

20 Worksheets to Learn the Planets

Sure, you know your way around Earth, but how well would you do if you went to space? Get to know the lay of the land on Mars, Venus, Saturn and other planets in this series of cosmic worksheets.

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Use the following clues to determine the order of the planets in the solar system. The complete list of planets is given below.

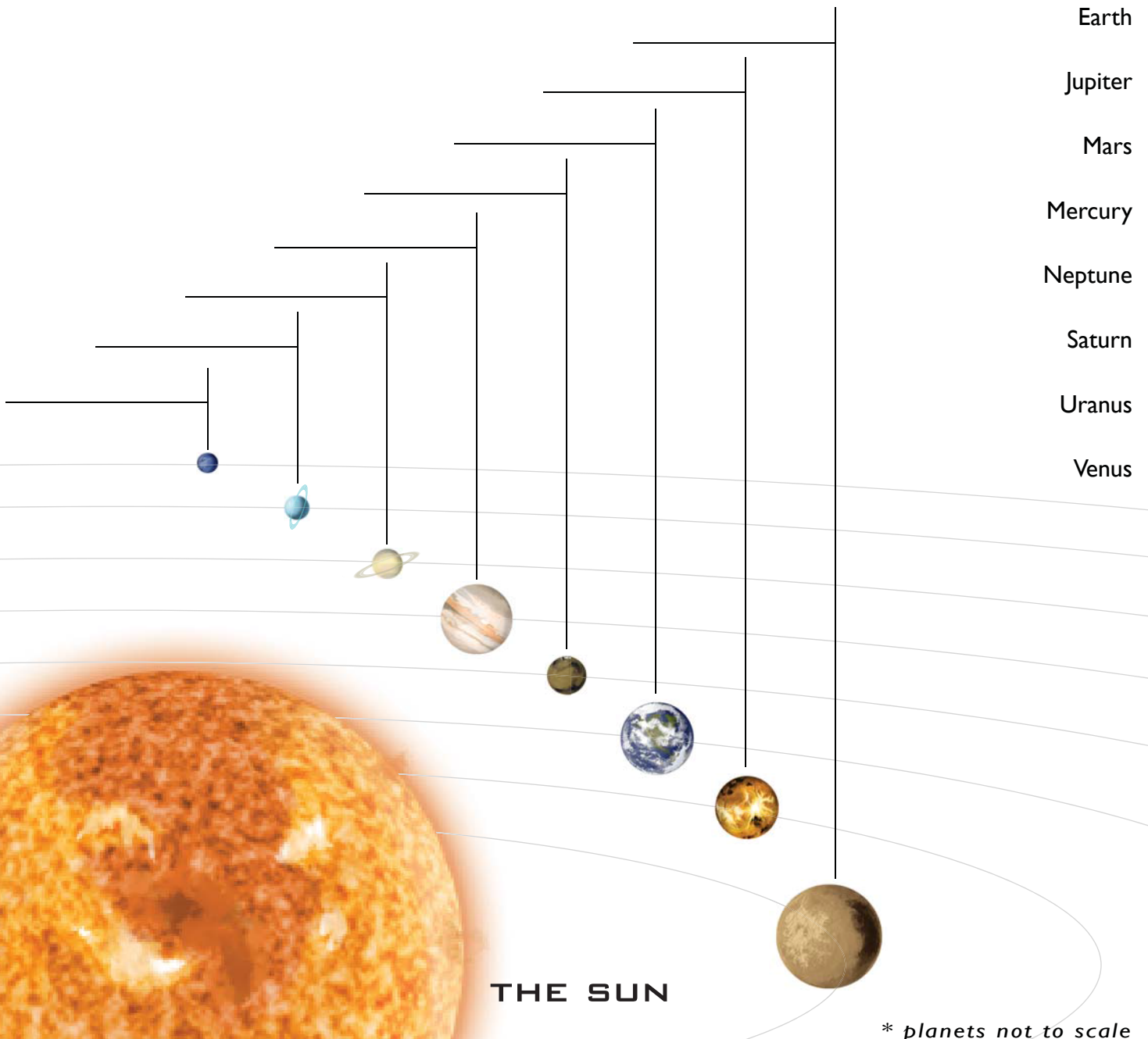
There is exactly one planet between Earth and Jupiter ☉

