CODING FOR KIDS

IN 2021

A Step-By-Step Guide On How Kids Can Learn To Code With Awesome Fun Activities

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TABLE OF CONTENTS

CODING FOR KIDS

Complete Parental Guide for 2020/2021

Learning how to code (Computer Programming) for kids has become popular and is fast gaining the attention of so many.

According to a Gallup poll, 90% of parents would love for computer programming to be integrated in the school's curricula for their kids even though programming is not studied widespread in the US.

Learning to code at an early age can truly place your kid right in the middle of great opportunities as they advance. It makes them stand out in whatever

modern industry they specialize in, as it is not designed for just computer science related fields.

Some students are opportune to take computer science lessons in the classroom, but the rate at which the lessons impact the students is quite low (just Scratch, Code.Org and Tynker). Parents have decided to resolve this issue by looking for external resources that will provide the basic knowledge for their kids to learn coding.

The school cannot actually be blamed for this position we find ourselves in. Integrating computer Programming lessons in the curricula will require teachers with a background in

engineering who would teach it with the necessary resources (real languages and tools). By the way, schools don't even stand a chance with the Private sector as they are really doing a fast job in employing all of the engineers within their reach.

This is the major reason CodaKid was created. It is an affordable platform available to all those with a desire to learn actual computer programming with professional tools and languages. Also, we wanted to provide students with the appropriate mentorship they needed from experienced engineers as they progress from one level to another in their project. CodaKid now teaches kids with the same advanced tools and languages Facebook, Google

and Amazon employees use to code. Artificial intelligence and machine language is the new step up for our most advanced students.

This guide will provide you the answers to some of the most frequently asked questions as an operator in a kid's coding academy. Putting a crown on it, I'll bring you tips on academic approach, how to select curricula and resources best for your kid.

KID'S AND CODING- WHAT IS THE APPROPRIATE AGE FOR KIDS TO START CODING?

Computer programming, otherwise known as Coding, entails a process by which programmers instruct a computer on how to carry out a task. In the beginning, it simply has to do with using a programming language to write a computer program. Learning to code for kids involves using information appealing to the kids in a bid to create projects that require creativity.

In simple words, learn to code for kids involves games which makes it fun and easy for them to learn.

Teaching kids how to code using games, apps and other enticing projects is a research-based method that has proven that kids can learn real-world skills and still be very much active in participation.

Reasons why you should consider Coding for your kid now and not wait till 12th Grade

Simply put, coding provides kids and teens with more fascinating

opportunities in future, there is compelling data below. The Bureau of Labour has stated that the median pay for software developers is $103,560 per annum, with an expected increase in demand of 24% from 2016-2026. The rate is not comparable to other occupations.

However, if there's a K-12 school which is among the few regularly providing platforms for students to learn how to code, they might as well not be doing it properly. It is either they are not incorporating the right languages to boost your kid's career or they don't have the necessary equipment available in additional programs.

Majority of schools make use of Scratch, Code.org or Tynker.

A free and good way for your kid to learn coding without having to use real programming language is with Scratch. Code.org provides some simple looking exercises that introduce a Scratch-like visual block approach while introducing a text-based approach in coding in their later modules.

Schools prefer to use these programs as they are sure their teachers with little or no engineering background can handle the lessons. No doubt it is fun-filling and your kid may get excited at first. It's just a matter of time when your kid begins to clamour for more

advanced projects. The next stage allows kids to be creative in their way either in gaming, app or web development using real text-based languages as well as granting access to other platforms other than closed ones.

Investing in external resources allows your students to learn real software development and benefit from using professional tools and languages. (section 5 of this article provides you with information on this aspect including free & paid programs)

Most of the courses are taught using the same languages software companies such as Facebook, Amazon and Google use in their daily routine.

The nature of Computer code

We're going to be looking at two concepts in pseudo-code; Conditionals and Loops

Conditionals

Conditional statements puts the computer in a position where it is has to perform certain tasks based on whether the condition is true or false. Java makes use of Boolean values to test these conditions. The computer reports one of two of the Boolean values (True or False) after testing the condition.

Here's a tiny part of code that indicates when the user's player can jump in

```
if(player.pressedSpacebar) {

  player.jump();

}
```

From the example above, once the user's player presses the space bar on the computer, the user's player will jump.

Loops

Another concept used in coding is called Loop. In this example, a "While loop" repeatedly runs a command while the condition remains true, but the moment the condition becomes untrue, the command stops running.

The above is an example of skills that kids can learn in a game-like format. The next section will be about the best programming languages kids should be learning.

Before we continue, these are further reasons why you should consider to let your child start coding at a young age;

1. Computer science develops skills in diverse areas such as maths,

science, problem-solving, team work, project-based learning, and creative art and many more. Just as Steve Jobs rightly said, "Coding teaches you how to think".

2. It is always easier to start learning how to program early as it is simply the same instance with learning a foreign language.

3. There'll be about 1 million vacant tech jobs by 2020 as a result of limited number of qualified engineers.

4. Occupations that are computer related, consist of over 60% of projected new job fillings in STEM (Science, Technology, Engineering and Math).

5. Relevant skills needed in today's market are duly enhanced while learning computer programming.

6. Computer science is advantageous to basically every industry from education to farming, law to business and from construction to medicine.

7. Among the highest paying job ranks is Computer Engineering jobs.

8. Coding is the newest form of liberal art. (The aim of liberal art is to just prepare individuals for a civic life and to help them understand the life around them. With time, it'll be integrated as compulsory courses in schools).

Most Suitable Programming Languages for Kids

Many parents actually prefer visual block platforms as starters for their kids while others prefer texting.

