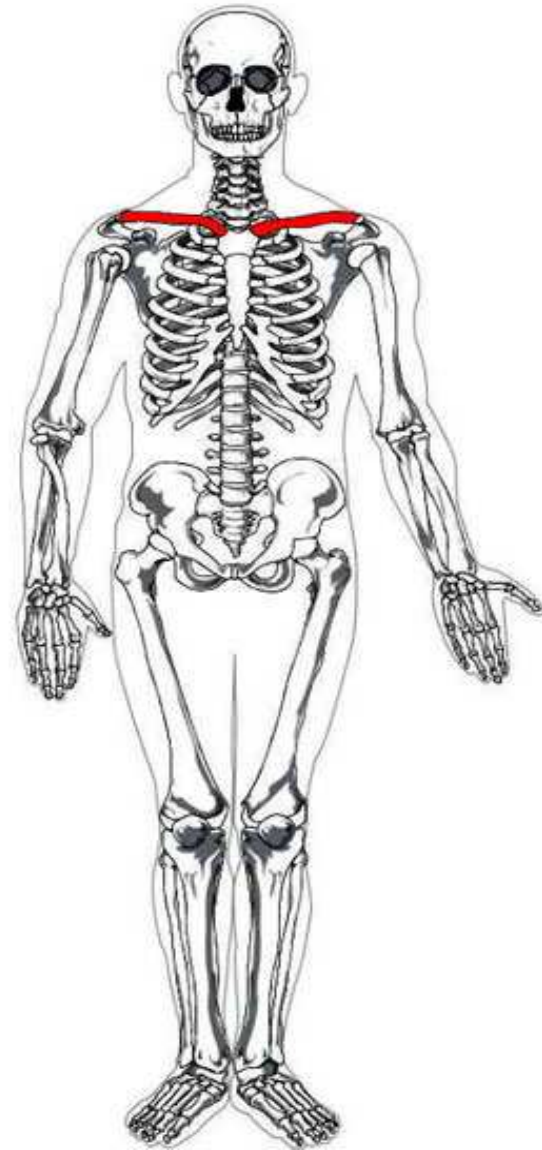
patella



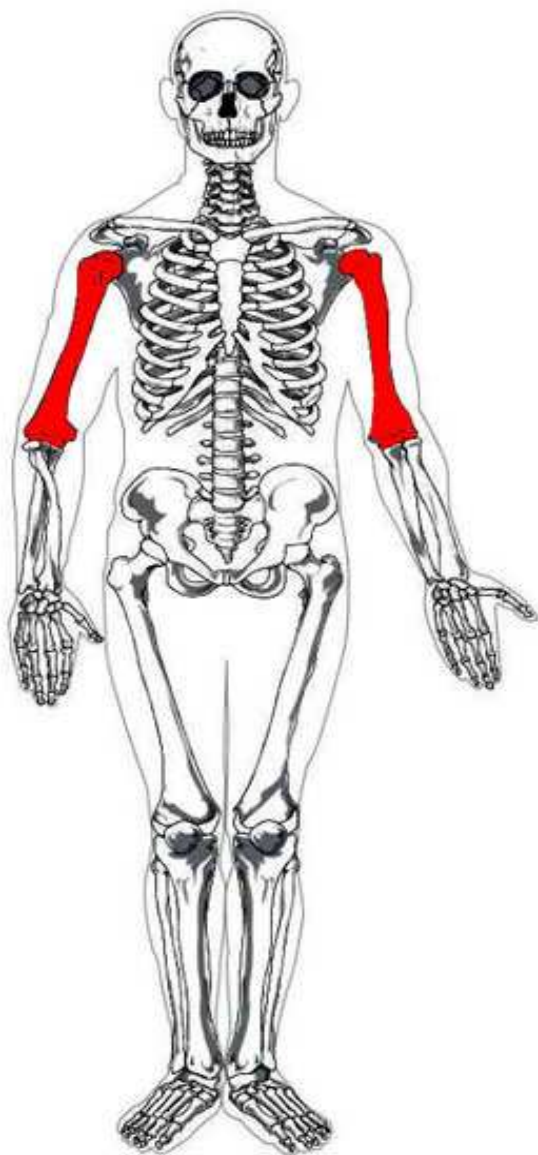
patella



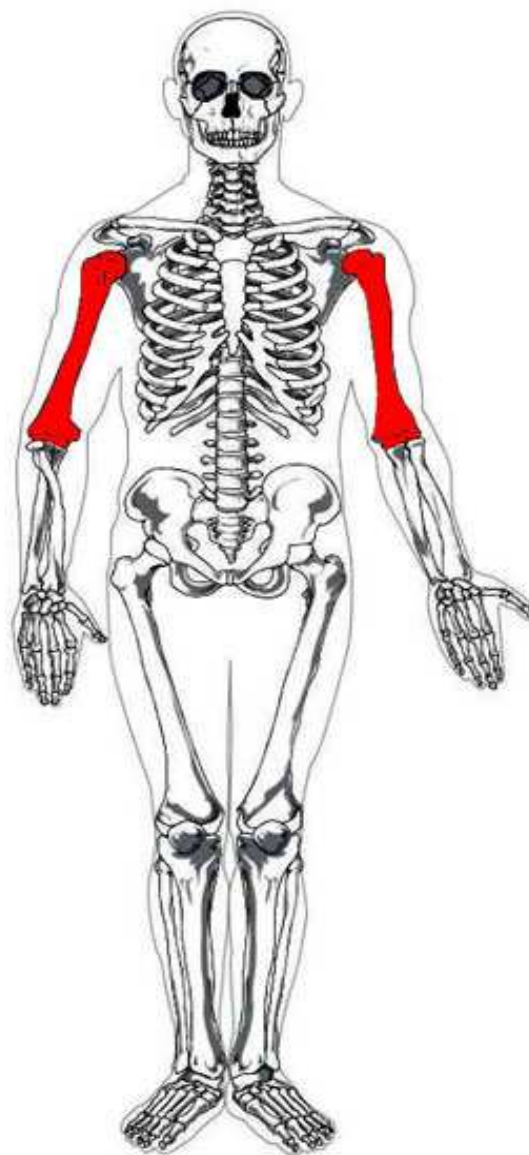
clavicle



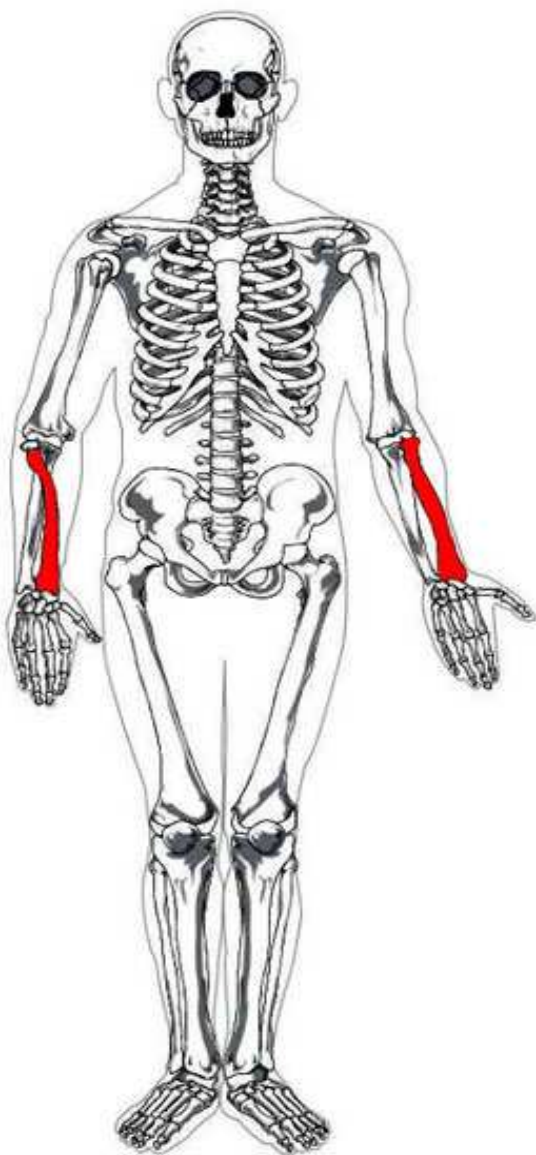
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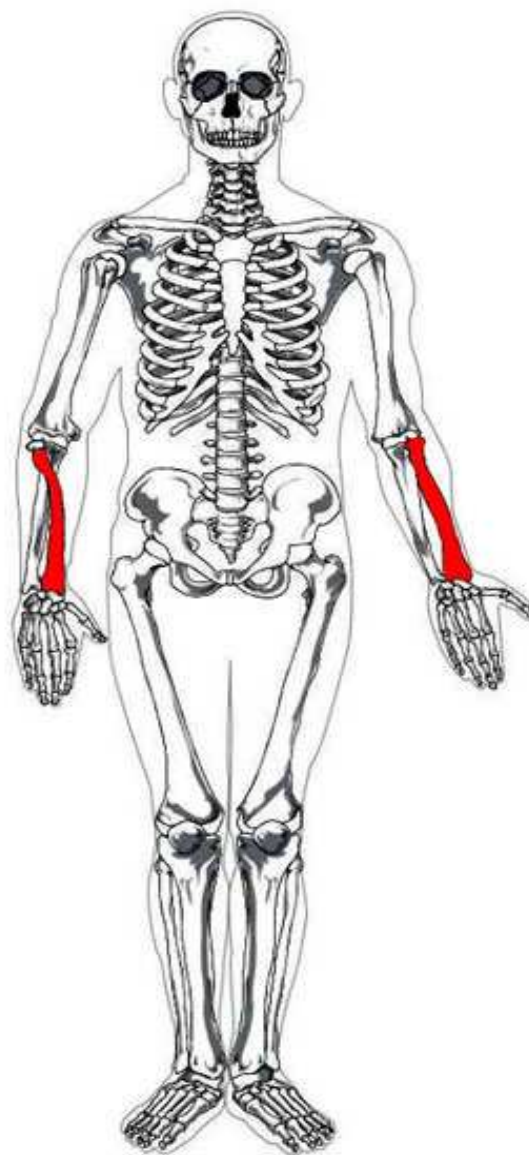
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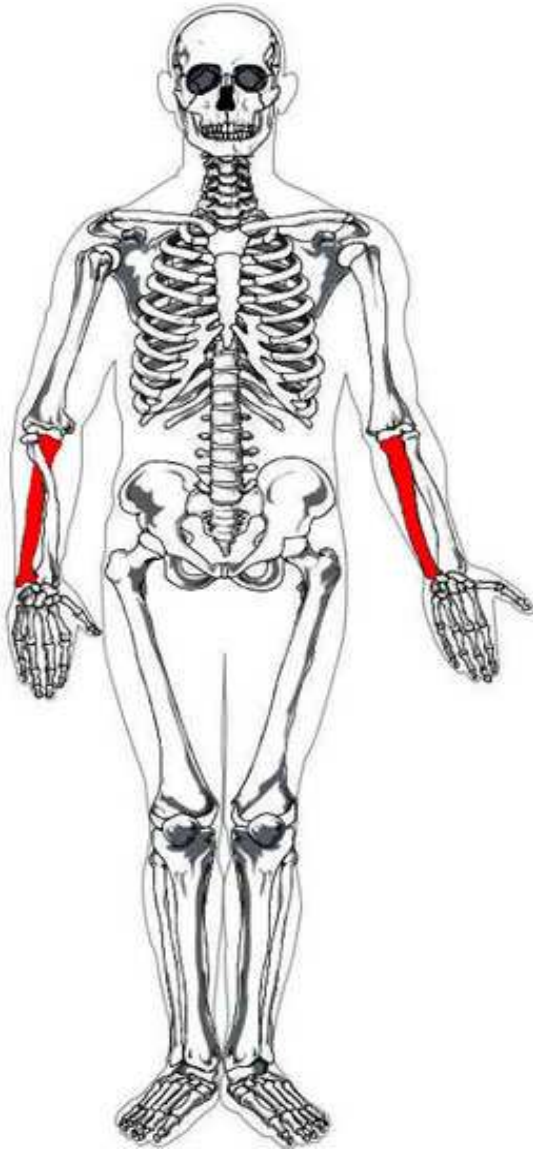
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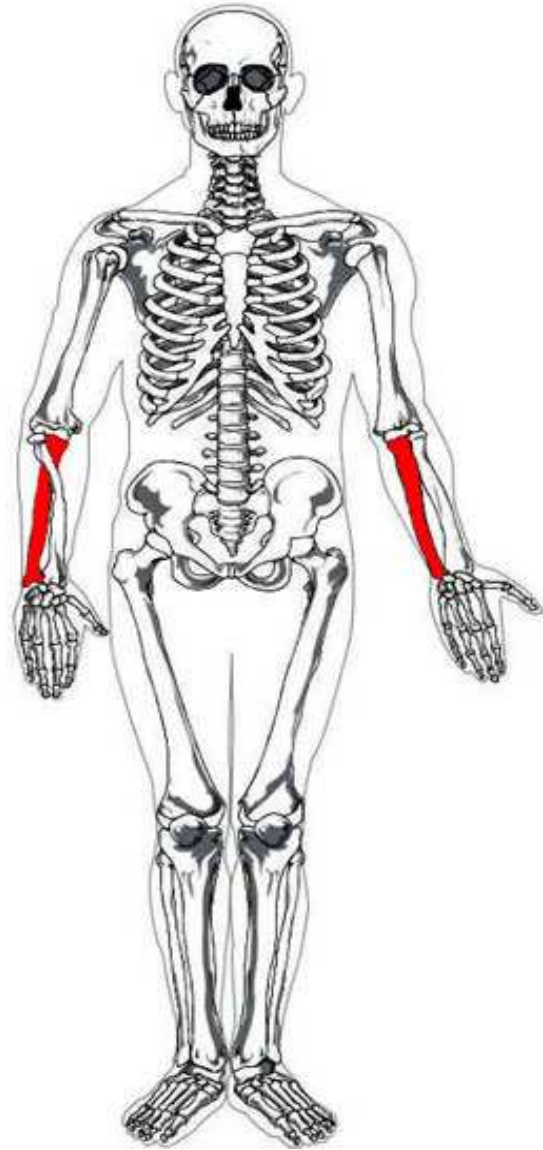
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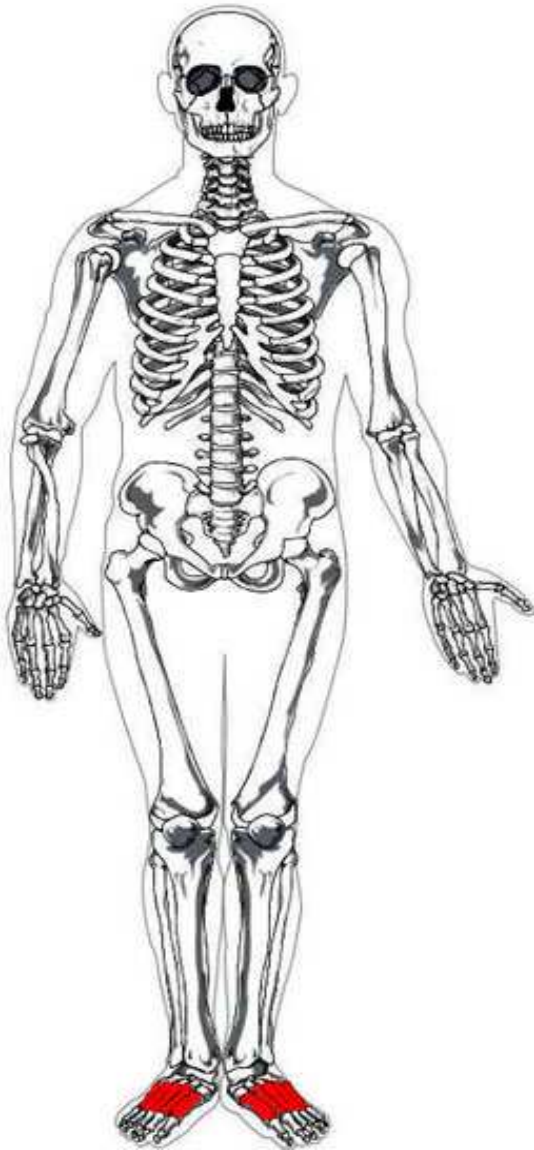
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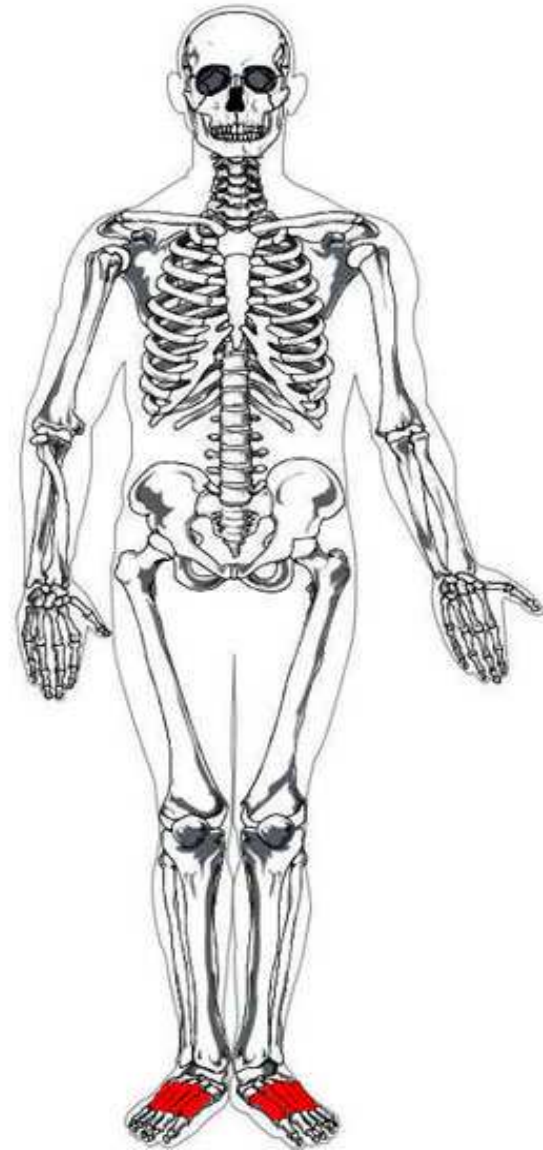
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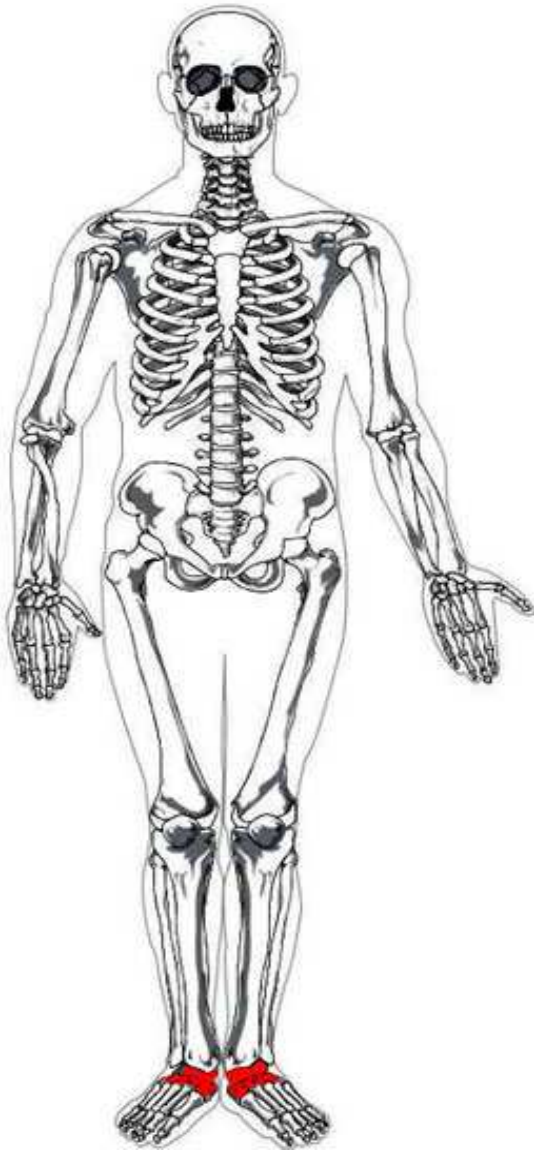
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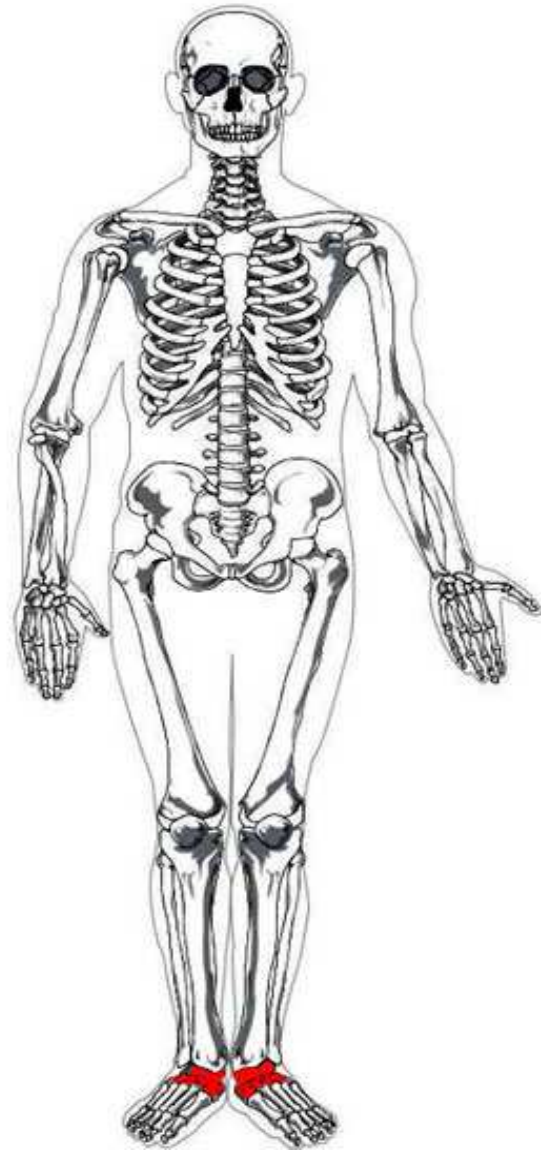
metatarsals