Jupiter is between Mars and Saturn ☉

Mercury is the closest planet to the Sun ☉

Venus is next to Mercury ☉

Saturn and Uranus have rings ☉



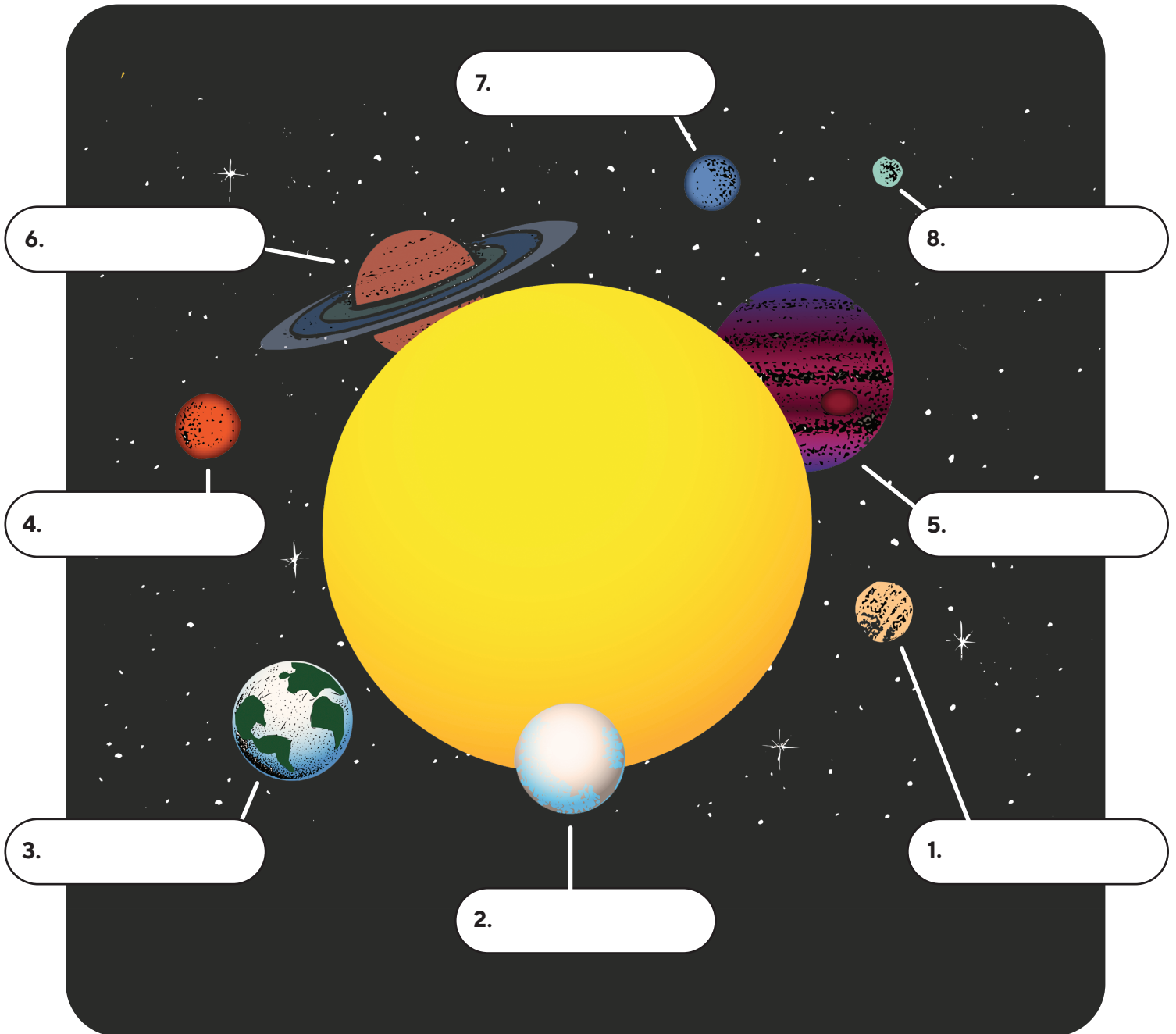
Name _____

Date _____

Our Solar System

How many planets can you name? Label the planets of our solar system on the diagram below.

Hint: The numbers list the planets in order of how far each one is from the sun, from closest (1) to farthest (8).



Know Your Planets:

VENUS!