If visual block suits you, our most preferred option is Scratch 3.0. We even created a video series of the entire Scratch 3.0 courses that will take kids through the basics of Scratch coding, as they learn how to create

more challenging 2D games in a gradual manner.

When you see that your kid is ready to move on to text-based coding, make sure you let your child's interest be the basis for selecting a coding language. If your student has an interest in Mincecraft coding, visual block would be a good way to start before moving on to Java or JavaScript.

If it happens that your kid develops interest in robotics, it'll be advisable to do a research on the coding languages used here and also find courses that applies same language. Some of our most preferred DIY robotics kits use scripting languages such as Lua and Scala and they are both child friendly.

If you notice that your kid is interested in web development, HTML and CSS would be the best options. And if their interest lies in building apps, Swift or JavaScript would be the most considered option.

At CodaKid, Java for our MInecraft coding courses is our major focus. We make use of helper files to reduce the complexity in our beginner's class. This allows them have a head start with the basics. To make things more exciting, we have devised a more efficient way of teaching Java as an introductory coding language. Combining this with kids' natural enthusiasm for Minecraft pushes them to work excellently through concepts like Booleans, conditional, loops, variables, methods,

of which they are all universal and are found in nearly every other coding language.

Java which happens to be a language tested by the Computer Science AP is still desirable for some our families.

Our most preferred option for 2D game and app development is JavaScript. It is one of the languages characterized by fast growth in the world as a result of its popular server-side language (Node.js) even as it remains essential for front-end developers. Node.js and Javascript are used in Paypal, Uber, Netflix, LinkedIn and Medium operations.

Another popular language is Python. A lot of person consider Python as one of

the easiest scripting languages to learn. Instagram, Youtube and Spotify were created using Python and it allows students to develop a websites using a popular web framework, Django.

CodaKid has also incorporated the use of Python in teaching kids how to create various games from scratch.

We also love Lua. The scripting language is used to power Roblox studios, one of our most preferred coding and gaming development platforms. It is simple to read and understand and Roblox and Lua scripting provides learners with a way to make their own games in a fun way

and even offer them up for sale online through Roblox Marketplace.

FOUR IMPORTANT TIPS AS GUIDELINES TO BEGIN YOUR KID'S JOURNEY IN CODING

Just before you move to the next section where I get to share information on amazing free and paid coding games, websites, apps and classes, there are few tips you must see first. Note that these tips are quite important and you must consider them before taking your child into the coding journey.

Tip#1: It should be Fun

Learning how to code for kids should be entertaining.

Although, not many computer science educators agree with this point. A lot

of them are still using the "Hello World" method where students have learnt to print the words in the same manner on the screen.

From experience, we have noticed that young kids find this approach stressful and this can discourage from learning how to code. We discovered that it is easy to get kids to hop on the programming train but quite difficult to have them stay on track.

We advise it is better to stay away from lessons which seem too academic and boring. Better still, engage your kid in courses that are fun and that they have interests in. Most of the best resources comes in form of games that the kids would definitely enjoy their content.

A custom sword would be created by some students for bestselling Minecraft game while others might be interested in creating their own web page. Do not ignore their interests, pay attention to it and feed it with the adequate resources and lessons. Moreover, people will only remain dedicated to programs which are in actual sequence with their motives and passion.

Kids are taught coding by building of video games and apps at CodaKid, as it is a more exciting and interactive way to learn coding concepts. A lot of coding institutions are beginning to move in this direction.

Tip #2: Search for a class, online or local

The CEO of Facebook, Mark Zuckerberg started attending lessons for computer programming from middle school.

Having a well experienced and qualified tutor in computer science is quite a way to learn but then its expensive nature won't make it affordable for most families. In a bid to avoid this, you may consider participating in group classes as well as taking online courses that will expose you to real life situations as you learn from experienced engineers directly. Of recent, CodaKid launched a one-on-one tutoring class which is less

expensive for students who need special and direct attention.

Very great and reputable institutions as well as online courses would have lessons that would integrate concepts like Booleans, Conditionals, Variables, Methods and more. With the rate at which coding for kids is becoming popular, there would be suitable options for your kid amongst varieties.

Tip#3: Get someone to Mentor your Kid

There are developers who are comfortable with tutoring kids who have interests in coding in form of volunteers. You might be surprised at how many are willing to take on your kid as a tutee either in person or online. Either this tutor is family, a friend, colleague or a professional, the difference would be clear.

Having a line of communication with a developer who is experienced is of immeasurable value and can be done over variety of free video conferencing platforms such as Skype. A lot of companies also offer such service, just in case you don't have anyone in your

immediate circle who can, you can search hem out online and employ their services.

Tip#4: know the difference between visual block & test-based coding

There are coding platforms that claim to teach your kid coding languages but then, it is merely visual block platforms they teach. This is actually best for kids who just started out in coding between ages 5-7years old. This is quite important so you're aware of what content your kid is being fed with and can also know the right programs for your kid.

Visual Block Platforms

Visual block programming is considered as the 'Three-way' street to coding, as we can view, drag and drop.

They are structured to be make tasks easy and fun but they can also be outgrown.

There are platforms which believe that typing should not be a hindrance to computer science education, like Code.org, Scratch, Tynker and so on. They believe that many of the coding concepts can be learnt through a more visible and concrete approach. We believe that these platform can be of great assistance to young learners even as they represent a link to text-based coding

Text-based coding

CodaKid, Codeacademy and Kahn Academy are programs that use professional grade coding tools and real programming languages. They teach lessons in a fun way that appeal to students as young as 8 years old and that also pulls their attention.

The most beneficial of this kind of approach is that students are now able to create real software. Honestly, I believe this is just a stepping stone to achieving a whole lot more in their career.