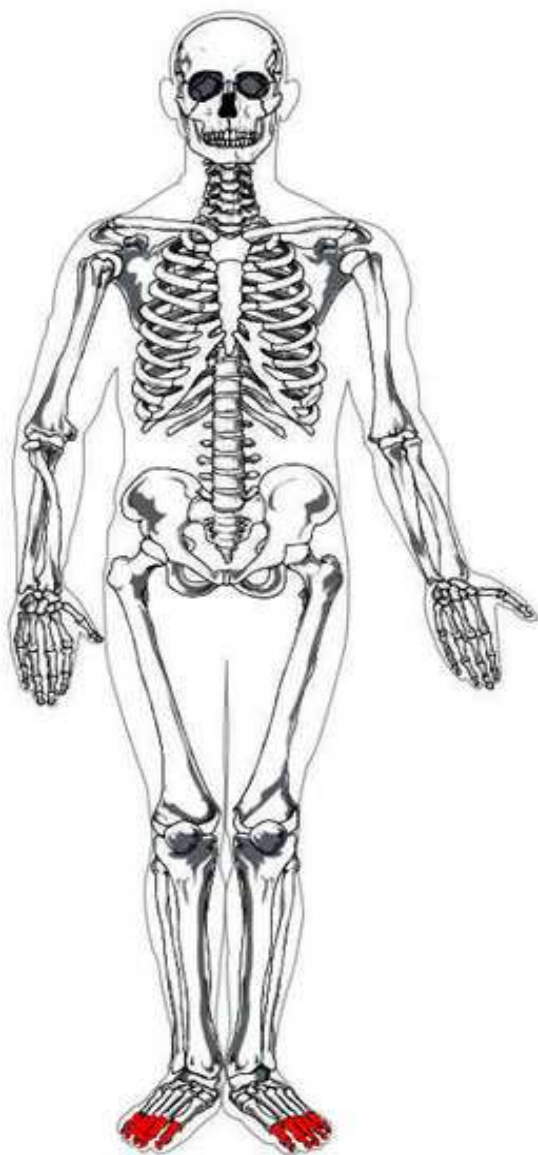
metatarsals



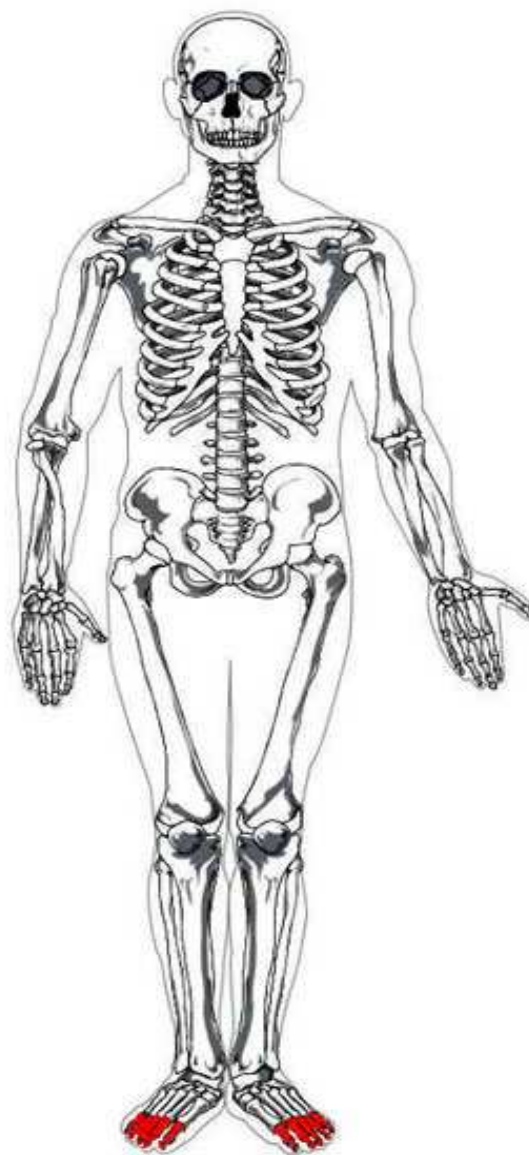
tarsals



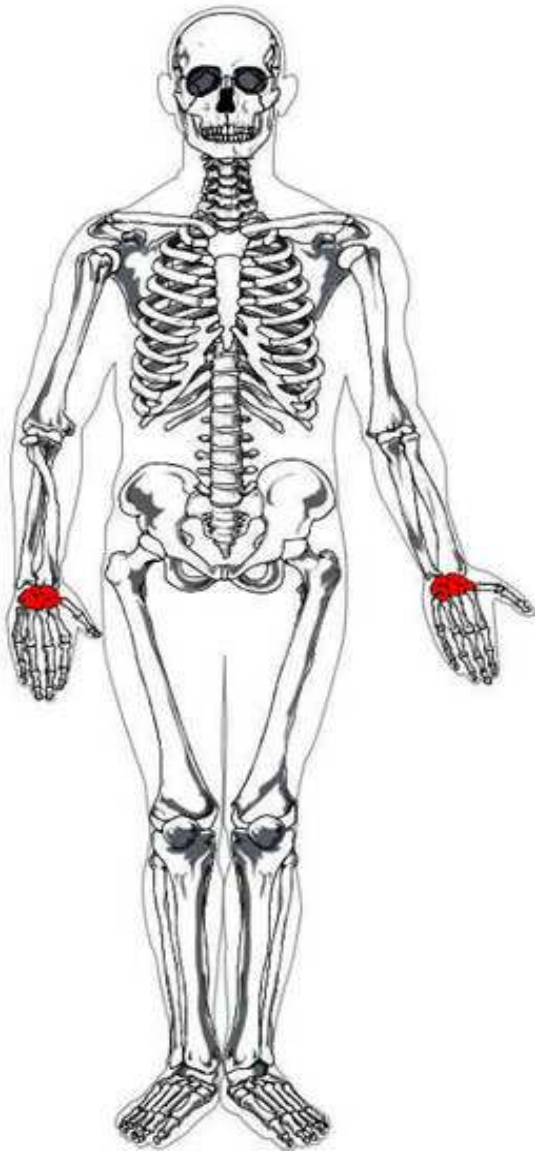
tarsals



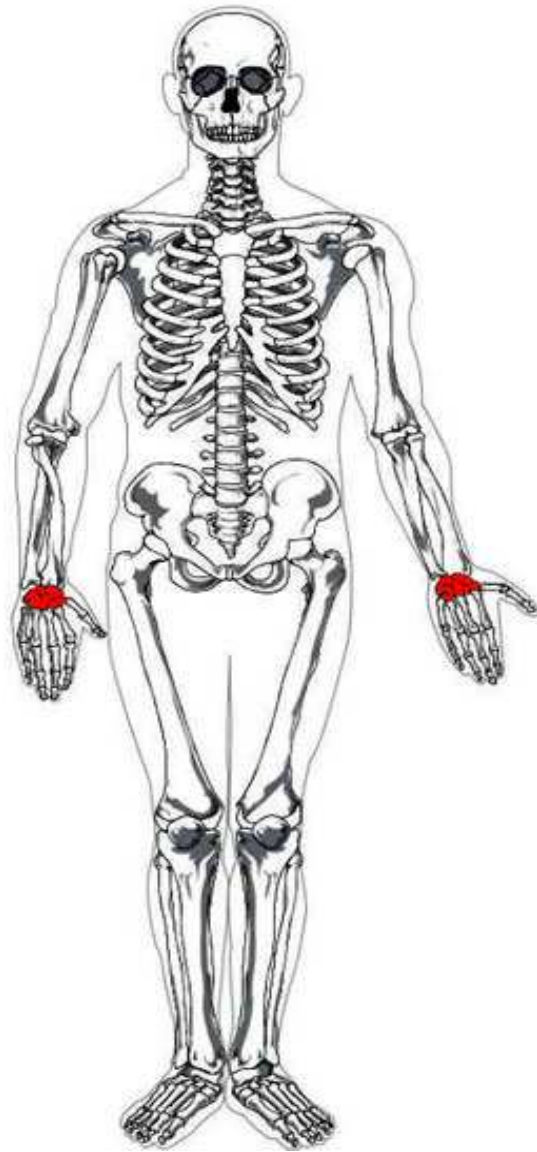
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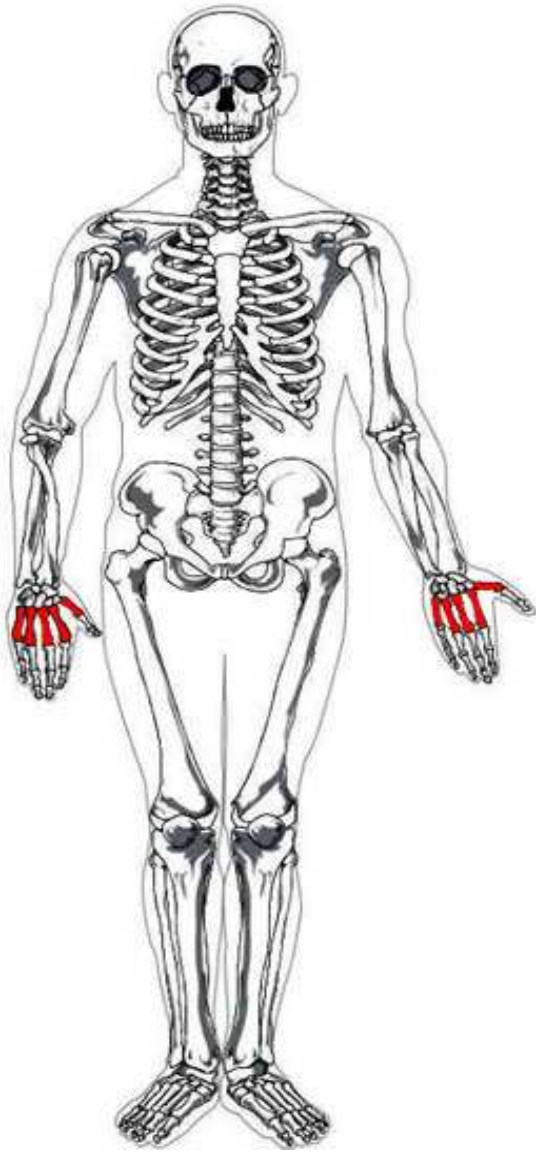
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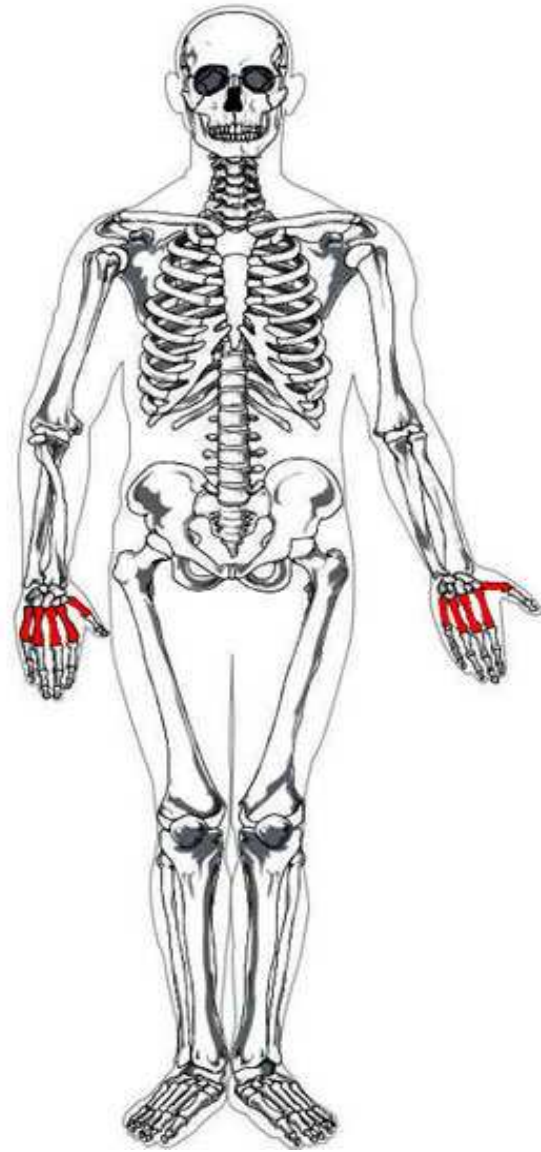
carpals