This is a picture of Venus. Color in the cross-section drawing below using what you've learned.

Name:

Venus is named after the Roman goddess of love.

Size:

Venus is the sixth largest planet in the solar system and is only slightly smaller than Earth. Earth and Venus are called sister planets because of this.

What's It Made Of?:

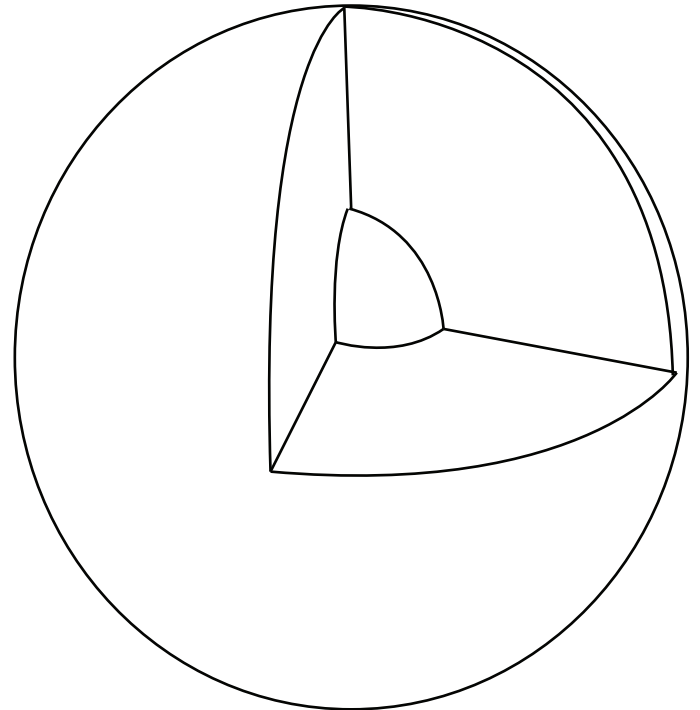
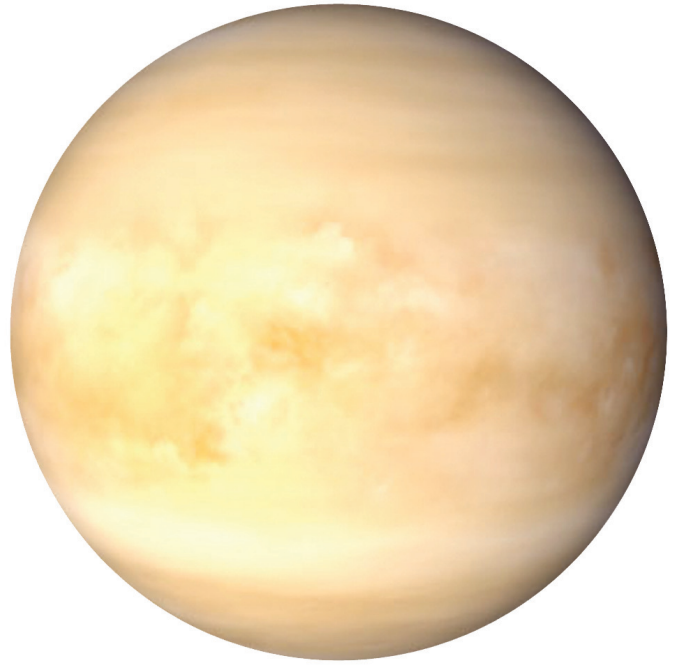
Venus is called a terrestrial planet, which means it is made mostly of rocks and hard substances. Mercury, Earth and Mars are the only other planets considered terrestrial.

Where Is It?:

Venus is the second planet from the sun and is the brightest object in the night sky after the moon. Look for it right after sundown and right before sunrise. It is on average 67 million miles away from the sun and orbits it in the opposite direction of all the other planets

Surface:

In the picture all we can see is the thick layer of clouds around Venus. On the surface it is mostly volcanic rock with many active volcanoes and many craters. The average high temperature is 860 degrees F!



Scrambles:

 Unscramble the words for the answer.

The atmosphere of Venus is 96%
this gas:

RBCNAO XODEIDI

Venus is in this galaxy:

KMLYI YWA

Molten rock is called this:

AVLA

Know Your Planets:

MARS!

This is a picture of Mars. Color in the cross-section drawing below using what you've learned.