Now that these 4 tips have been brought to your knowledge, just before your kid gets started in coding, you should also get to know about

some free & paid coding platforms that could get the ball rolling for you.

Amazing Free & Paid Coding Games, Apps, Websites, Courses and More just For You

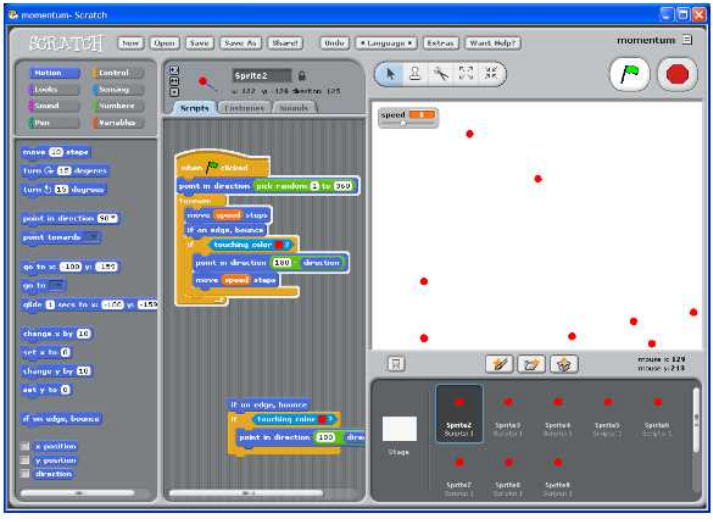
To begin with, there are different games, app, courses, website to get you started on coding but the list would be unending.

Therefore, I'll be itemizing the ones that'll be most helpful in getting you started beginning with materials in coding for ages 5-7 years old. When you're prepared for more resources, do well to check my next article on the best games on coding for kids.

Coding for Kids between 5-7 years of age

Visual blocks is the best way to get your kid who is between the ages 5-7 years old started in coding.

Scratch (Free)



A fun visual block platform was designed by the MIT Media Scratch Labs that will teach coding concepts

and giving the students the opportunity to build fun games with a lot of creative freedom.

Google CS also designed well organized lesson plans suitable for kids and the best part to it is that reviews are free for students who carried out project tasks.

Now, kids are allowed to study the Scratch visual block code that was used to create fun 2D games such as Asteroids, Donkey Kong and lots more. Smart also allows kids to be creative in their own way by creating room for edits in art, animation, music, sound effects and voice-over. At this point, Scratch does not provide student support.

CodaKid actually launched a 15 lessons Scratch coding series in 2020 starting from the beginners level and then to the advanced level. CodaKid's courses are mostly in videos and are quite engaging, so for students who enjoy video lessons, this is quite a dish. It is apparently used by students all around the world.

Code.org (Free)

Code.org is being used many public schools to teach the introductory aspect of computer science and has been featured by Hour of Code.

Code Studio has beginning modules which feature visual block interfaces and more advanced chapters that teach coding in text in a closed platform. Code.Org has combined efforts with Minecraft, Scratch, Tynker, CodeBattle, and others to create lesson plans that integrate the knowledge and act of creating games and apps.

The interesting thing about Code.Org (except of course, apart from the fact that it is free) is that they are partners with Minecraft and Star Wars Brands. Also, they teach computer

programming in such an organized way. The only disadvantage is that kids never get to feel the experience of creating from scratch as they are left with no choice other than to drag and drop blocks instead of texts.

Tynker (Paid)

Tynker is a very popular gaming resource that helps kid to learn how to code. It offers 32 online courses at a price.

It is one of the most popular platforms used by schools as it basically based on visual block teaching methods as earlier mentioned. This makes it quite a catch for beginners and kids, even though they are expected to graduate from it as time goes on.

Furthermore, the lesson plans and courses actually advances to a difficult and complex form just as the students grow. The advantage to this despite the limitation, there's room for improvement from the status quo.

Tynker happens to be the best recommendation to begin the journey to coding.

Osmo Programming (Payment required)

Osmo programming merges Legos, wagering, as well as programming. This is a game trademark which educate toddlers on coding ideas through the use of attractive bricks which gives room the user's persona to steer through enigmas as well as other problems in an iPad game.

While the webpage specifically indicates that the program is outlined for students between the ages of 5 years and 12 years, we are of the opinion that it is most suitable for those within the ages of 5-7 years. Osmo brings in a captivating, tangible viewpoint to programming order and we are of the opinion that they possess huge prospect for K-2 computer science.

Surprise Workroom Dash and Dot Mechanicals (Payment required)

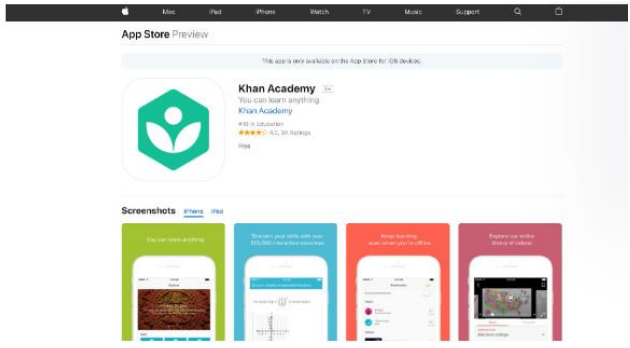
Surprise workroom Dash and Dot mechanicals equipment makes available an easy toddler-friendly introduction to brick coding with additional gains of a physical robot. Dash and Dot's manual motions can be coded through the use of a straightforward attachment and the two robots experience pleasure, lovable characters which are quite amusing for toddlers. My six-year-old daughter has enjoyed multiple hours of replay worth from her Dash and Dot equipment, this has made us become huge supporters!