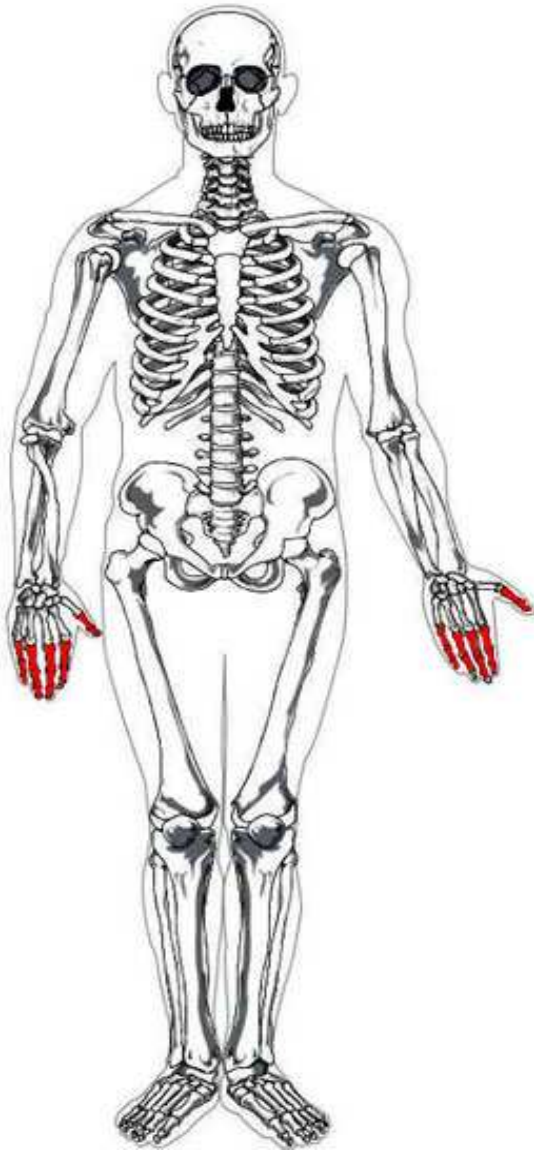
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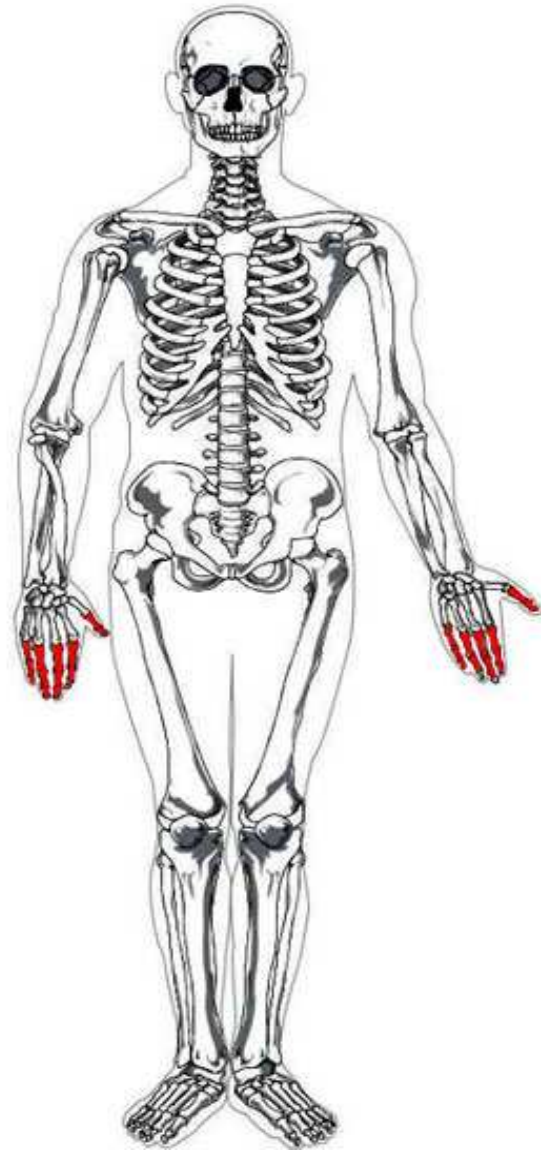
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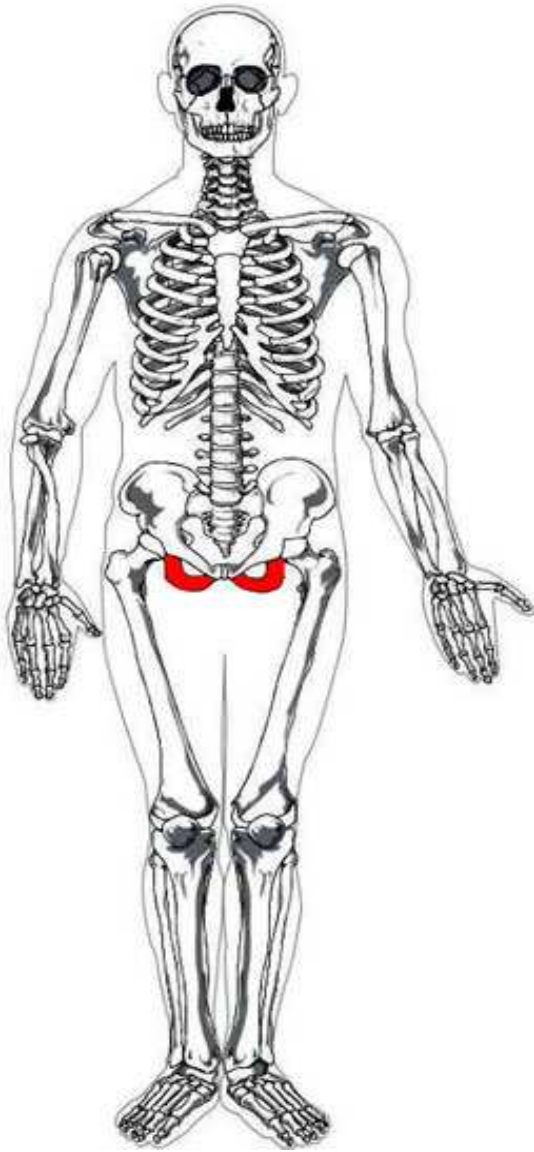
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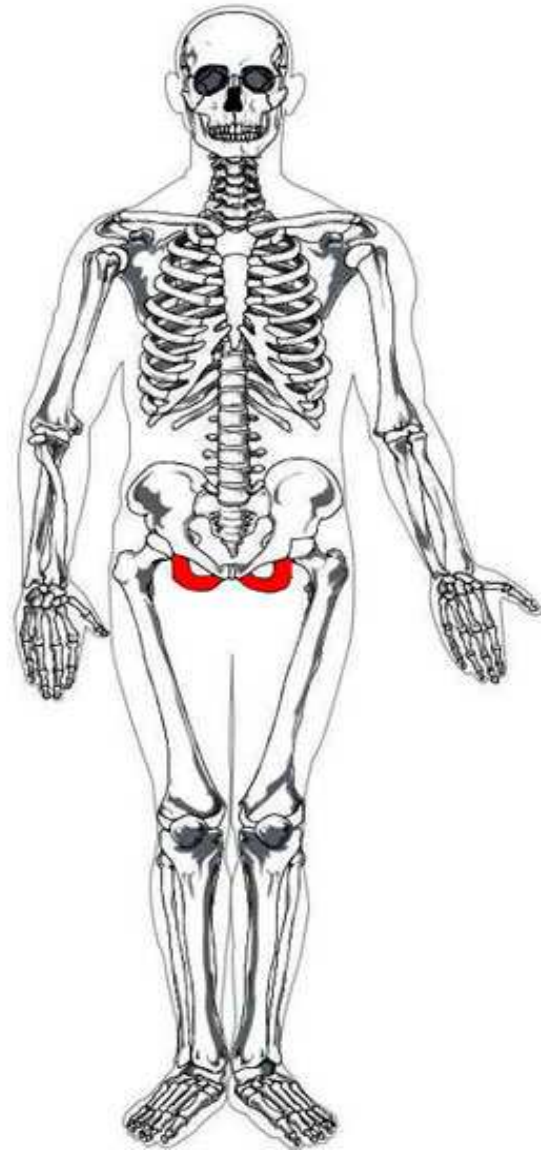
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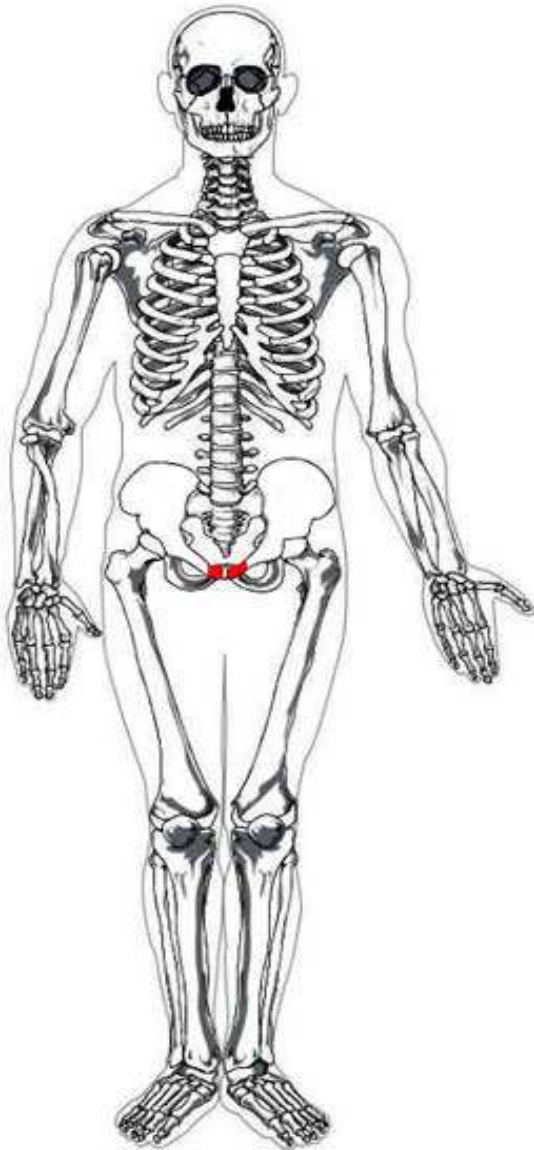
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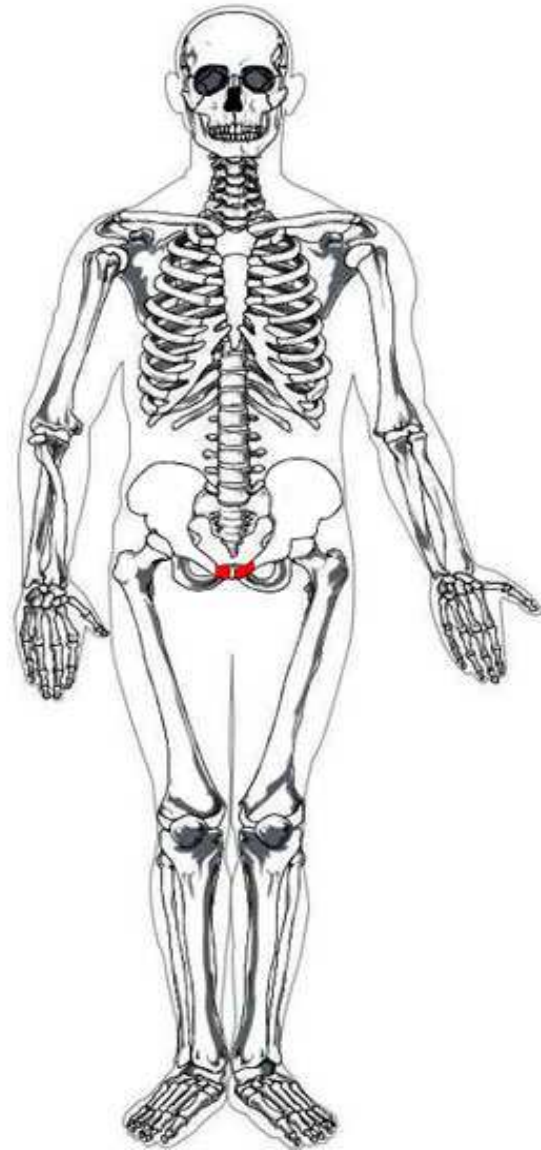
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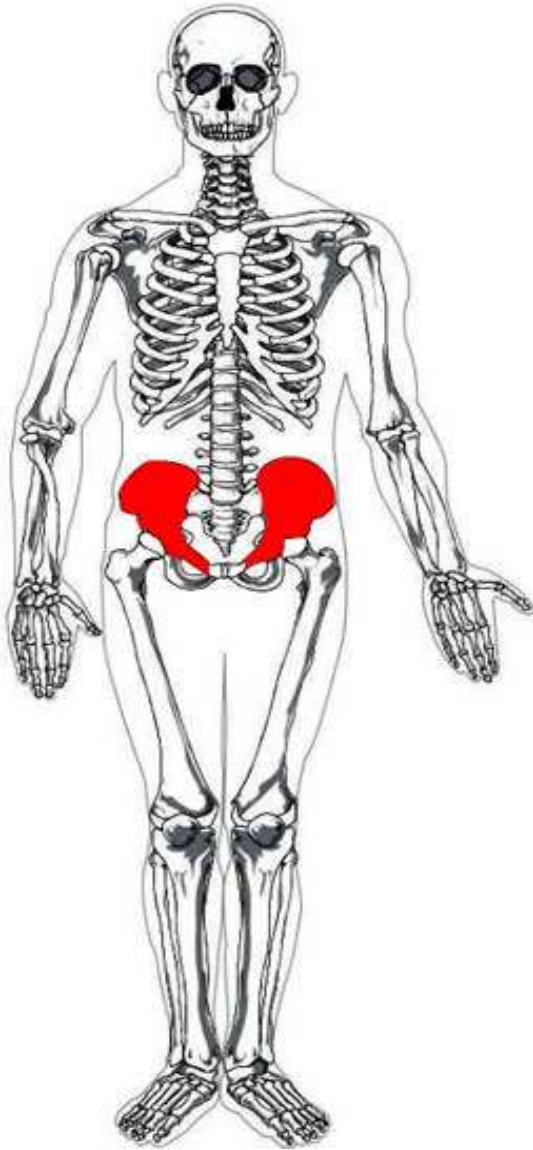
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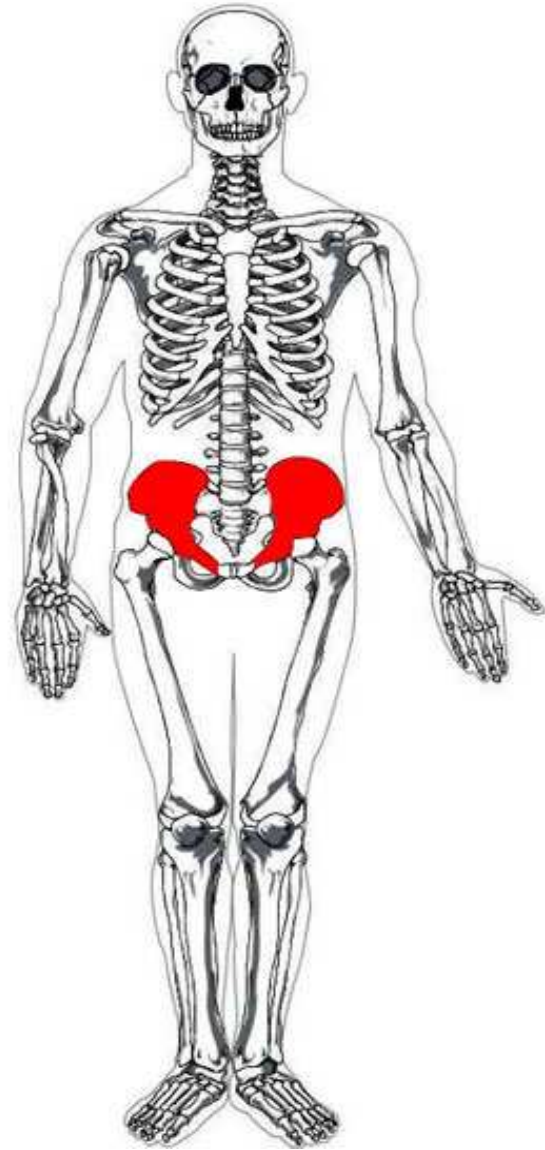
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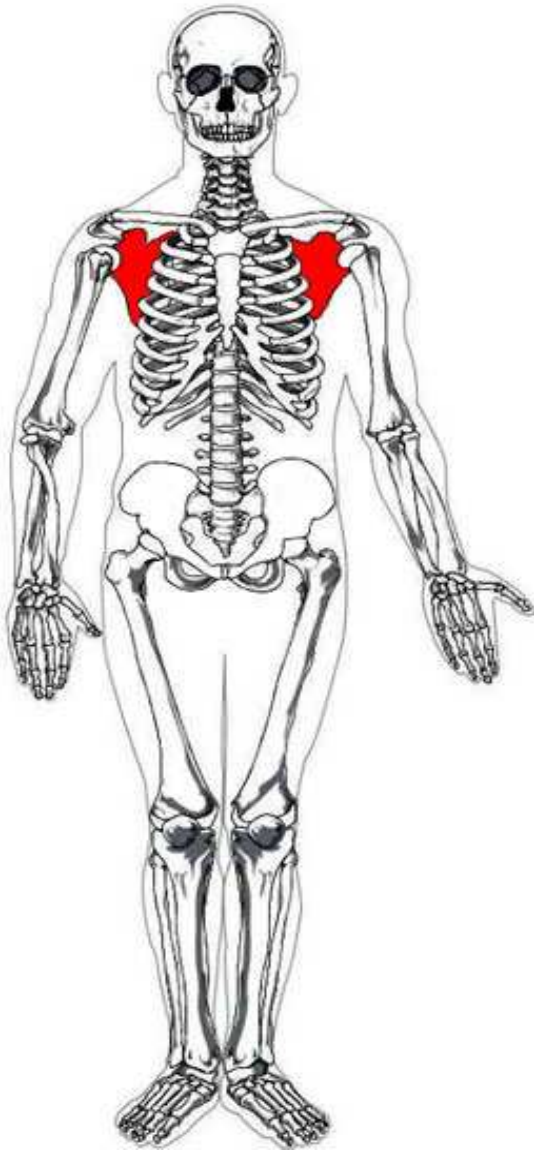
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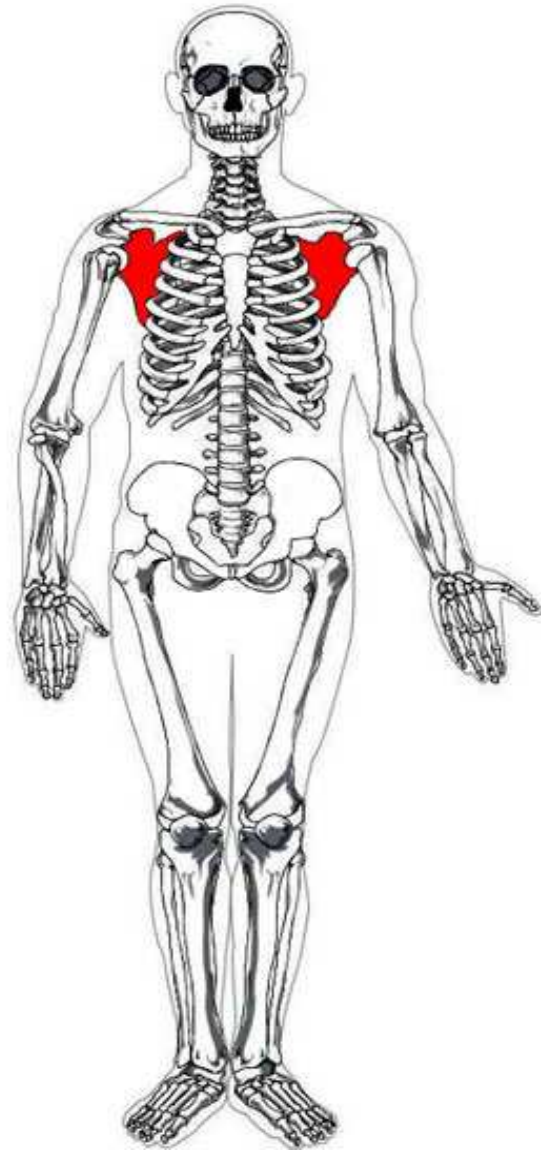
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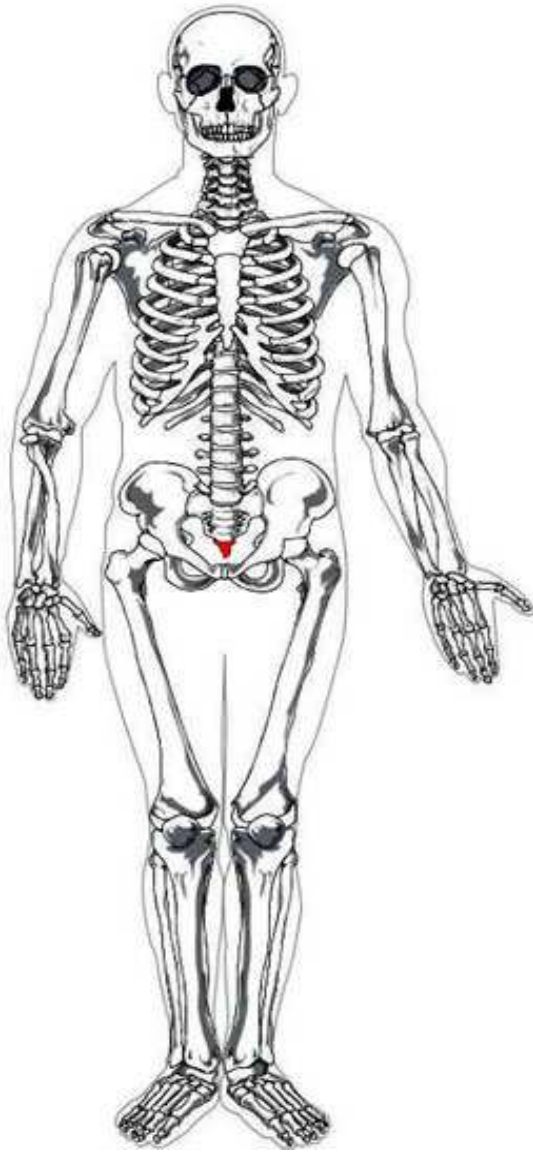
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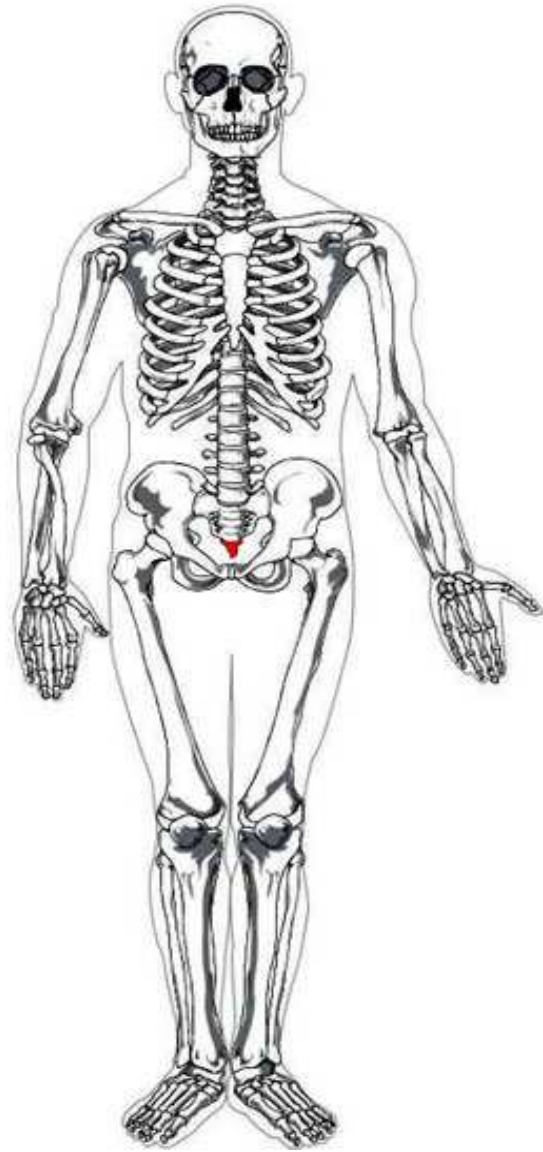
scapula