Name:

Mars is named after the Roman god of war. It is sometimes called the "Red Planet".

Size:

Mars is the seventh largest planet. It is about half the size of Earth and slightly larger than Mercury.

What's It Made Of?:

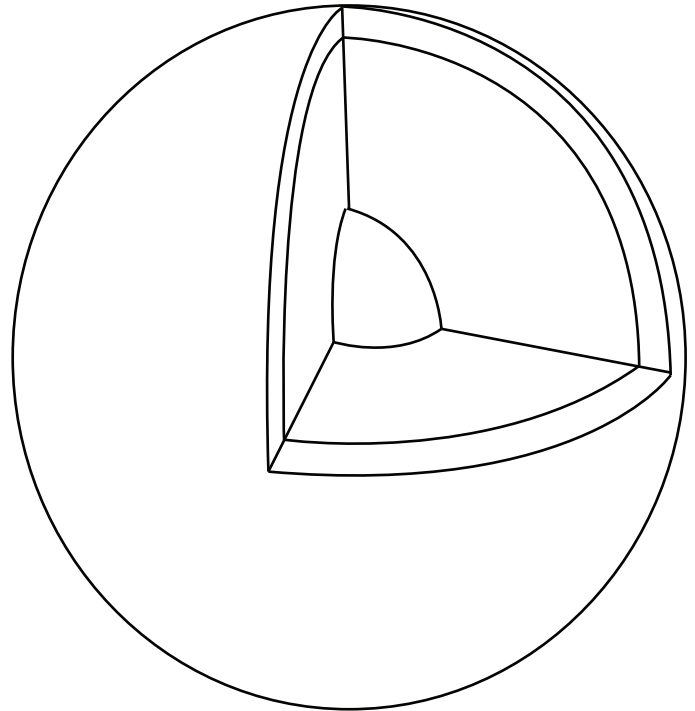
Mars is called a terrestrial planet, which means it is made mostly of rocks. The outer crust contains ice, soil, and rust, which is what makes it look red. The mantle is silicates and the core is iron.

Where Is It?:

Mars is the fourth planet from the sun and the fourth brightest object in the night sky. Earth and Mars are the only two planets that are the right distance away from the sun so that it is not too hot or too cold to support life.

Water and Ice:

At the north and south pole of Mars there are giant sheets of ice, called ice caps. Some scientists believe that there is water beneath the surface. There is evidence on the rocks that at one time there was liquid water on the surface.



Scrambles:

 Unscramble the words for the answer.

This part of Mars is very thin and is mostly carbon dioxide:

SOHMAPTREE

The seasons on Mars are most like this planet's:

TRAHE

Rocks called this created the many craters on Mars:

ATIREOSD

EARTH!

Know Your Planets:

This is a picture of Earth, our home planet. Color in the cross-section drawing below using what you've learned.

Name:

Earth is named after the Ancient Greek goddess of mountains and streams.

Size:

Earth is the fifth largest planet in our solar system. Earth and Venus are nearly the same size, but Earth is slightly larger.

What's It Made Of?:

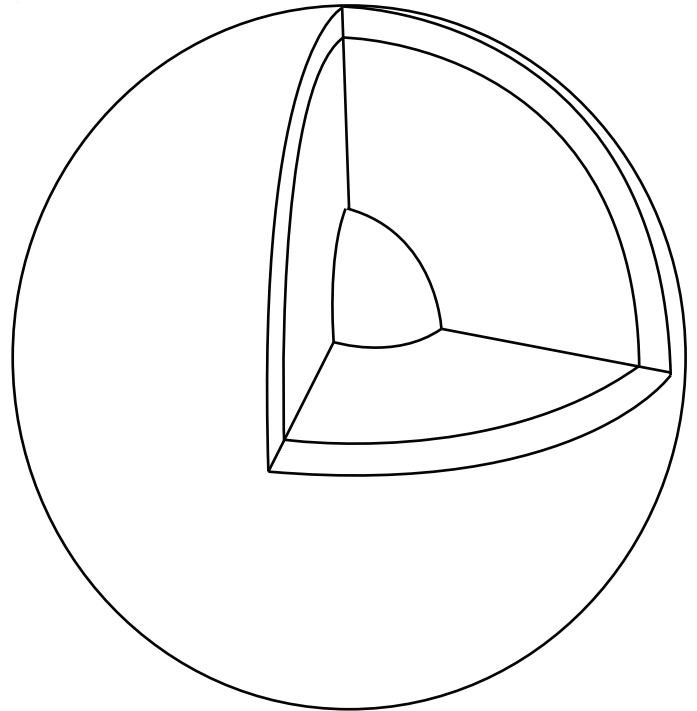
Earth is called a terrestrial planet, which means it is made mostly of rocks. The outer crust contains rocks and metals such as iron and magnesium. The mantle is made of metals and silicates. The core is made of liquid and solid iron and nickel.