PROGRAMMING FOR TODDLERS WITH AGES ABOVE 8 YEARS (MASTER PROGRAMMING WITH THE USE OF AUTHENTIC LANGUAGES)

Peradventure you recall from my suggestion above, Code.org as well as Scratch are basically the software that schools make use of.

Nevertheless, if you desire that your student enjoy a head start to their profession and commence mastering the same programming language at Facebook, Google, Amazon, as well as others, I have compiled some free and renumerated materials for you to kick off with

Khan Academy (Without Charge)



Khan Institute Application Codakid Highest 21 Mathematics Applications of 2019

Sal Khan has built a sequence of visual broadcasts which are fabricated to make chargeless education available to the world. Financed by Bill and Melinda Gates Foundation amid others, Khan Institute has started a sequence on computer science which

instructs on JavaScript fundamentals, HTML, CSS, as well as others.

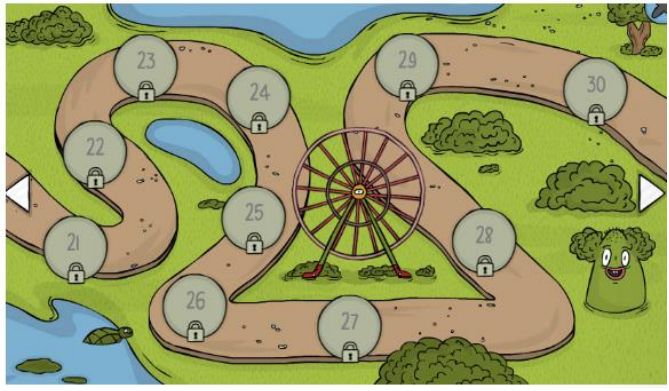
There are visual broadcast classes on numerous subjects ranging from creating animations using JavaScript, creating websites, creating 2D games, as well as others. Currently, a large percentage of the lessons do not comprise visual broadcasts, rather they made available drafted directives more suitable for secondary school and college students. Khan institute also do not give student support as at when this piece was written.

Bitsbox (Payment required)

Peradventure you are seeking for a practical programming encounter, then Bitsbox would be a good choice. It is a pay-as-you-go service which makes recent, themed programming projects available every month. It is a good avenue to keep a timetable with programming classes while also enjoying interesting amazement introduced into the encounters.

With Bitsbox, one may decide to choose a digital recourse to get a monthly PDF of projects or one may opt to get their physical bundles. The distinction between the normal box and the luxury box is just the inclusion of play-materials, games as well as rewards which are added to the luxury bundle. Peradventure you are searching for methods to increase the pleasure and make available more motivation, then getting the upgrade would be a good choice! Or else, you can be confident that you would still be obtaining the exact same remarkable project classes every month.

CodeMonkey (Without Charge)

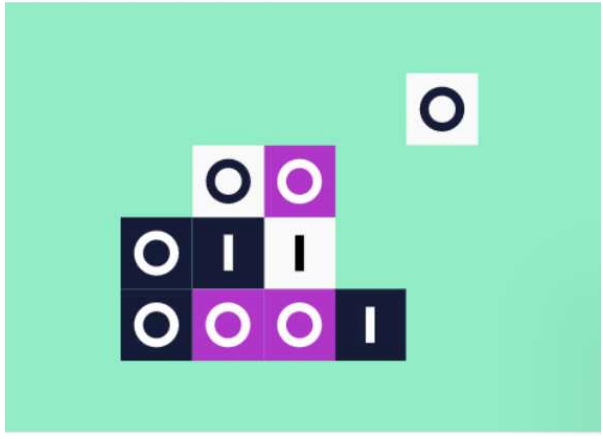


One other pleasurable and interesting material aimed for toddlers of 8 years and above is CodeMonkey, a game program which educates toddlers to program as they find their way through difficult stages. The pleasurable classes and escapades are wheeled particularly towards starters; hence it is a good avenue to commence a programming voyage.

There exist various distinct games which toddlers are able to play using CodeMonkey, hence you have choices. This is going to assist your ward obtain the highest satisfaction from the program not just by the availability of diverse educational channels to employ but likewise by the availability of distinct games to ensure they remain thrilled and delighted.

A number of these games are Dodo Does Mathematics, Challenge Assembler, Game Assembler, as well as Programming Escapade. Surfing through the choices and getting a grasp of the program as a whole is a good avenue to commence with a toddler's computer science education.

Codecademy



Codecademy is a programming material for toddlers.

Codecademy supplies programming lectures comprising lectures to assist tutors organize computer science courses. We discover that their classes and content are more fitting for teens who desire a professional tutoring in Web development as well as data

science, because the game coding choices are relatively restricted.

Drills are carried out in a portal possess instinctive correctness checking. Codecademy's strong point is in tutoring longer students who are attracted to word-based languages. The secured platform method hinders students from the real experience of making their own program, yet it makes available a clearly reasoned out module chart.

Which Model of computer should I spend on for my kid?

This resolution is hinged on what your kid is attracted to, your financial allocation, as well as what method you'd like to employ.

A lot of online programming lectures for example Code.org and Khan Institute are online and only need a fast internet linkage.

Online lectures do not need computers with high processing speed and will naturally work with almost any computer produced within the past 4-5 years, comprising of choices such as Google Chromebooks.

Suppliers of lectures with authentic programming materials would need a Mac or PC computer with advisably 4GB RAM and a fast internet linkage. The gain is that your kid will grasp the way to program with the use of the same expert level materials and authentic programming languages

utilized by bigtime software organizations all over the world.

At a certain time in your kid's computer science voyage, you will probably get to a time when your kid possesses a vigorous desire to make use of authentic coding conditions as well as expert materials.