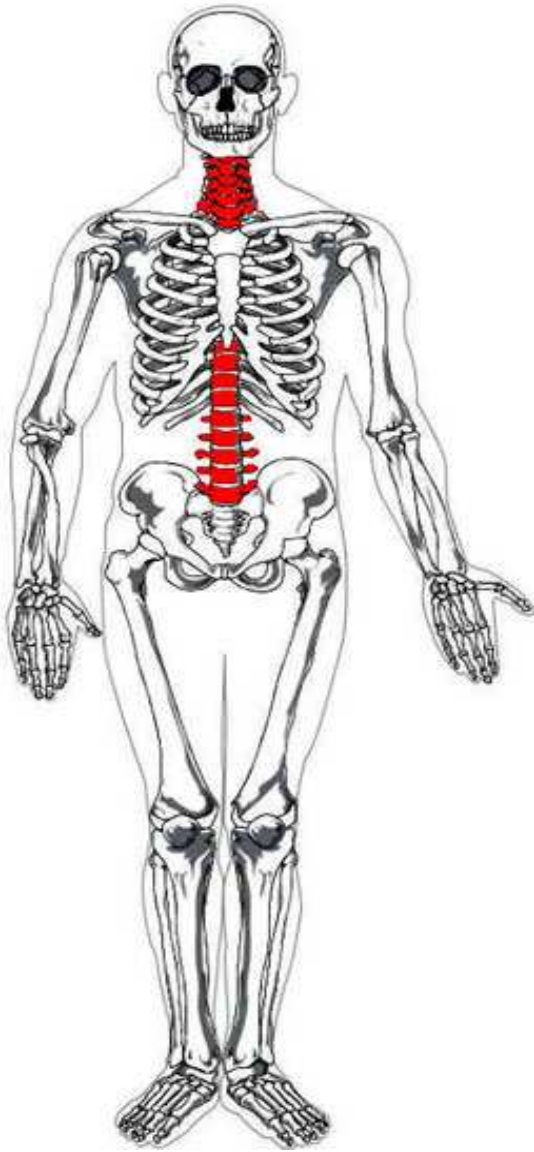
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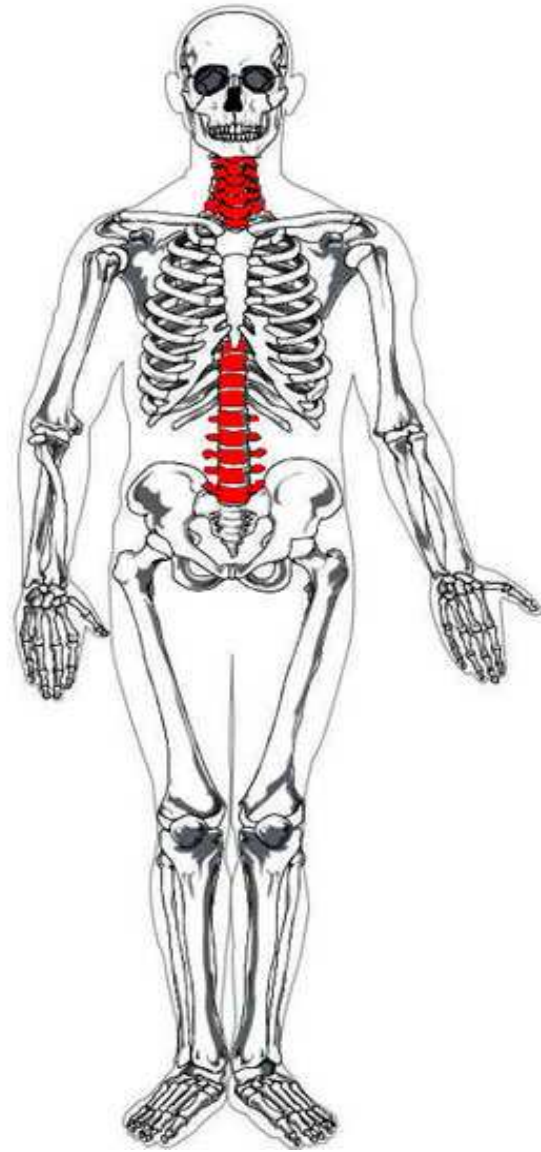
coccyx



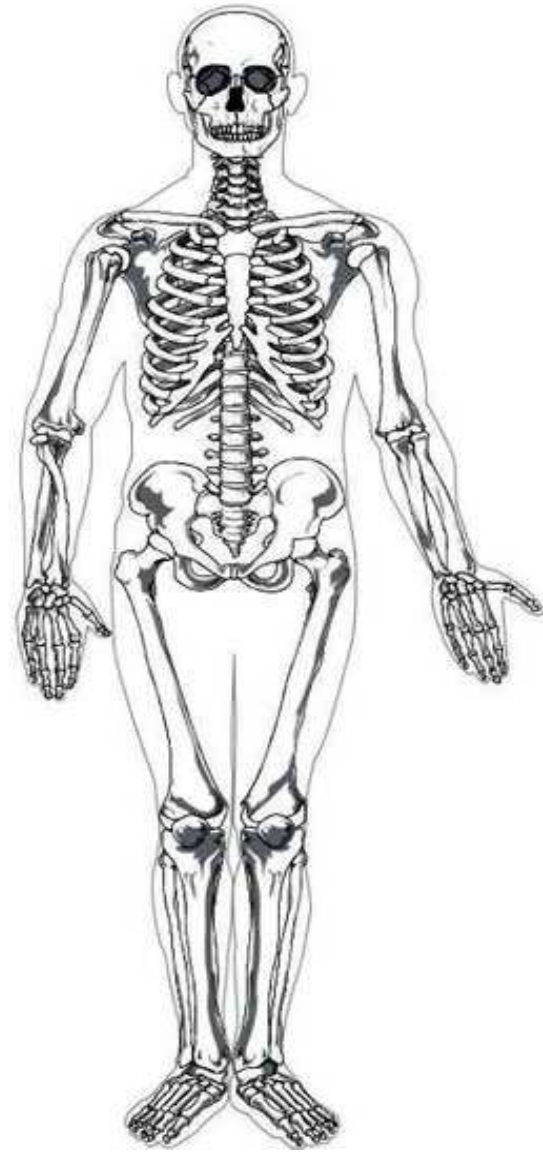
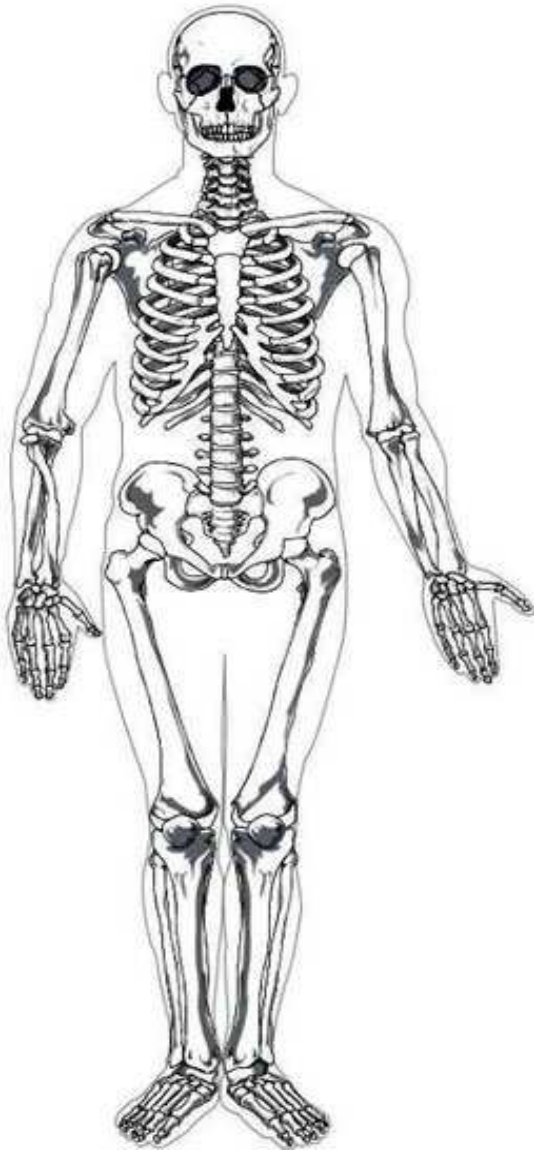
coccyx