Where Is It?:

Earth is the third planet from the sun. Earth and Mars are the only two planets that are the right distance away from the sun so that it is not too hot or too cold to support life.

Life:

High amounts of water and metals, as well as a thick atmosphere that keeps a stable temperature, have made Earth a place where life thrives.



Scrambles: Unscramble the words for the answer.

70% of the Earth's surface is covered with this:

LTSA RTEWA

Earth's internal heat comes from this section:

REOC

This protects the Earth from the sun's radiation:

ZOEON

Know Your Planets:

NEPTUNE!

This is a picture of Neptune. Color in the cross-section drawing below using what you've learned.

Name:

Neptune is named after the Roman god of the sea.

Size:

Neptune is the fourth largest planet in our solar system. It is almost four times larger than Earth. Uranus is its most similar planet.

What's It Made Of?:

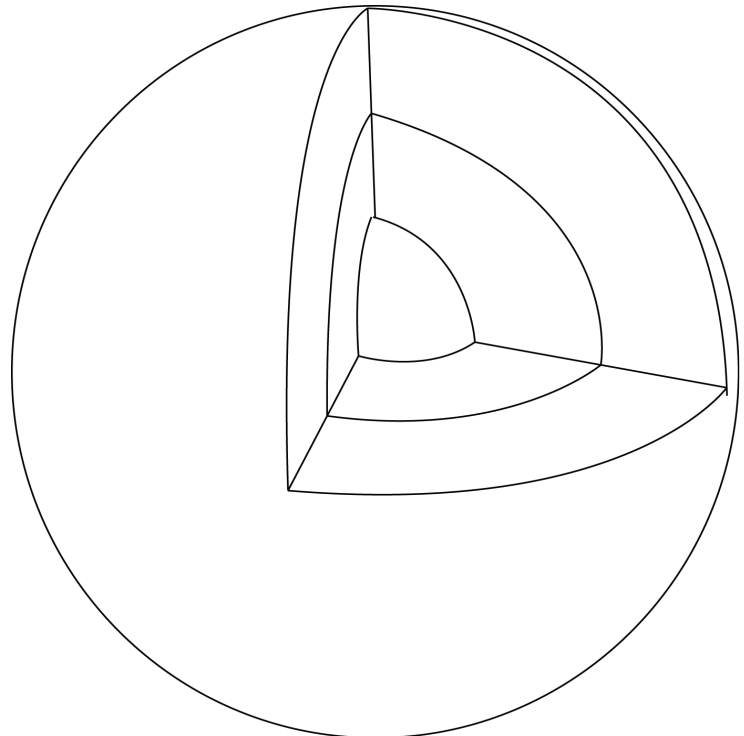
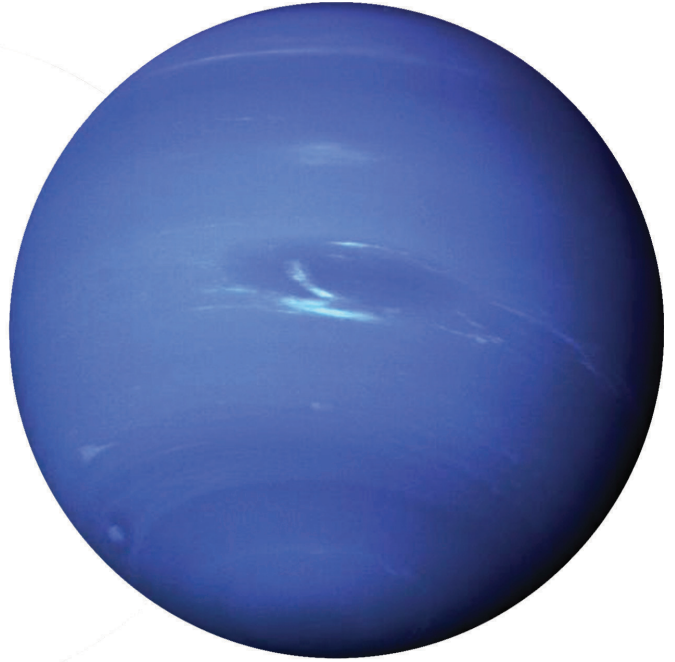
Neptune is one of the four gas giants. The outer crust is mostly helium and hydrogen gases with some methane. The mantle is frozen water, ammonia and methane. The core is ice with some rock and metals.