A number of households may opt to carry this out from the beginning, while others make use of online instruments to commence and then change to expert level instruments after a while. We have discovered that children develop huge amount of self-assurance when making use of these instruments. As a matter of fact, when trained with obvious instructions,

students with ages as low as 7 years old are able to make use of them.

We are a little skeptical about PC computers and therefore recommend that adhere to the hardware demands of the class. We also recommend that you go through computer comments on certified outlets such as CNET or PCMagazine.

Conclusively...

Programming for toddlers is increasing in recognition, because a lot of households see computing as a more recent education which would be as relevant as mathematics and science in the near future labor market. There are

a lot of methods to choosing appropriate classes for K-12 students and there is assuredly no universally-workable answers.

The most relevant bit of counsel we can give is to make programming pleasurable.

Programming for toddlers does not have to be tedious and dull. Of a truth, it requires tolerance and tenacity, yet if children are aware that the outcome is a project, game, or application which they are attracted to, they will get the job done.

If it is tutored with an inaccurate method, programming for toddlers can look like a dull typing lecture worse still

a 50 paced mathematics textual challenge.

If you make your choices rightly, however, you will present your children a new expertise which is as interesting as it is educative, and you would probably be shocked to observe the pragmatic outcome it has on their studies and self-assurance.

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PROGRAMMING FOR TODDLERS

Reasons toddlers should begin, as well as the way to attain victory

Programming for toddlers appear as if it is an impractical venture, right? It so much seems like—really—mastering a completely different language!

Hence, demanding that kids imagine themselves with the capability to, for

instance, create an application is a challenging job in itself.

We have all had these experiences... a clean page can be a really fearful, saturating obstacle. "Is programming for me? What way would I attain a stage where programming become a piece of cake? What time would I be able to make use of this fresh expertise to finish a completed project?"

Utterances such as these have halted a lot...even before they present themselves with the opportunity to commence.

Consider it—foremost you possess a scheme, after which you have to master, after which have to be qualified enough to make. Although

right before you master, you have to make up your mind about what exactly you are going to master, then you must possess a deep comprehension that what your mastering will payoff for you after completion.

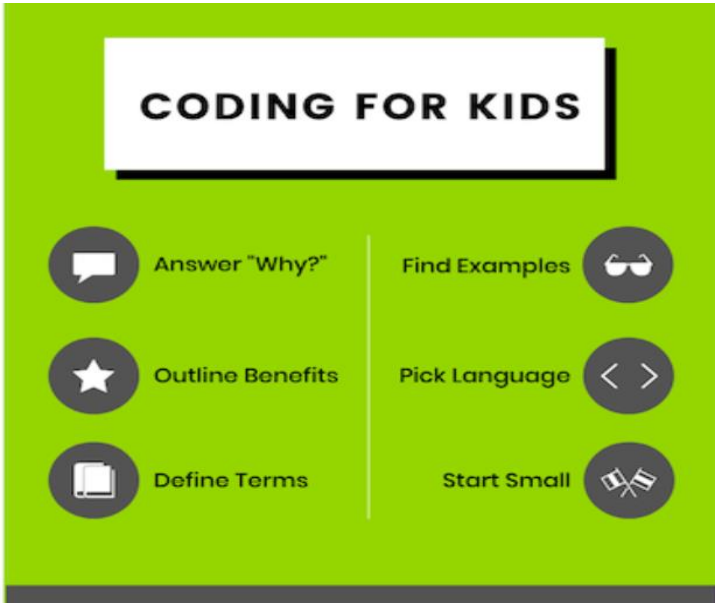
It is non-negotiable. It is a really difficult thing to accomplish.

Nevertheless, please, continue studying.

Every fresh venture usually looks impracticable from the beginning, and is as a matter of fact impracticable if you do not follow all the required procedure—as well as in the appropriate order—ahead of time.

This implies that leaping into it with both feet may eventually end in more disappointment, as well as even reduce the chance of accomplishment, in contrast to beginning from little, bidding one's time, and attaining little wins as one moves along.

WHAT IS PROGRAMMING FOR TODDLERS?



Programming for toddlers is an assembly of chances present for kids to be engaged in programming. These chances intend to be pleasurable and gamified in order keep the youthful mind indulged.

And as hard as it is to envision a youthful mind mastering a thing which looks so compounded, programming for toddlers is real—courtesy of the numerous programming summer encampments, webpages, programming trainers, after school projects, as well as playthings programming can really be understandable.

Begin with the reason, list out the gains, explain key words, examine instances, select a language, and commence.

Hold on. What is programming, in simple terms? Programming is the means through which we interact with computers to create as well as operate websites, applications, games and others.

HOW TO MAKE YOUR KID BEGIN PROGRAMMING?

It is a response which can move in a multitude of distinct directions.

Thus, let us begin by concentrating on going in a certain direction—onward. It does not necessarily need to be a major jump. As a matter of fact, it should actually just be a little step for the moment.

The relevant thing is that following each step, your kid encounter advancement.

With that, we would be able to surf through this twirly-turny programming topography through the numerous subjects:

- The reason children should master programming
- Programming definitions
- Most efficient programming languages
- Toddler programmer victory narratives
- The way to actually begin a mastering voyage
- Programming materials

Ready?

THE REASON "EVERY" CHILD SHOULD PROGRAM

Sometimes ago at the beginning of all the children and programming talks, one could have categorized it as puff due to the fact that the entire plan was new and strange to the schooling setup. And, although the "learn to program" recognition upsurge was not baseless by any means, time was actually the one thing which could make us know for sure if it was to be unsuccessful.

Well, here we are.