vertebrae

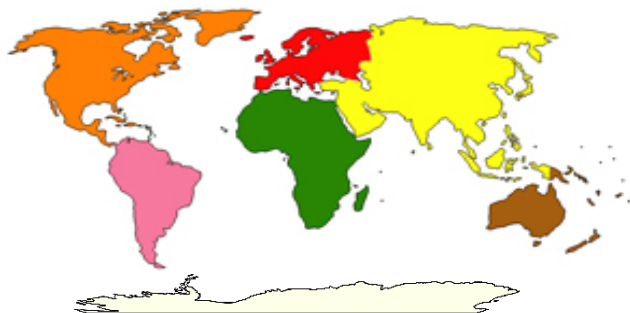


vertebrae





Continents of the World

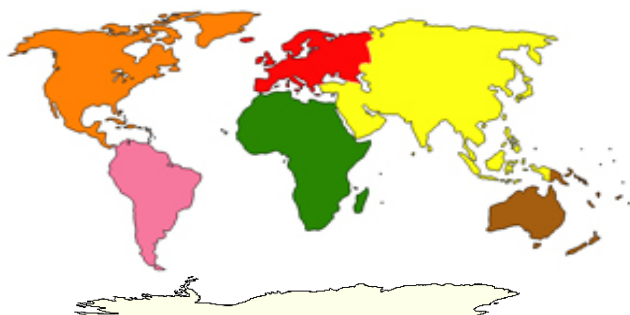


The World



North America

Continents of the World



The World



North America

Continents of the World



South America



Europe



Africa



South America



Europe



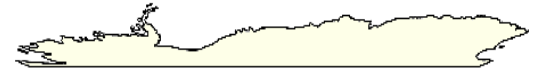
Africa



Asia



Australia



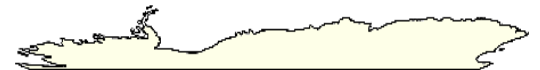
Antarctica



Asia



Australia



Antarctica



Oceania



Australasia

Oceania is a name used for varying groups of islands of the Pacific Ocean. In its narrow usage it refers to Polynesia (including New Zealand), Melanesia (including New Guinea) and Micronesia. In a wider usage it includes Australia. It may also include the Malay archipelago. Although the islands of Oceania do not form part of a true continent, Oceania is sometimes associated with the continent of Australia for the purposes of dividing the whole world into continental groupings. As such, it is the smallest "continent" in area and the second smallest, after Antarctica, in population.



Oceania



Australasia

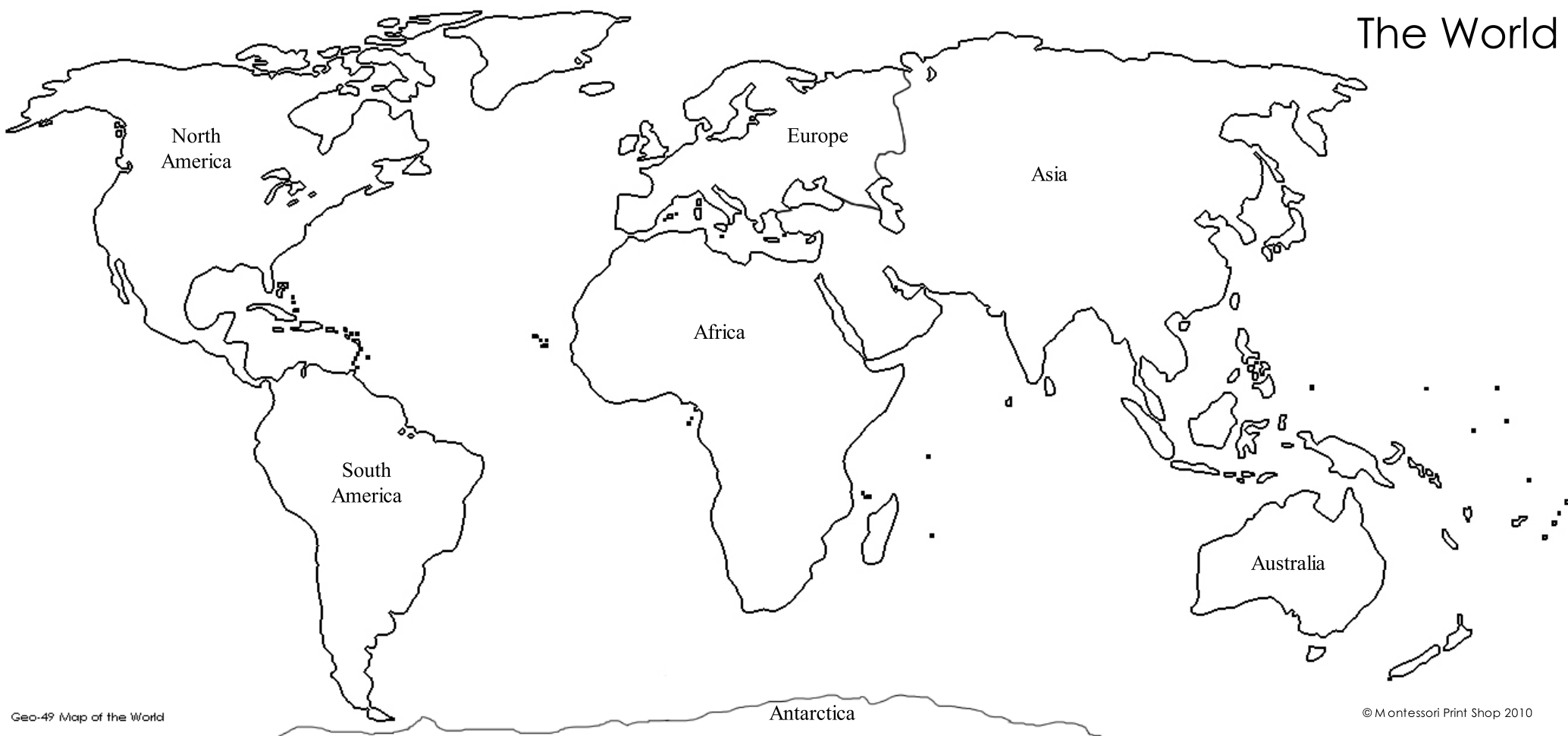
Australasia is the area that includes Australia, New Zealand, New Guinea, and the many smaller islands in the vicinity, most of which are the eastern part of Indonesia. The name was coined by Charles de Brosses in *Histoire des navigations aux terres australes* (1756). He derived it from the Latin for "south of Asia" and differentiated the area from Polynesia and the south east Pacific (*Magellanica*). Australasia is sometimes used as a term for Australia and New Zealand alone, in the absence of another word limited to those two countries.

Choose the term (Australia, Oceania, or Australasia) that suits your needs.

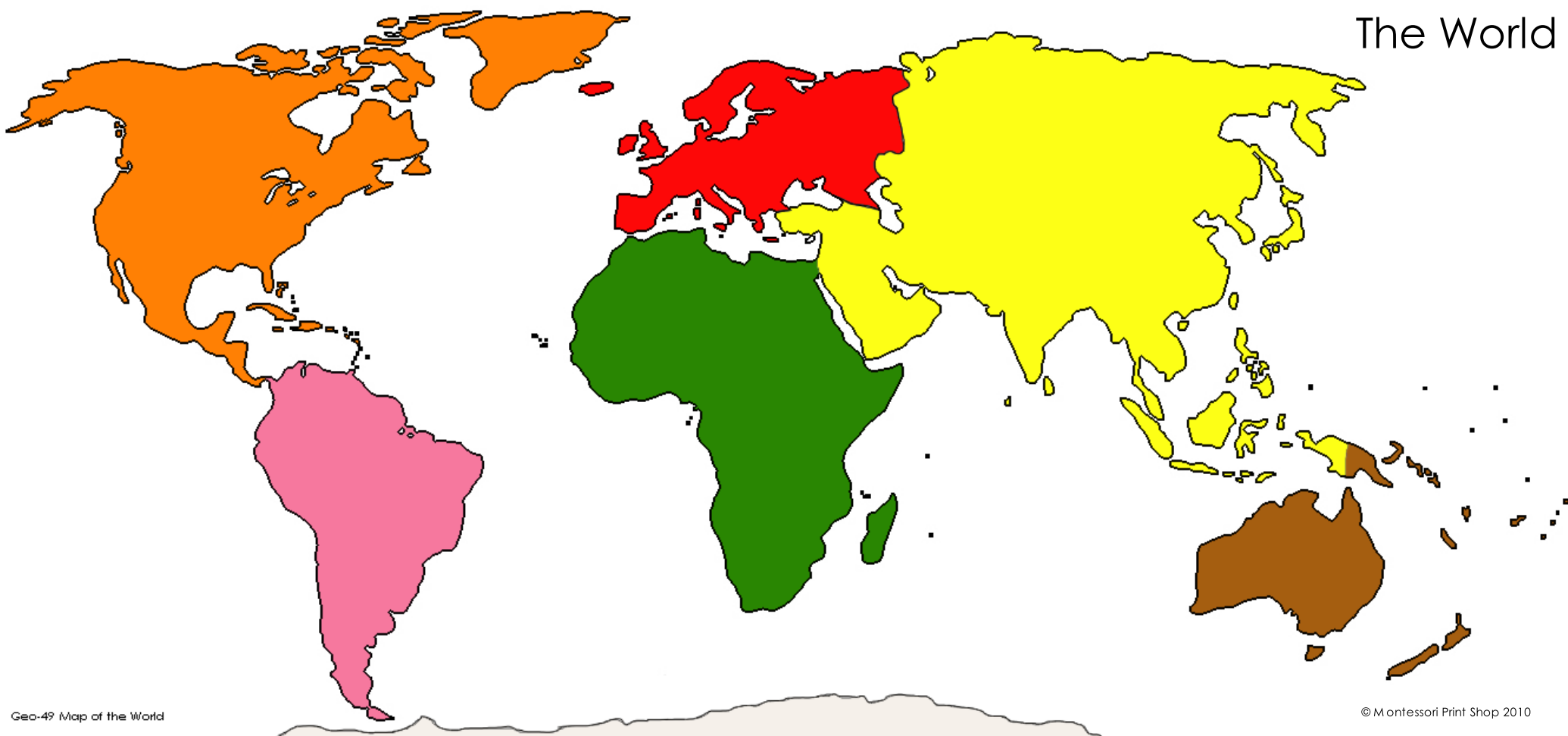
The World



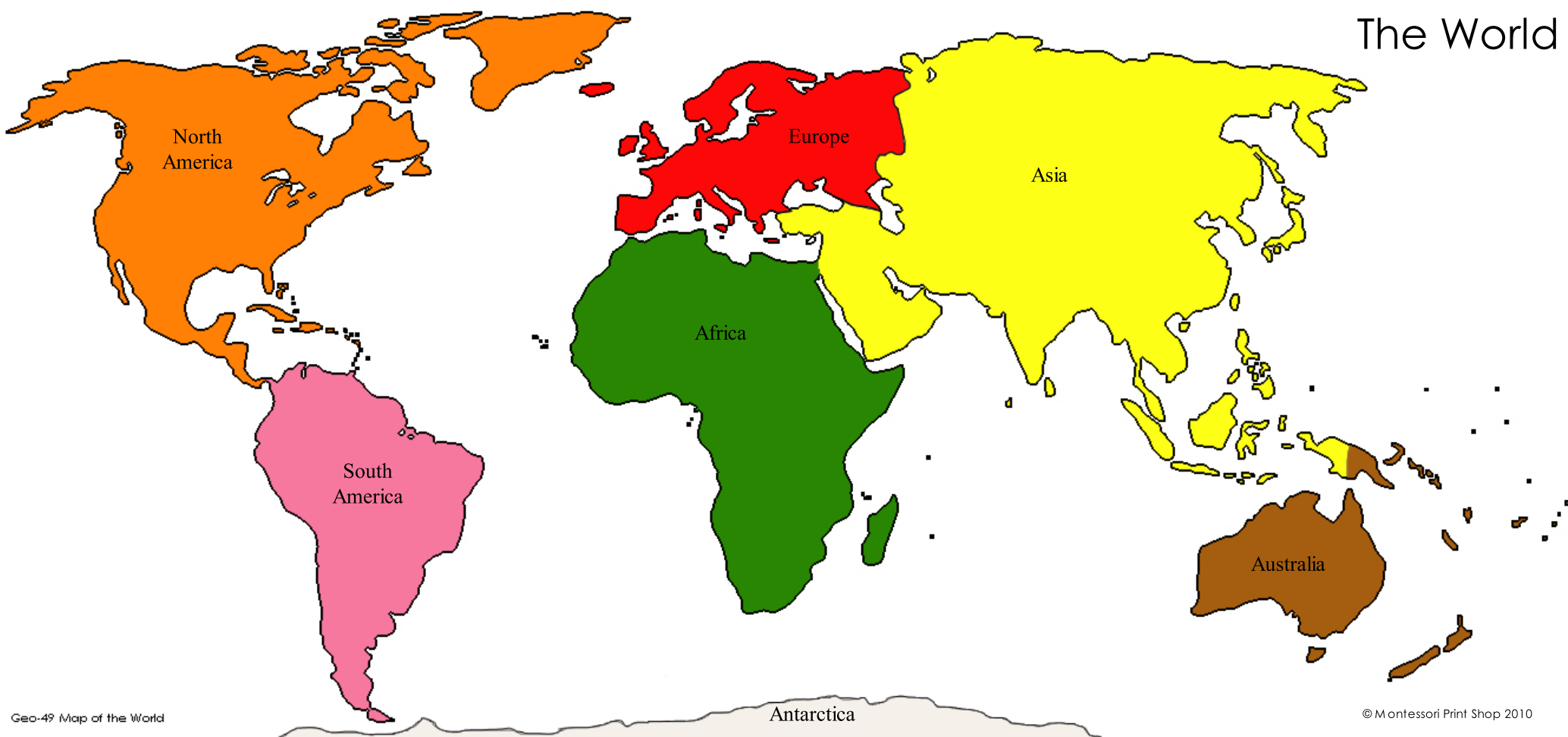
The World



The World



The World



North America	South America	Europe
Africa	Asia	Antarctica
Australia	The World	Pacific Ocean
Atlantic Ocean	Indian Ocean	Arctic Ocean
Southern Ocean		

The World	North America	South America
Europe	Africa	Asia
Antarctica	Australia	Southern Ocean
Pacific Ocean	Atlantic Ocean	Indian Ocean
Arctic Ocean		



Land & Water Form Photos

Land & Water Form Photos



archipelago

An **archipelago** is a group or chain of islands clustered together in a sea or ocean.



system of lakes

A **system of lakes** is a group of lakes.



cape

A **cape** is a piece of land jutting into a body of water beyond the rest of the coastline.



bay

A **bay** is a part of the sea indenting the shoreline.



gulf

A **gulf** is an arm of the sea extending far into the land.



peninsula

A **peninsula** is a body of land extending far out into the water and is almost surrounded by water.



isthmus

An **isthmus** is a narrow portion of land connecting two larger land masses.



strait

A **strait** is a narrow body of water connecting two seas. It is situated between two pieces of land.