Where Is It?:

Neptune is the eighth planet from the sun. Of all the recognized planets it is the furthest from the sun.

Rings:

Like Saturn, Uranus and Jupiter, Neptune has rings around it. They may have come from an old moon that was hit and exploded into many tiny pieces. Saturn has the most distinct and visible rings.



Scrambles:

 Unscramble the words for the answer.

Neptune and Uranus are sometimes called this

CEI NTSIAG

Neptune is most similar to this planet:

USRANU

This element is found in Neptune's core with iron :

NKLCIE

Know Your Planets:

SATURN!

This is a picture of Saturn. Color in the cross-section drawing below using what you've learned.

Name:

Saturn is named after the Roman god Saturn.

Size:

Saturn is the second largest planet in the solar system. 763 Earths could fit inside of Saturn!

What's It Made Of?:

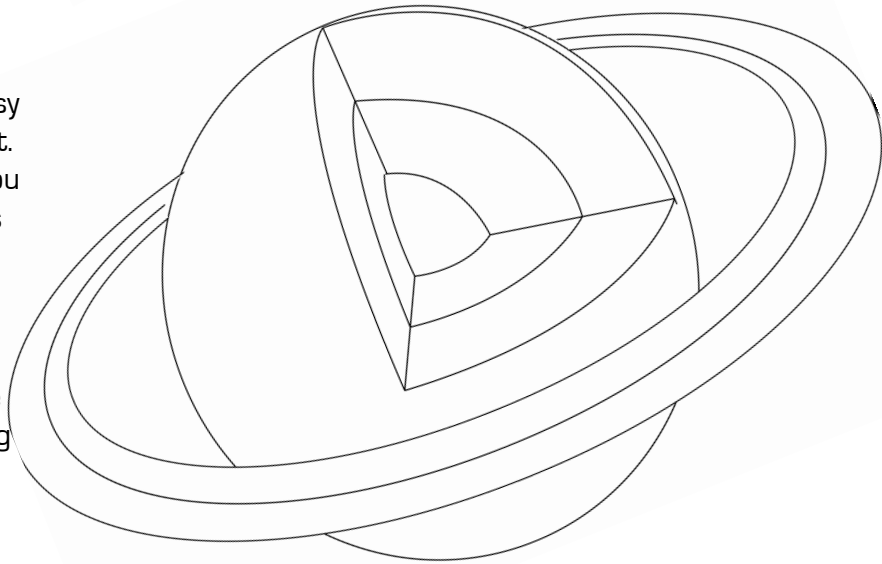
Saturn is considered one of the gas giants along with Jupiter, Uranus and Neptune. It has a rocky core but is mostly made of hydrogen and helium gas.

Where Is It?:

Saturn is the sixth planet from the sun. It is not easy to spot at night. It is the fifth brightest visible planet. It is a yellow point in the sky but with a telescope you can see its rings. It is on average 888 million miles away from the sun!

Rings:

Saturn has nine rings. They are made mostly of ice with some dust. Saturn also has 62 moons orbiting it and most of them have names!



Scrambles: Unscramble the words for the answer.

The fifth planet from the sun is:

PRUJETI

The lightest element is:

RDHOGYNE

This civilization gave Saturn its name:

ORMAN IRMEPE

Know Your Planets:

JUPITER!

This is a picture of Jupiter. Color in the cross-section drawing below using what you've learned.

Name:

Jupiter is named after the Roman god Jupiter.

Size:

Jupiter is the largest planet in our solar system by far. 1,300 Earths could fit inside of Jupiter!