Time has gone by, still we are continually spotting STEM education statistics such as by 2018, 2.4 million STEM works will be unoccupied. As

well as others such as 71% of all recent works in STEM are in computing, meanwhile just 8% of STEM graduates studied Computer Science. People are still pondering on the thought of if programming is difficult to master.

We have formally transited past just saying "programing is nice, hence go engage in it," full stop. Rather, our new utterances are now "Programming is definitely nice, hence go and engage in it, but you should also engage it for the fact that you will be compensated for it."

That is to say, jobs exist, a huge number of them—and these jobs renumerate very well.

What causes this to be even preferable is the fact that it is not only about the jobs or how nice it is, either (this post would have been much shorter if it were to be just that). But also, about the inventiveness, issue tackling, alliance, interaction, as well as other ability ready for further development as outcomes of toddlers learning to program.

Hence, toddlers need to learn to program because:

- Programmers are highly sought for
- Programming supplies a competitive edge
- Programming knowledge gives room for students to grasp the world better

- Programming is pleasurable and fulfilling
- Programming upgrades inventiveness
- Programming upgrades Issue tackling
- Programming upgrades tenacity
- Programming upgrades alliance
- Programming upgrades interaction

GAINS OF PROGRAMMING

Present here is a detailed report of the reasons why programming is crucial.

1. **Programmers are highly sought for**

As indicated, according to Code.org, 71%of all recent STEM works are in computing, nevertheless just 8% of STEM graduates finished from Computer Science. This represents an ALARMING insufficiency of CS experts.

2. **Programming supplies a competitive edge when seeking admission to colleges, internships as well as works.**

Peradventure you have a certain expertise which a lot of your

colleagues lack—like the ability to program—you immediately become more preferable in the face of prospective college admission officials as well as employers. Clear and easy.

3. With programming knowledge, students grasp the world around them better

Majority of us do not have knowledge of the first thing about that which makes our smartphones, laptops, social media matrixes, as well as video games run. Common coding knowledge can alter our mode of relating with the tech we make use of (and take lightly) everyday, and can enlighten us to the unending prospects of programming.

4. Programming is pleasurable as well as fulfilling

Although coding is based on logic, it is likewise an utterly inventive engagement. If you are knowledgeable about programming, you can create the earlier mentioned applications, video games, webpages, as well as others

For a lot of program developers, a portion of the thrill of programming is the problem and compensation of watching their program come alive after a great debugging period. Do not be deceived, nevertheless—with the accurate direction, commencing coding can be simple as well as pleasurable.

5. Coding enhances creative skills

What better way to express yourself other than using a language? Coding is a language and it helps kids to learn about the digital world, not only that but to also create an environment for themselves in it. For example, it is not enough to just play video games or surf the internet for information, there's allowance for having great ideas like developing your own

character, website or even an app and then bring it to life i the digital space.

6. Coding enhances problem solving

Coding creates room for kids to take on difficult tasks, disassemble them and convert them to minute sizes. Just the way a software engineer would approach a problem with logical and computational thinking, coding provides such opportunities for kids. Logical thinking is necessary and it is needed both at work, in school and life generally.

Dan Crow, the CTO of Songkick has explained that computational thinking helps you to know how to overcome

big problems by reducing them into a number of smaller, identifiable and solvable problems.

7. Coding encourages continuity and consistency

Coding, poses a challenge just like undertaking any new skill. Encountering problems that requires solution and also having to make several mistakes, is a must but shouldn't discourage you. Coding helps to retain valuable skills like continuity and consistency when faced with challenges. Learning to provide solutions to problems through research and collaboration helps to improve these skills.

8. Coding encourages team work

Learning is a primary function for every student, therefore, every student can learn coding along with others of diverse race, background or gender. Kids can collaborate or form a team with others with similar interests in technology. With the help of classrooms and in-person environments like iD tech, kids can meet up for face-to-face collaboration and team work. It also goes for kids learning online as they are able to solve problems, ask questions or be creative in a team-like manner.

There are also a number of games that offer educational benefits because they include coding, and they require

team work and collaboration with peers from all over the world. An example is Minecraft.

9. Coding enhances communication skills

Communication as a skill is needed throughout all spheres of our life at work or in school. The ability to communicate complex ideas in not just simple but relatable terms can make one very successful in every aspect of life.

As kids learn how to code, they develop the ability to communicate with computers which happen to be the most simple imaginable audience.

Coding teaches kids how to communicate effectively with the computer by breaking down complex ideas into what it can understand.

After all said and highlighted, be cautious.

I'm not implying you should resist the urge to code, but then...

WHY CODING?

It is not unnatural for this question or other of such related questions to quell up in you as you wonder why coding has to be the best skill for your kid:

What if my child isn't interested in coding? Are they failures in that way?

Wouldn't there be an opportunity to get a worthy internship? A great job?

How about just learning "tech"? Isn't that enough?

What if they are interested in other varieties like X or Y or Z? Wouldn't it be worth it in the future?

Just learning to code, is it the right way to climb the ladder to the top?

In a nutshell, I or any other person influencing you to learn how to code aren't doing so to make exclusive of the statement.

In essence, there can't be a desire to read but not write, to learn numbers in multiples but not know how to divide them too. Not to mention the importance of Facebook who was created by a programmer but still needs a great designer.

Now, if you have a kid who has an interest in coding, then you should help them in Learning how to Code. And if by chance, they don't have the interest, or have other considerations,

it is still worth the try as it is important and there wouldn't be any regrets.

Still, don't throw other options out of the window. Help them learn and explore other development possibilities in gaming, 3D printing, video production which all surmounts to "tech". Input in photography lessons if that's where their interest lies whether or not they want to make a career out of it.