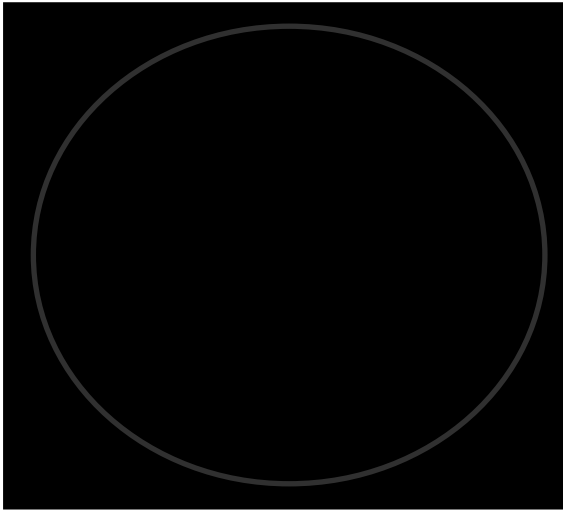

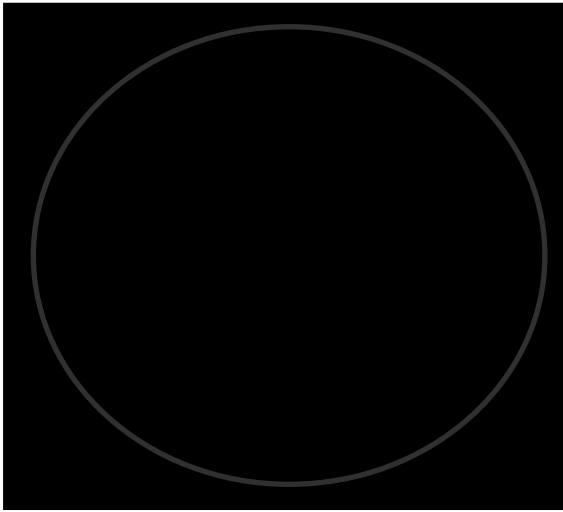

lake

A **lake** is a body of fresh water completely surrounded by land.



island

An **island** is a piece of
land completely
surrounded by water.

<p>Phases of the Moon</p>	 <p>new moon</p>	 <p>waxing crescent</p>
<p>Phases of the Moon</p>	 <p>new moon</p>	 <p>waxing crescent</p>
<p>Phases of the Moon</p>	<p>new moon</p>	<p>waxing crescent</p>



first quarter



waxing gibbous



full moon



first quarter



waxing gibbous



full moon



waning gibbous



last quarter



waning crescent



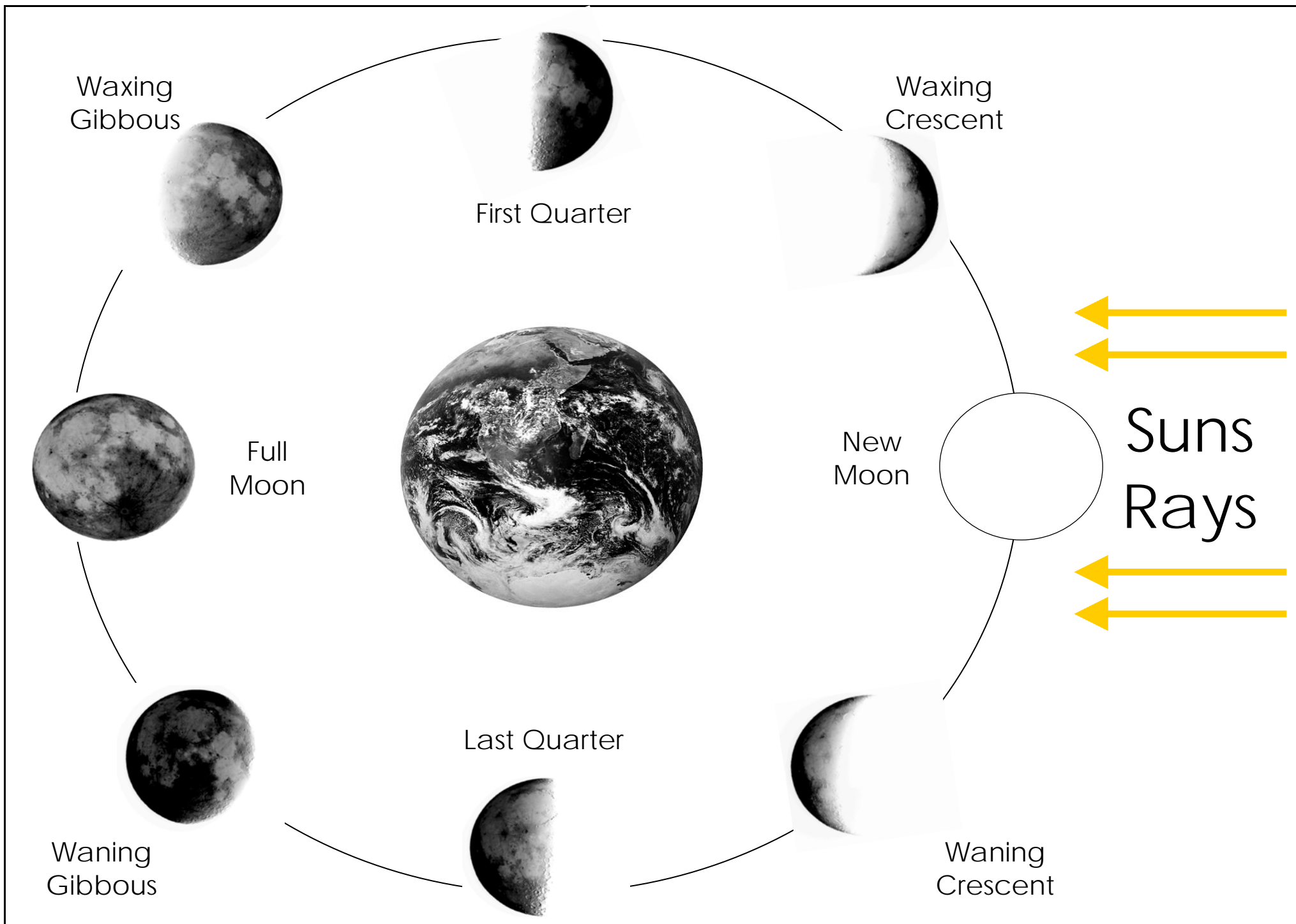
waning gibbous

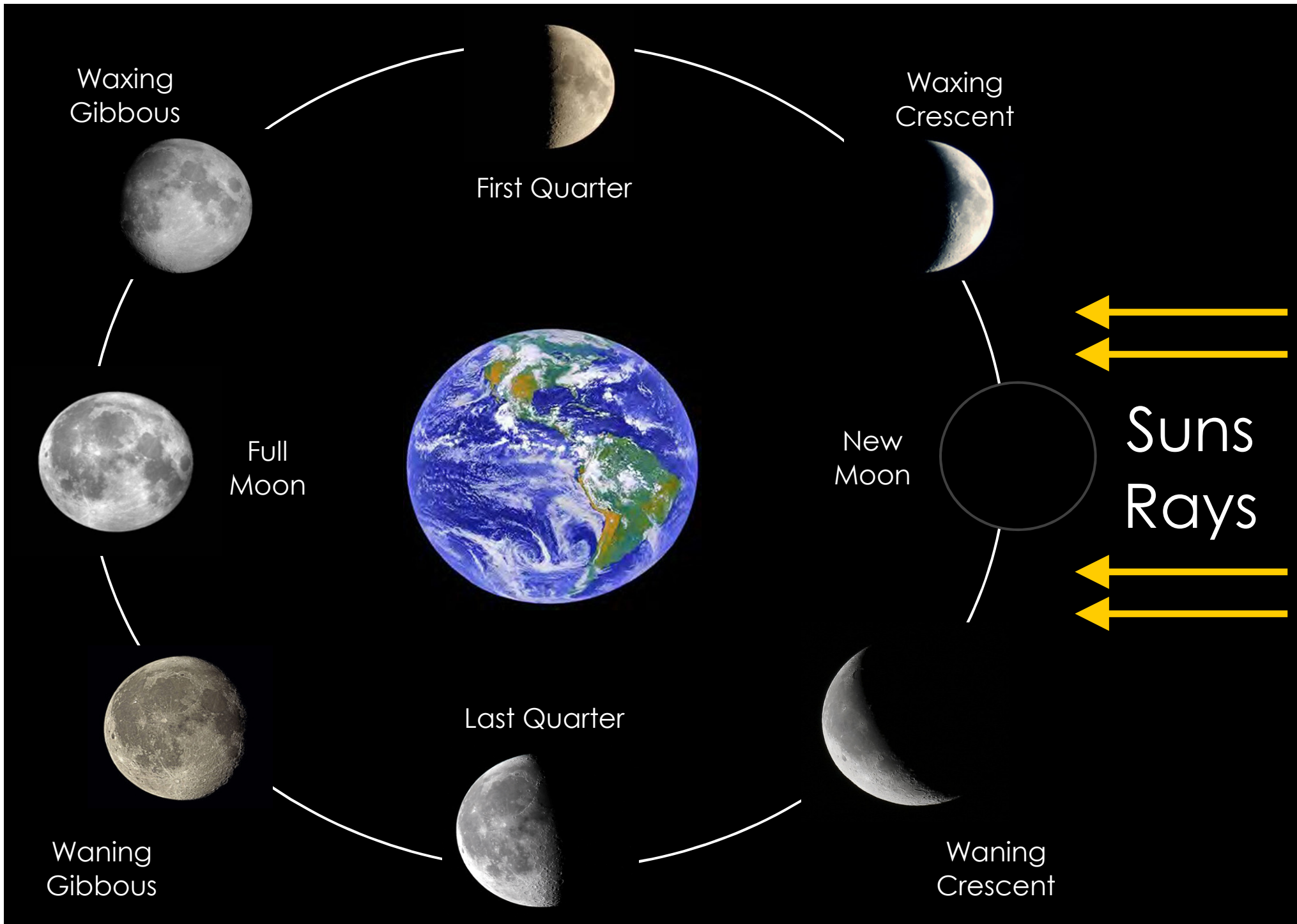


last quarter



waning crescent







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1 - 100 Math Series

This Series Includes the following:

Number Cards from 0-10: used to teach order and also quantity (place 1 counter under # 1, 2 counters under #2, etc. Make note of the "0" and that it means "nothing".

Set of "tens" cards from 10 - 100: used to teach order and sequence and also skip counting by tens

Count it Out! (complete) - used to teach quantity. Use the counters to count out the quantities and cover the squares.

Count it Out! - (blank) # 1-10 printed across the top - have your child practice writing out the numbers in the correct order in each square.

Stamp it Out! - (complete) The correct amount of blank boxes already counted out. Most children love to do stamping and it's self-correcting as the correct number of squares are shown.

Stamp it Out! - (blank) Requires the child to be very attentive and count carefully as they stamp or place the counters

100 Board - (complete) Use as a control chart for the partial and blank chart work, or use the translucent counters and cover up numbers to practice skip counting (ie. Cover up and count 2, 4, 6, 8, 10)

100 Board - (partial chart) # 1-10 and the tens (10 - 100) are printed: easier introduction to writing out numbers from 1-100 than starting with a completely blank chart

100 Board - 1 blank chart for practice writing the numbers out from 1 to 100 in pencil

Skip Counting Chart - this is a control chart that a child can use to check their work on skip counting or use to practice memorizing skip counting

Skip Counting - (blank) - the numbers are printed across the top as squared (like the control chart), however the child uses a pencil to fill in the chart with the correct numbers.

Other Items required for this material: 55 small translucent counters

Count Out!

1	2	3	4	5	6	7	8	9	10
1	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2
		3	3	3	3	3	3	3	3
			4	4	4	4	4	4	4
				5	5	5	5	5	5
					6	6	6	6	6
						7	7	7	7
							8	8	8
								9	9
									10

Count Out!

[illegible]

Stamp it Out!

[illegible]

Stamp it Out!

1	2	3	4	5	6	7	8	9	10

100 Board

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

100 Board

1	2	3	4	5	6	7	8	9	10
									20
									30
									40
									50
									60
									70
									80
									90
									100

100 Board

Number Cards 0- 10

1	2	3	4	5
6	7	8	9	10
0				

Number Cards 10 - 100

10	20	30	40	50
60	70	80	90	100

Skip Counting

[illegible]

Skip Counting

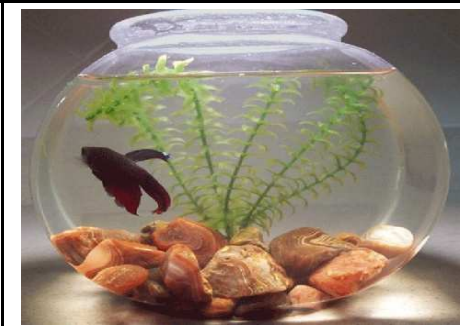
1²	2²	3²	4²	5²	6²	7²	8²	9²	10²
1	2	3	4	5	6	7	8	9	10
	4	6	8	10	12	14	16	18	20
		9	12	15	18	21	24	27	30
			16	20	24	28	32	36	40
				25	30	35	40	45	50
					36	42	48	54	60
						49	56	63	70
							64	72	80
								81	90
									100

What Does Not Belong?

1



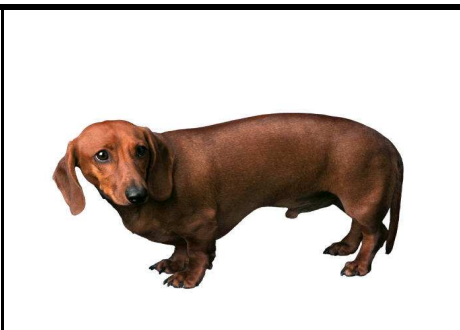
2



3



4



What Does Not Belong?

5



6



7



8



What Does Not Belong?

9



10



11



12

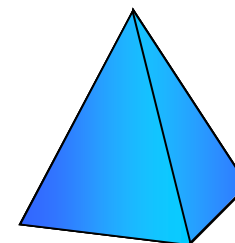
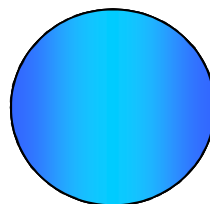
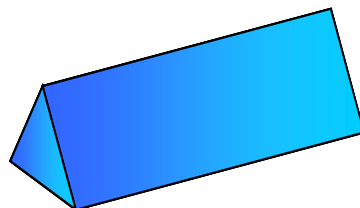
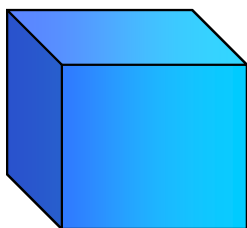


What Does Not Belong?

13



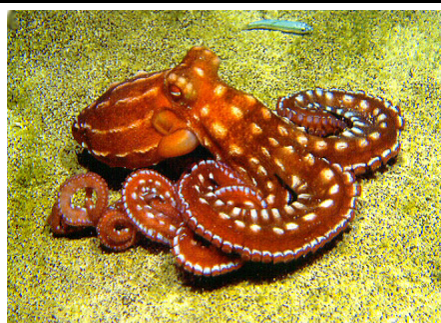
14



15



16



What Does Not Belong?

17



18



19



20

3

W

7

2

What Does Not Belong?

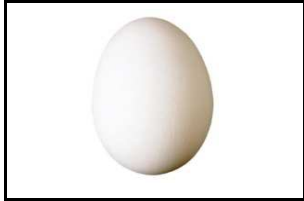
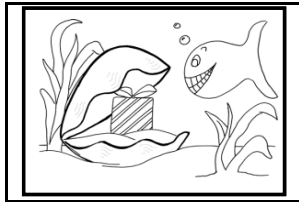
1	toothbrush	hat	toothpaste	dental floss
2	tiger	hamster	fish	bird
3	pot	frying pan	necklace	mixing bowl
4	dog	dog	dog	cat
5	canoe	duck	sailboat	powerboat
6	piano	french horn	trumpet	clarinet
7	leaf	flower	leaf	leaf
8	soap	towel	hair dryer	sink
9	hand fan	electric fan	electric fan	electric fan
10	scooter	skateboard	car	skipping rope
11	blueberries	raspberries	blackberries	bananas
12	plate	toaster	fork	glass
13	umbrella	shorts	overalls	coat
14	cube	triangular prism	circle	pyramid
15	ice cream cone	ice cube	popsicle	juice
16	scuba diver	octopus	lobster	jelly fish
17	eggplant	pomegranate	spinach	carrots
18	running shoes	sandals	gloves	rubber boots
19	skiing	snowboarding	snowmobiling	skateboarding
20	number	letter	number	number

What Does Not Belong? - Cut in to individual cards and place on the picture that does not belong in each of the rows.

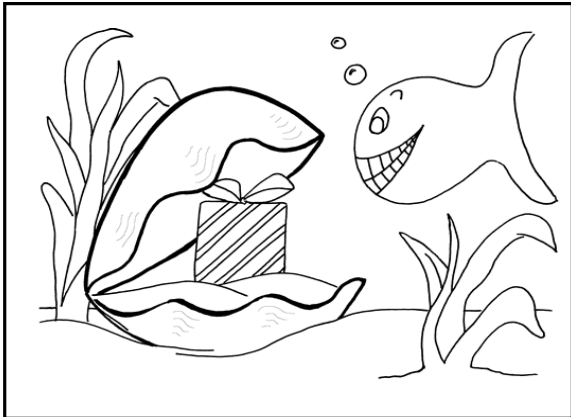
X	X	X	X
X	X	X	X
X	X	X	X

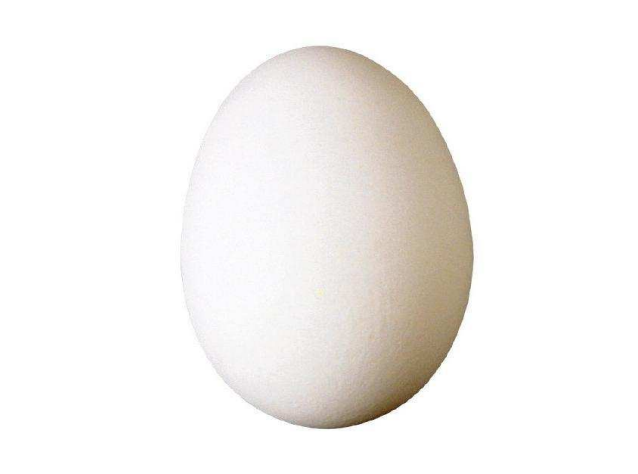
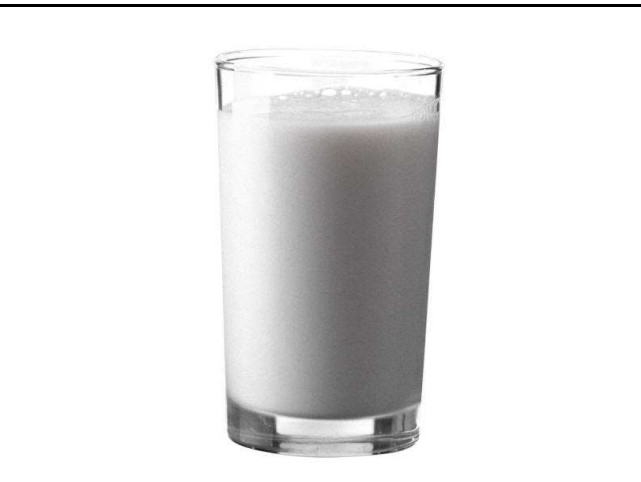
What Does Not Belong? - Cut in to individual cards and place on the picture that does not belong in each of the rows.

X	X	X	X
X	X	X	X













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Phonics Sound & Picture Sorting

Instructions for Preparing

- 1) Print out 2 sets of pages 2-9.
Keep 1 set intact - these are the "Control Sheets".
Cut out all the pictures from the second set.
- 2) Print out 1 set of pages 10-17 - these are the "Blank Sorting Sheets".
- 3) Print out 1 copy of page 18 - this is the word list for the teacher.

Instructions for Use

Choose 1 Blank Sorting Sheet and the associated pictures to work with.

1. Make sure that you point to each letter at the top of the Blank Sorting Sheet and make the correct phonetic sound - do not use the letter names.
2. Pick up one picture card from the pile to start with (i.e.. dog). Say the word clearly "dog", say the beginning sound "d", repeat the beginning sound "d", then repeat the word "dog". The process would be: "dog", "d", "d", "dog". Make the **sound** 'duh' very clear and precise.
3. Point to the "d" at the top of the "Blank Sorting Sheet and place the picture card below.
4. Complete the above procedure for 1 more card.
5. If the child you are working with is familiar with the 3 phonetic sounds then have them sort the remaining pictures. If they are not familiar with the sounds, then you will have to sit with them and help them identify each beginning sound and the proper placement on the
6. When all of the pictures have been sorted on to the sheet then show the child how to use the "Control Chart" to check their work.

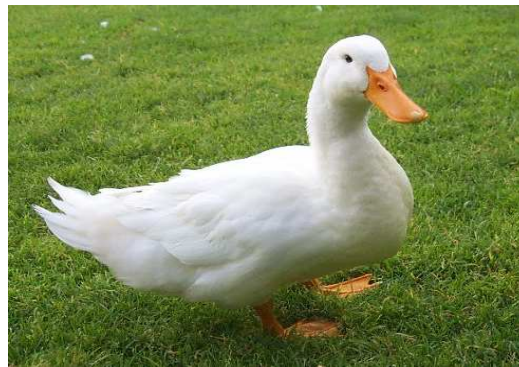
k



d



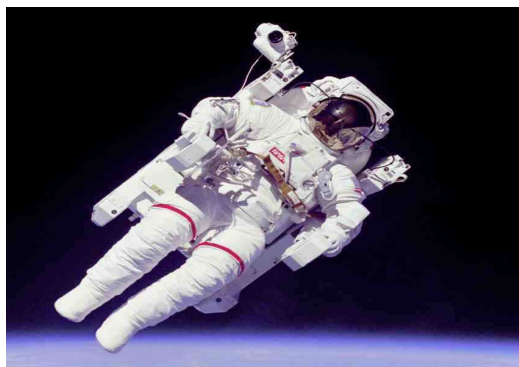
u



c



a



y



z



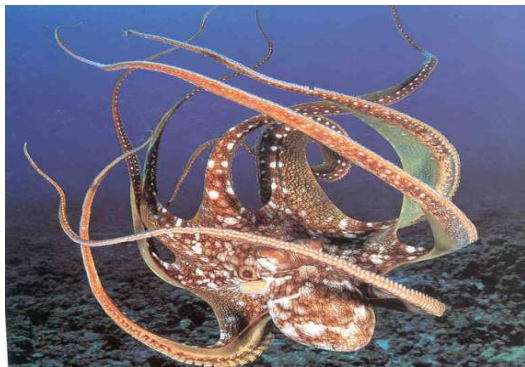
b



f



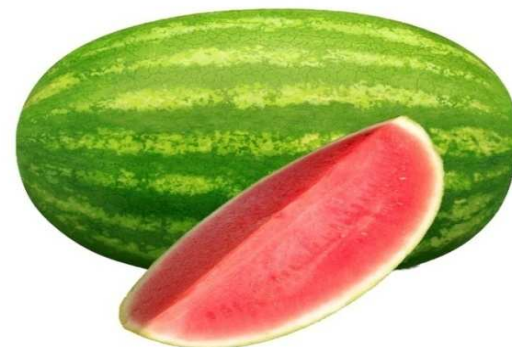
o



h



w



r



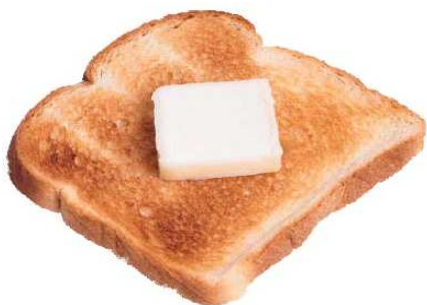
j



v



t



n



g



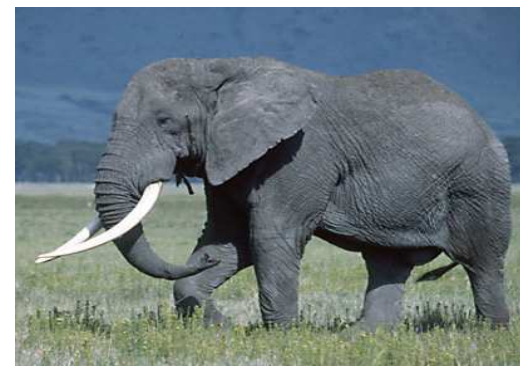
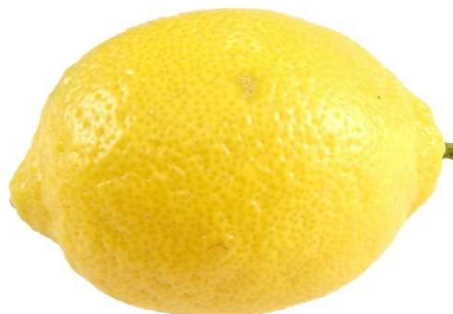
p



l



e



s



m



i



k

d

u

c

a

y

z

b

f

o

h

w

r

j

v

t

n

g

p

l

e

s

m

i

Word List for Phonics Sound & Picture Sorting

k

kettle
kite
kiwis

c

cat
crab
carrots

z

zipper
zebra
zig-zag

o

octopus
otter
ostrich

r

rooster
racket
rattle

t

toast
turtle
tag

p

present
pumpkin
pig

s

snake
sponge
snow

d

dog
drum
duck

a

ant
apple
astronaut

b

buttons
brush
bat

h

hanger
hat
hotdog

j

jello
jet
jar

n

nest
noodles
nuts

l

lion
lips
lemon

m

money
monkey
mittens

u

umpire
underwear
umbrella

y

yo-yo
yarn
yak

f

frog
fire
fern

w

window
watermelon
waterfall

v

vulture
vegetables
violin

g

glasses
gourds
grapes

e

elk
egg
elephant

i

iguana
infant
insect

Step 1 Words & Picture Cards

Cut out each card using the black lines as cutting lines. Laminate the cards for durability. Instructions on how to present this material are on the last page of this document. You can view a step by step tutorial on "How To..." prepare and laminate your cards on our website www.montessoriprintshop.com



bus



peg



mug



fox



nut



mat



bag



egg



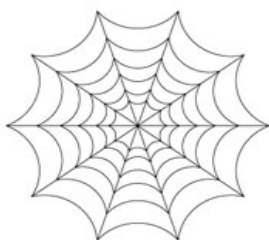
cat



bib



map



web



pot



pin



elf



dog



bat



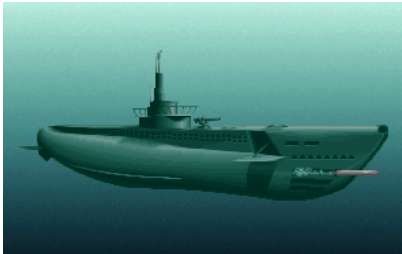
cap



rug



pup



sub



ant



net



man



elk



jet



fan



pig



log



pop



bug



sun



box



rat



pan



bun



tag



top



nut












jug



mum



lid

set 1	set 5						
set 2	set 6						
set 3	set 7						
set 4	<table border="1"> <tr> <td></td><td>bus</td></tr> <tr> <td></td><td>fan</td></tr> <tr> <td></td><td>pop</td></tr> </table> <p>Place picture cards in a vertical line. Read a word card and match it with the correct picture.</p>		bus		fan		pop
	bus						
	fan						
	pop						

1. Words and Picture Cards - Instructions

The words and picture cards can be divided in to 7 sets (or less), by vowel sounds or random division - the choice is yours.

The presentation is quite simple: Take 1 set of cards and lay the picture cards on the table in a vertical line. Make a pile of the word cards in random order. Pick up a word card and sound each letter out slowly. Repeat again, but sound the letters out a little more quickly. Repeat yet again, but increase the speed even more, so that the letters join together and clearly create the word.

Example: 'sun' s--u--n, s-u-n, su-n, sun

Once the word has been decoded, match it up with the correct picture. Pick up another word card and have the child sound it out with you. When they've said the whole word have them place it beside the correct picture card. Have the child continue with each word card until all of the words and pictures have been matched.

Next in this Step 1 Series - Sheets and Labels



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Moveable Alphabet

Maria Montessori always pointed out that the young child has a natural sensitivity for language development which follows closely on the years when he learns to speak his native language. The child at three, four and five has a unique fascination for words, both reading and writing before the age at which it is traditionally taught.

This material should be presented to a child once he has learned the phonetic sounds of at least 15 letters (including several vowel sounds). Work with "sandpaper letters" or a comparative material should continue even after the introduction of the moveable alphabet until most, if not all sounds have been mastered. Start only with the lowercase letters, introducing the uppercase when the child shows interest or work with short sentences, names etc., is begun.

Presentation #1: Associate Sandpaper Letters with the Moveable Alphabet

Tell the child that you are going to show him the moveable alphabet.

Open the lid and explain to him that the letters in the box make the same sounds as the "sandpaper letters" or "sounds" that he has been learning.

Begin to demonstrate this fact by choosing a letter that he knows, remove it from the box - place it on the table and make the correct phonetic sound (you can place the actual sandpaper letter beside it as well if you have this material).

Repeat this step with a few letters.

Then ask him to find a sound that you know he knows - it might take him a few moments to find, as he is not yet familiar with the layout of the material.

Repeat this step with a few sounds/letters until he has been able to find and identify the letters he knows.

Show him how to replace the letters back into the box.

Presentation #2: Word Building

Once he is familiar with the location of the letters in the box it's time to start building words.

Tell him you are going to make a word using the sounds in the moveable alphabet box.

Choose a 3 letter phonetic word - make sure he knows all the sounds needed for the word i.e) "log".

Be sure to speak slowly and clearly when pronouncing the word "log" to him.

Say "l-l-l...log" - then ask him to find the sound "l" - place it on the table.

Repeat the word "log" - emphasizing the second sound "o" - ask him to find the sound "o" - place it beside the "l".

Repeat the process to find the last sound "g". Once the word has been built you can say the sounds together to make the word.

This process is repeated for another word, unless the child appears eager to make the word by himself.

The Moveable Alphabet cont....(2)

Presentation #3: Word Building with Pictures/Objects

This presentation is the same as presentation #2, however the child is able to work independently with the aid of pictures or small objects.

Use the pictures included in this set and/or collect a variety of small phonetic objects with sounds that he is familiar with.

Children at this age are fascinated with small objects.

If he chooses a picture or object with a sound that he hasn't been introduced to yet, you can take this opportunity to introduce the sound to him.

Be sure to continue work with the sandpaper letters if your child isn't fluent in them or they will be limited in their ability to build a variety of words.

Variations and Extensions:

1. For the child who is not yet writing, use an alphabet letter stamp to make a booklet of words.
2. Create a set of pictures with the word printed on the back of the card. The child builds the word according to the picture and uses the printed word on the back of the picture to check his own work - control of error.
3. The child who is able to write can copy the words he has built onto paper and make a booklet.
4. Introduce word families, consonant blends or phonograms to the child by setting out a vertical row of the "constant" letters of the lesson (ie...**a**t) and show them that they can add a letter in front of "at" and they have built a new word.

Example.....**a**t: **b**at
 cat
 fat
 hat

Notes:

- * Do not ask the child to read back what he has written. The process of building words using the Moveable Alphabet is "writing", not reading. It's only after the child has had much practice with writing words that he is able to read (decode) words. Usually the child will show you when he is able to read (decode) the words - this is a wonderful moment and worth the wait!
- * In the beginning stages of the Moveable Alphabet do not correct spelling. If the words are terribly wrong then you should direct the child back to the sandpaper letters and sound games.

Direct Purpose:

- * Making the connection between the sandpaper letters (phonetic sounds) and the Moveable Alphabet letters.
- * Visual and auditory practice in the association of letters and sounds.
- * Reproduce words with graphic symbols.
- * Develop visual and auditory memory.
- * Seeing spoken word as written word.