Marketing, Promotion, negotiation and more are still in consideration, even learning to be a leader. The list of learning opportunities is unending even as you can still acquire skills that'll complement your ability to code to enable your creations to thrive.

In a bid to blow your mind, Steve Jobs isn't the one who did Apple's coding. Unbelievable right? The same way you're certain about Steve Jobs' success is the same way you're certain that the sky is blue or the grass is green.

Jobs is among the most successful people on earth not because he is an ultimate coder but because he was able to communicate a vision properly while been skilled in a total different aspect.

Conclusively, kids and teens interested in capitalising on the vast computer science jobs in the nearest future should consider coding a must have skill today.

Now let's take some definitions

WHAT IS CODING?

Not knowing the meaning of that new language you're to learn would make it difficult to learn because without understanding, words are only a combination of letters.

Therefore, it is not enough to just speak words but to familiarize yourself with each combination and what they refer to, to make a logical claim.

Relatively, let's highlight some of the major terms your kids and teens would need to get familiar with in the course of their coding journey

Programming

Do you have a dog at home or have you tried with your kids to train a dog?

The essence is having to give commands like Sit, Stay, Rollover and your dog simply obliges to your instructions immediately. Similarly, when it is time for your kids to write a program, there's no difference. As the owner of the program, they launch certain commands to the computer and without restrictions, they expect a response accordingly.

The difference here is that, instead of using word of mouth to pass these instructions whilst having a treat of liver flavour hidden in their hands, instructions will be written in a language almost similar to English but with few additional rules and variables by the kids.

It's not a doubt that training a dog is quite difficult but mind you if your kid gives the right programming instruction to the computer, it will always listen. Being successful with a dog could stop that annoying squirrel from coming around.

The foundation of robotics, video games, computer graphics, apps and so much more is Programming. Every one of these programs is only a set of instructions; a series of short commands, one after the other, with programming used as an effective tool to write and execute those singular instructions.

"Programming language"

With regards to what's above, the central point of Programming is the relative language. In order to effectively communicate with a computer, ensure you speak the right terms it understands.

Let's consider the English language first. There are words and there punctuations. There are also certain conditions and rules that guide the usage of a particular word and also when to replace such words with synonyms or otherwise.

A Programming language is similar as it consists if its own vocabulary and set of rules. The only difference is that each language bears its own syntax

(grammatical structure) and semantics (meaning).

And as a result of multiplicity in Programming languages, each individual language possesses its own unique rule and use case.

"Scratch Programming"

We have defined what Programming is and also what Programming language is all about.

While it is possible that there are many terms that needs to be defined, Scratch Programming is an essential piece we have to look into as your kid would definitely encounter it.

Scratch is a graphical programming language developed by MIT on the

basis of drag-and-drop programming to allow kids create interactive stories, comics and lots more very easily.

Scratch Programming is a go-to for kids because it allows them learn through colourful command coding and animations instead of using mere lines of codes. This means that kids need not type a single line of code, as they can get started with Programming statements and computational ideas, alongside improve their problem solving skills by testing their limits if creative thinking.

THE BEST CODING LANGUAGES

After so much said, I'm certain you're impressed and are still interested in moving forward. Nevertheless, it'll be advisable to halt and make some evaluations because we'll be detailing the best coding languages for your kids while having few inspirational stories from kids who are coders.

Visual Programming languages and Scratch

Scratch did come up again! Seeing that we have discussed it above, it is pertinent to know that visual programming is an impressive way to lure young novices-students, into coding.

Of course, there isn't room to learn the syntax necessary for most other coding languages, but it's fine. The major focus is on the progress, as having so many dishes on your child's plate may be harmful. Keep that in mind.

The simplicity of Scratch and other visual programming languages is what get kids so excited about coding. The instant satisfaction from the drag and drop commands, then experiencing the unveil of interactive stories, comics and game is exceedingly great.

Lua

This is a great language for kids and teens interested in learning a language quickly, even though it requires more

involvement and complexity unlike the visual programming language.

Taking a breather, I'll say that introducing your child to an expressly new concept (alongside the challenges that come with it) depends on previously determined interests.

Do your kids have interest in videogames? Lua is best for helping kids synchronise their new found interest in coding to game programming. For a fact, the number of developers who use Lua are increasing which translates to more job opportunities ahead. There will be a number of career options for students who possesses such skill.

For instance, Roblox. Ever heard of it? It is known that top Lua developers who design games on Roblox can make $1million a year. Fantastic!

To let you know what your kid can expect in our Lua coding and game scripting course, they initially start with the Roblox built-in editor for creating 3D worlds and also to increase their functionality with Lua. Thereafter, creating scripts for their own game or selling of scripts to designers to use in their game is now a choice for them.

Is it possible for kids to learn coding?

At this point, it is understandable if there's so much you need to comprehend as it has been from one case of information to another.

It wouldn't be a bad idea if there's a limit to the "telling" and more on the "showing".

It may some what be impossible to believe that kids or teens would eventually find a path in coding especially in terms of possessing the right skills to excel in a lucrative career.

Just like any other journey to success, a process is required and here at iDTech we term it, *The iDTech Pathway.* It is a long-term skill development system which improves with time, participants love and mastery for technology.

Practically, the same way an hour or more is dedicated to learning a foreign language or mastering a musical instrument, same energy would need

to be reciprocated in this case. To attain the 'masters' level, it is advisable to start young while making little achievements as well as bulidingup your skill tank.

There are programs simply set up to facilitate such journey- STEM programs. This allows kids of 7years or 10 years old start with iDTech camp or Alexa Café respectively and then advance in their journey to iD Coding & AI Academy , iD Game Dev Academy, or AcademyNEXT as they become teens. At the end, they're in all wise ready to continue their journey into college and even more, allowed to make an exciting career out of it.