The Moveable Alphabet cont....(3)

Instructions for assembling the Moveable Alphabet

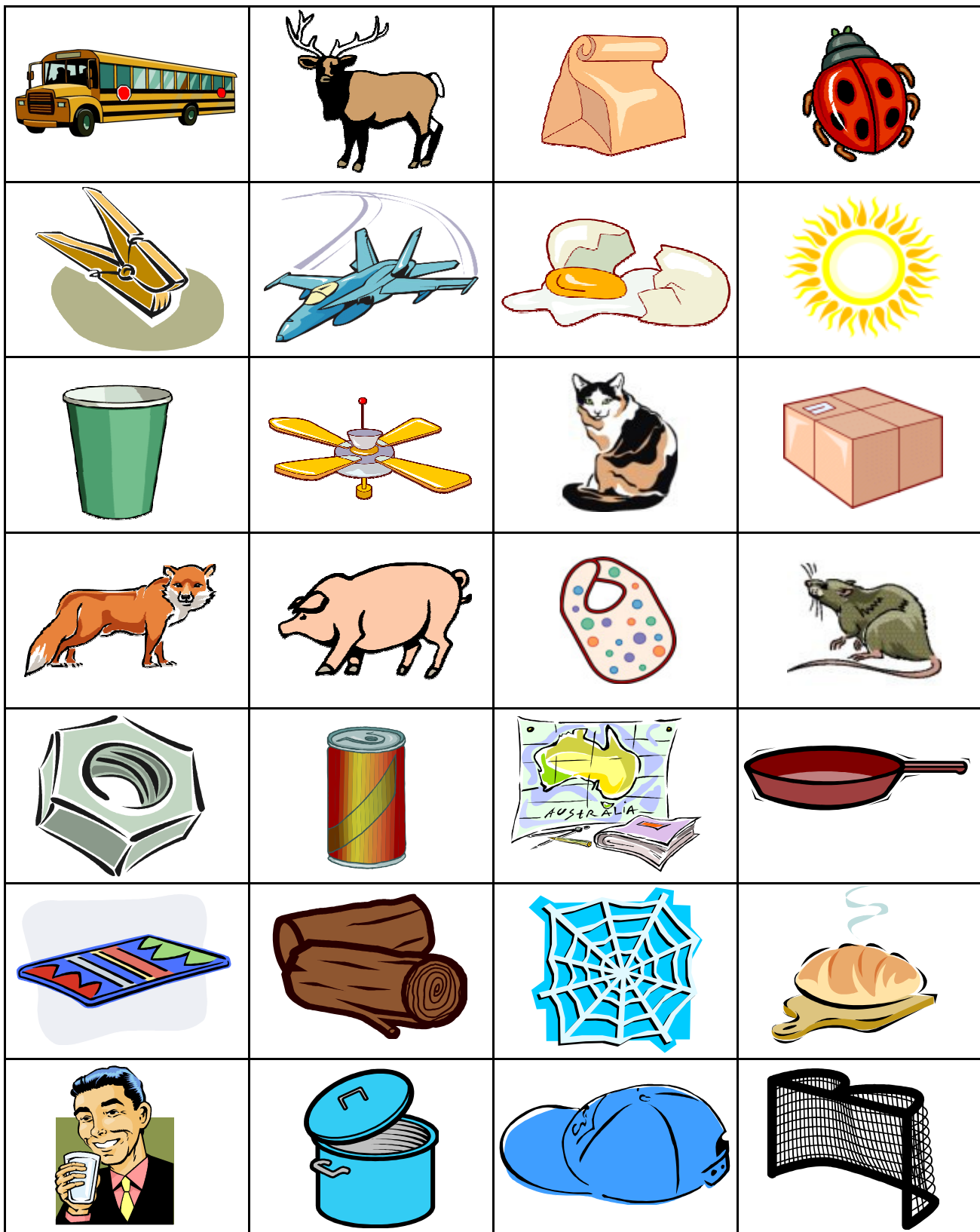
- * To make the letter cards more durable, laminating is recommended. This can be done with traditional laminating or another method that can be less costly is using "MacTac" or "Contact Paper" (clear plastic that is sticky on one side).
- * The laminating process is best done **before** cutting any cardstock as there are SO many letters to cut and laminate.

Storage of the Moveable Alphabet

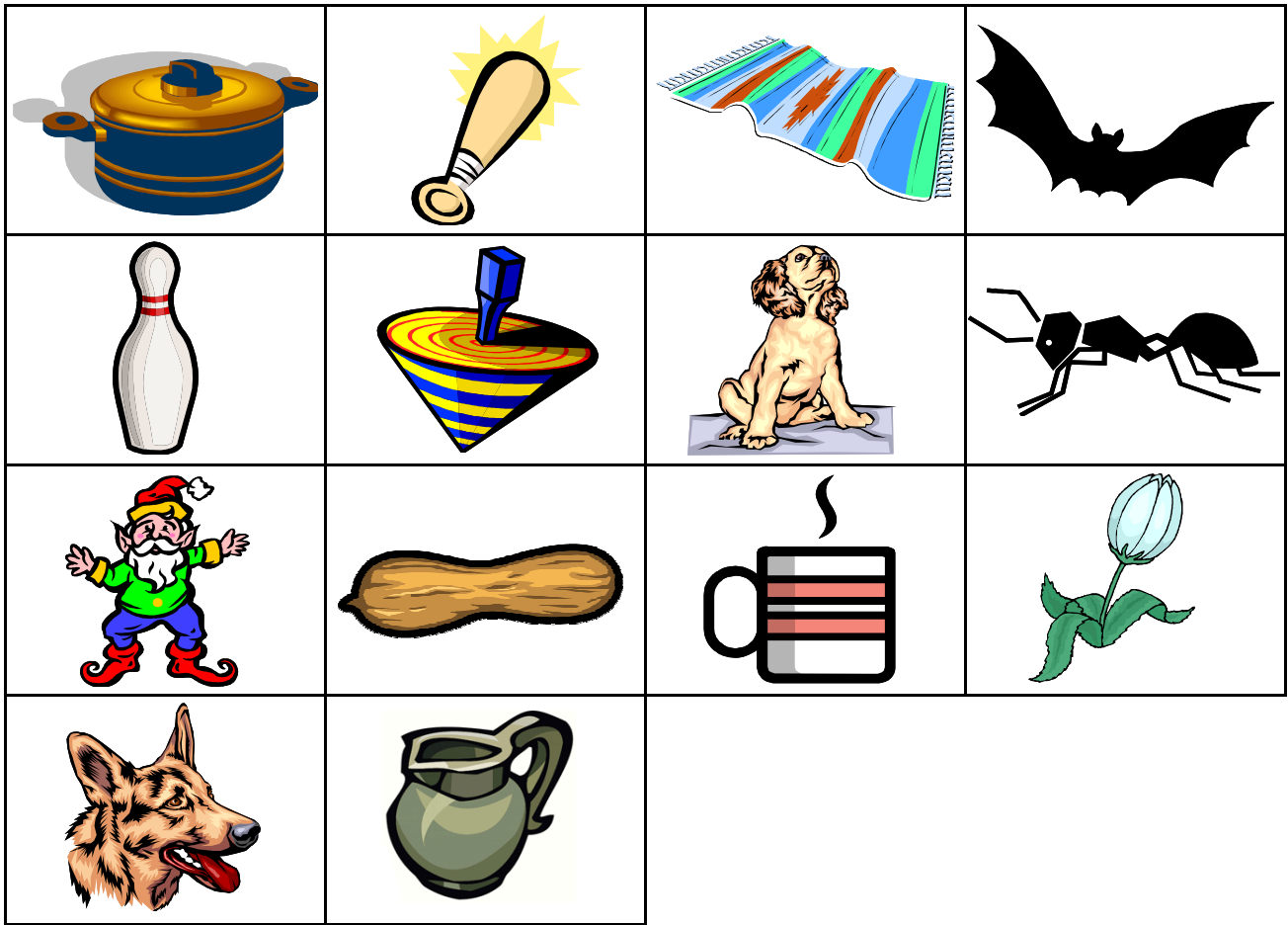
- * The letter cards and pictures were designed to fit into a tackle box - "Plano 3600".
- * It can be purchased at most Wal-Mart stores in the Sports section (fishing) or Hardware
- * The "Plano 3600" tackle box has enough spaces to hold all of this material, however it **does not** come with enough dividers. You will either have to purchase a second tackle box and borrow some dividers from it, or create a few dividers from craft materials at home - you could use cardboard. If you choose to purchase a second tackle box it can be used without any dividers for storage of small objects & object labels.
- * Once cut, the capital letter cards can be stored behind the lower case letters. There will be 2 slots for punctuation and 4 spaces for the picture cards.
- * To purchase on-line www.cabelas.com



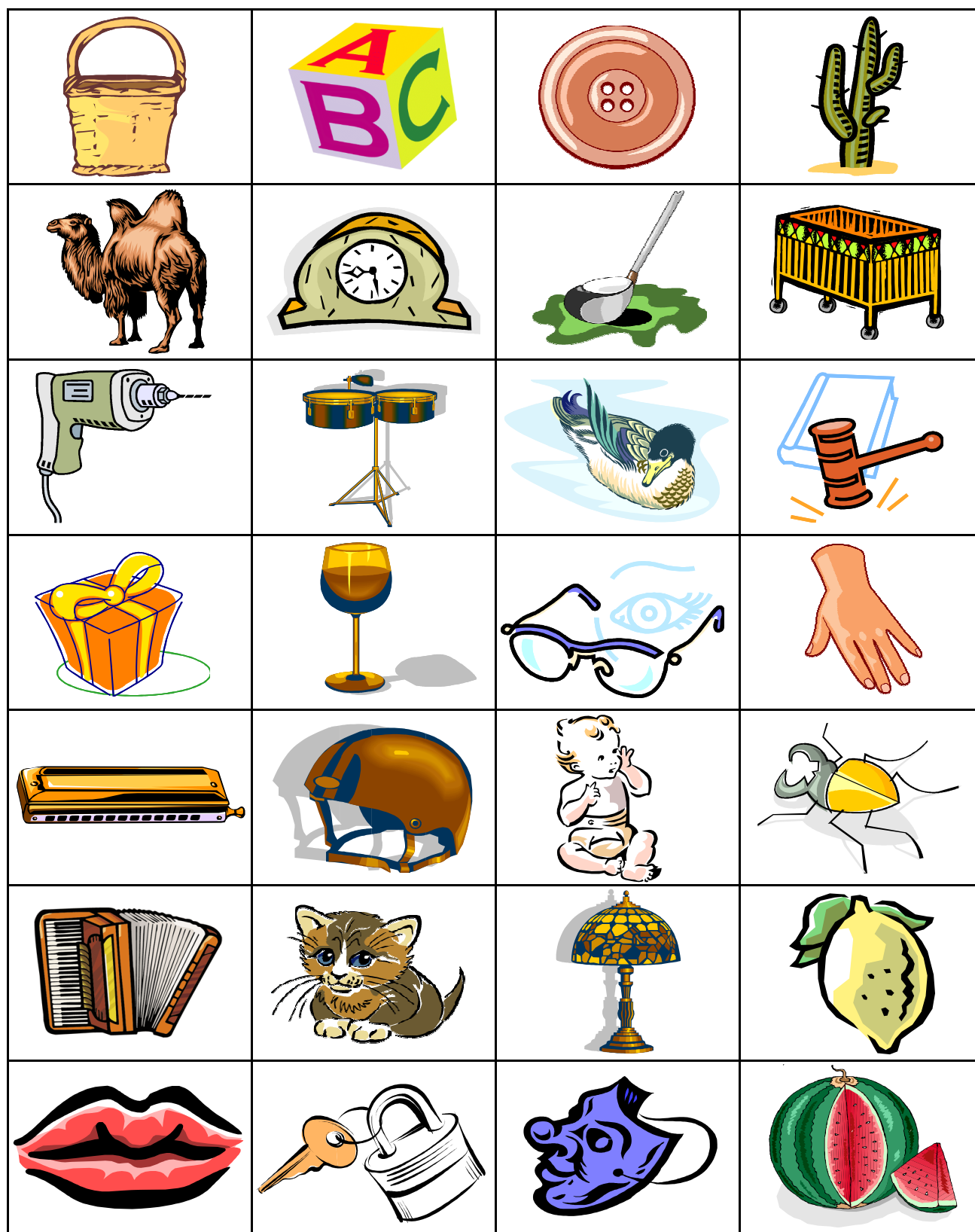
3 Letter Phonetic Pictures



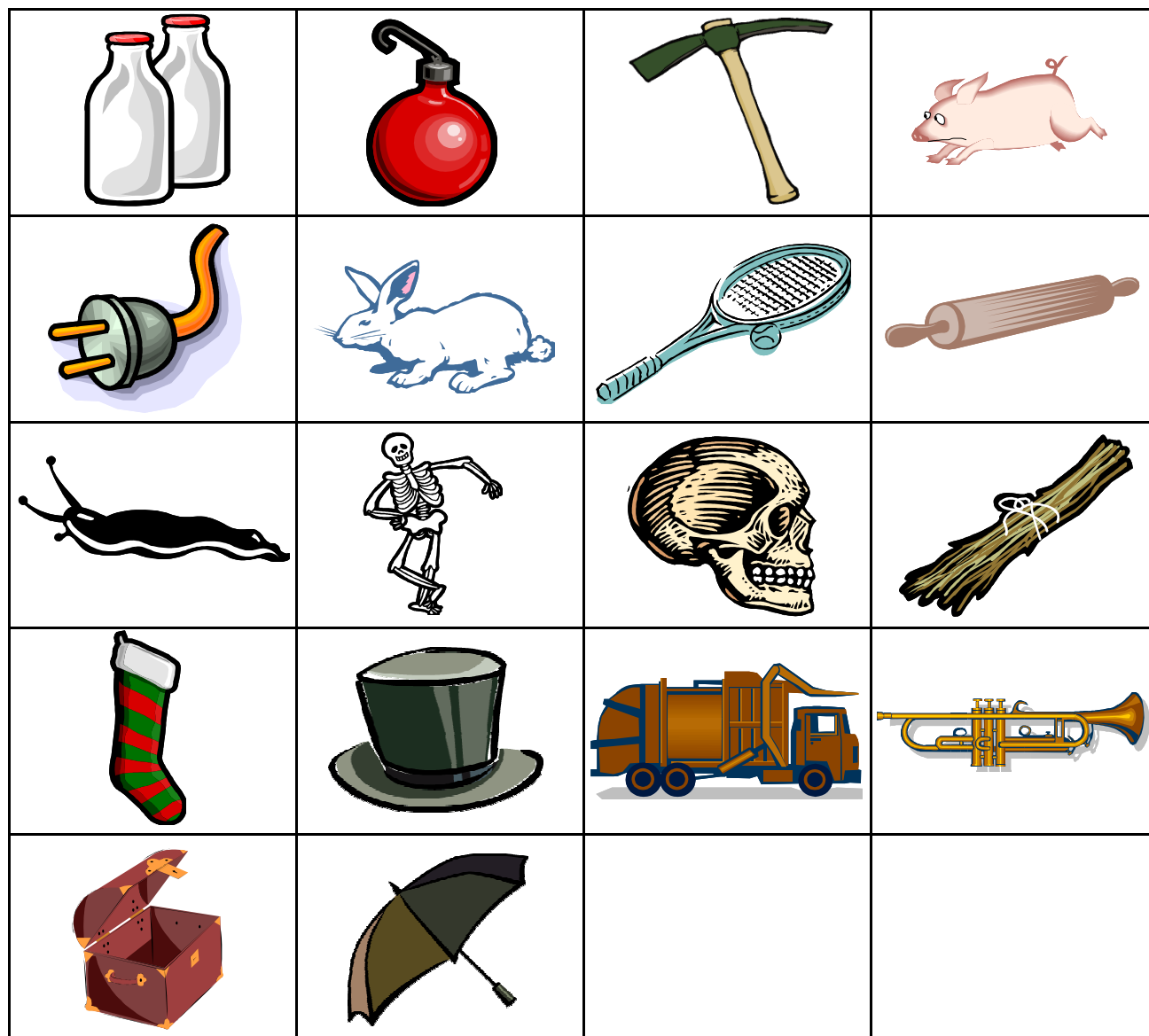
3 Letter Phonetic Pictures



4 + Letter Phonetic Pictures



4 + Letter Phonetic Pictures



3 Letter Phonetic Words

bus	elk	bag	bug
peg	jet	egg	sun
cup	fan	cat	box
fox	pig	bib	rat
nut	pop	map	pan
mat	log	web	bun
man	lid	hat	net
pot	bat	rug	bat
pin	top	pup	ant
elf	nut	mug	bud
dog	jug		

4 + Letter Phonetic Words

basket	block	button	cactus
camel	clock	club	crib
drill	drum	duck	gavel
gift	glass	glasses	hand
harmonica	helmet	infant	insect
instrument	kitten	lamp	lemon
lips	lock	mask	melon
milk	ornament	pickax	piglet
plug	rabbit	racket	rolling pin
slug	skeleton	skull	stick
stocking	tophat	truck	trumpet
trunk	umbrella		

a	b	c	d	e	f	g
h	i	j	k	l	m	n
o	p	q	r	s	t	u
v	w	x	y	z	.	.

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z	.	.

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a	b	c	d	e	f	g
h	i	j	k	l	m	n
o	p	q	r	s	t	u
v	w	x	y	z	.	.

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z	.	.

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a	b	c	d	e	f	g
h	i	j	k	l	m	n
o	p	q	r	s	t	u
v	w	x	y	z	.	.

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U
V	W	X	Y	Z	.	.

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		/	/	/	/	.



A big mop.



A red bug.



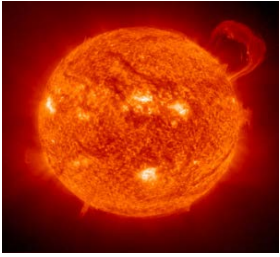
A big dog.



A fun jig.



A sad lad.



The hot sun.



The mad pig.



The fit man.



The wet cat.



Pam can nap.



Sam hops a lot.



Bob is at bat.



Pat has a job.



The pot got hot.



Will has a hat.