Moving forward, we would like to share some of our favourite kid coder stories with you to enable you see what you're about to take a leap onto for your kid as regards coding.

Matthew has responsibly worked at some of the most reckoned organisations in the world. With a goal to work at some notable companies like Dropbox, Facebook, and Google, which might imply over-optimism, it is something he has always wanted for a long time. The moment he made up his mind, there was no going back.

Matthew claims his skill development began at iDTech Camps and iD Coding & AI Academy summer programs which were held at Stanford in Silicon

Valley. The experiences he gained covered up for the things he hadn't been taught at school and also gave him the opportunity to get acquainted with industrial software.

Emphasis were made on how important working on projects outside the class was. Matthew said, it didn't matter what you developed, as long as it was technically challenging for you. It doesn't just let you build a strong portfolio but also provide a balanced foundation for answering likely interview questions as regards your future career.

White house recognized Rebecca's coding achievements

She's an alumna of iDTech and the founder of non-profit CoderDojo NYC even after getting recognized by the White house. Presently, she's an advocate for girls in STEM as well as a Program Manager in Microsoft.

"I got a chance to explore my passion as a 14-year-old, as I began my journey at the iDTech Camp in Cambridge. My life changed just spending two weeks there. I was made to understand the concept of technology and how I can achieve a great career without an overbearing optimism just like engineers hiding in a lab, Rebecca says".

Rebecca, a highly self-esteemed person, literally "a master of all", is now a Programs Manager at Microsoft for Tech Jobs Academy which specializes in technically training talented New Yorkers internally needed for tech jobs in cloud and server administration for a duration of 16-weeks.

Andrew's app in Apple store have exceeded 50,000 downloads

Once a student of iD Tech camp, he made huge success by selling his nine apps on Apple store. Now, he run his own development companies and with his coding skills is making great impact.

It is quite fair to think that Andrew's list of accomplishments could have taken a couple of years to achieve, but he started succeeding in his career as a young developer while still in college.

Some of his notable achievement include developing nine apps that has accrued over 50,000 downloads, being a tutor at a class he singlehandedly developed, to mention but a few. This former student has greatly achieved a lot unlike when he considered coding as "threatening".

"Before I attended iD Tech Camp & AI Academy, I felt threatened by iPhone Programming. I tried all I could to take myself through some lessons but it seemed like I wasn't smart enough to

handle it, so I relented. In about two weeks, I proved otherwise and left with 3 completed or in-progress apps".

GETTING KIDS TO CODE

From the above examples, we can see that to be successful requires a process. Definitely, some persons are simply naturals when it comes to certain areas, either ways, we all must begin at the first step.

What comes to mind first when trying to introduce coding to kids or when you're about to teach kids how to code?

Honestly, what comes after isn't meant for those who are already seated in front of their computer screens waiting for the greenlight as there are many avenues for that; online courses, in-person experiences and more.

Better still, the words to come are for those with an interest to know more; even after hearing about how important coding is, would still want to understand how logical it is for their kids.

Firstly, get your kids to start learning something. Just like the definitions stated above, the basics is a great kick off point and nothing is really insignificant in this case.

Afterwards, have your kid tutor someone else about everything they've learnt. It may be family or friend but just a second party who may or may not be knowledgeable about coding.

Still on track, have your kid try something again. This time around, it

should be something realistic but simple enough to boost the interest of the child. It might be a creation with Scratch or any other program; game intro or cartoon, but then it is something.

It is after passing these stages above that kids should increase their standards in terms of tasks, who they see as a mentor and activities they engage in.

Basically, the essence of these steps is to allow you help your kid see how their interest can be intertwined with coding, as well as how coding makes the world simpler and more beautiful.

WHAT MORE?

So, can we then say that learning programming is as easy as going about our daily activities; having a conversation, completing a task or meeting up with a deadline, as earlier stated?

Definitely not!

The steps mentioned above is a good way to start especially for those persons who don't know 'where' and 'how' to go from 'where'.

Just to be clear, the future is coding and learning it is quite advantageous as it improves your creativity skills, ability to solve problems amongst others.

Hence, learning to code isn't limited in itself as its value creates a pathway to great opportunities in diverse areas.

In a nutshell, these guidelines would be of great use to you and your kid in a bit to move forward, as the importance of coding cannot be overemphasized.

8 Reasons why every child should learn coding

There's a desire for our children to climb up the academic ladder and if so, we don't want to be ignorant of letting them learn how to code. It increases their cognitive abilities as well as inculcates good values that will make them outstanding in life and also in the

workforce. It is no doubt that coding is of essence and should be included in the school's curriculum even in early childhood. The earlier the child gets familiar with coding, the better their chance of being successful.

Getting started

It's quite easy to get started with your kids on learning how to code, of course after making the decision. You don't have to visit the electronic shop at the initial stage, you can make do with whatever items you got around the house. One way to kick off coding that we usually go for is with a deck of cards.

Not just an App, The App!

It's a struggle to get an appropriate screen time for the kids. Can you relate? Then we're alike. I got tired of seeing YouTube videos of kids opening and reviewing toys and just one more, I'd have flipped. Trying to make our screen time as educational as possible, I used this app to teach my kid how to play the piano.

There are number of apps that can help your kid learn how to code without conscious efforts. Minecraft, a popular game app even has an education edition where kids can learn how to code. Now, this is our favourite app for coding.

IMPORTANT NOTICE!

THIS IS A SERIES BOOK, THE OTHER SERIES WILL BE RELEASED BY THE SAME AUTHOR AS SOON AS POSSIBLE...