What's It Made Of?:

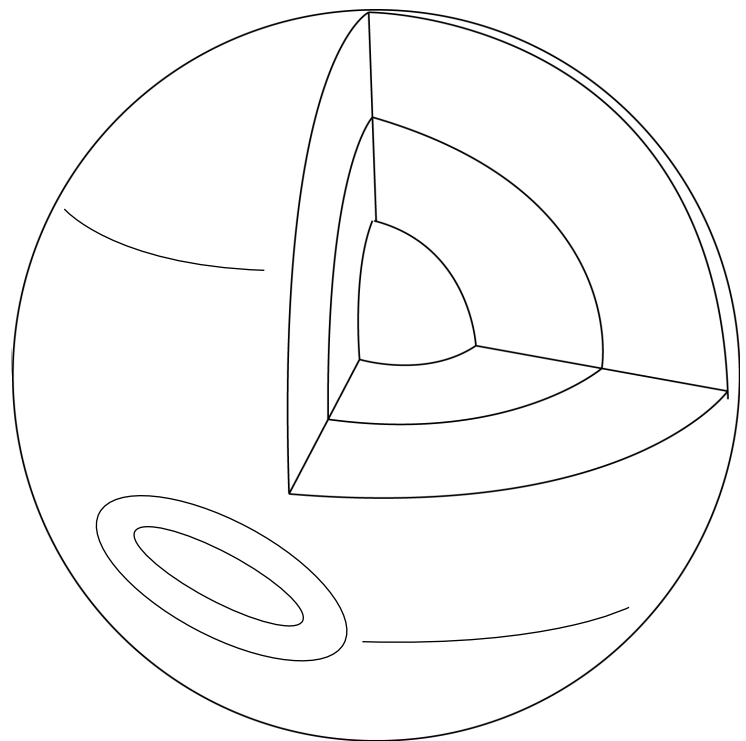
Jupiter is a gas planet, which means almost all of it is made of gases, only a tiny bit at the core is solid. The gases are mostly hydrogen with some helium, methane and water.

Where Is It?:

Jupiter is the fifth planet from the sun and the third brightest object in the sky at night, after the moon and Venus. Jupiter is about 483 million miles away from the sun, which it orbits around once every 11 years.

Weather:

If you look at the picture you can see a large red oval in the lower left of the planet. This is a massive storm on Jupiter. The storm has been going on for at least 300 years and is bigger than Earth.



Scrambles: Unscramble the words for the answer.

The Greek king of the gods is:

ESUZ

The second largest planet is:

UTRSAN

One of the four Gas Giants:

TNUEEPN

Know Your Planets:

MERCURY!

This is a picture of Mercury. Color in the cross-section drawing below using what you've learned.

Name:

Mercury is named after the Roman god Mercury, messenger of the gods.

Size:

Mercury is the smallest planet in our solar system. Its diameter is one third the size of Earth's.

What's It Made Of?:

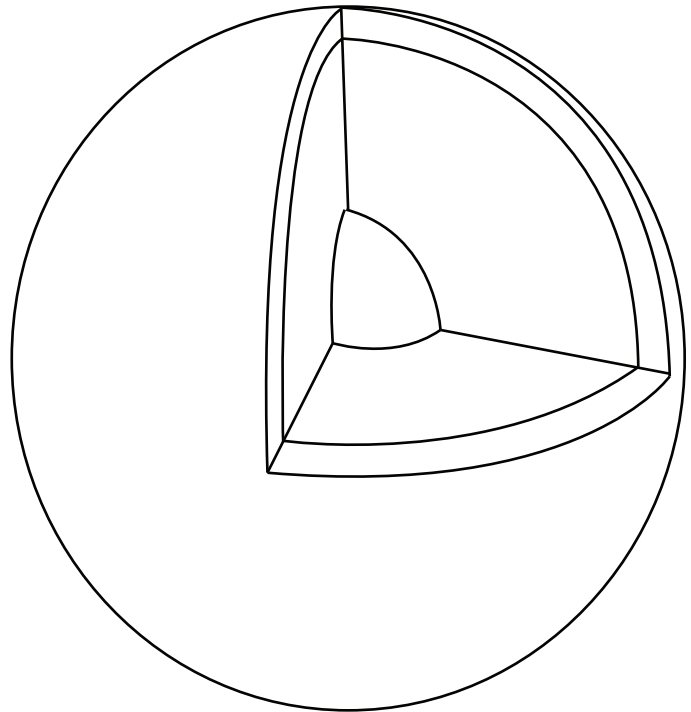
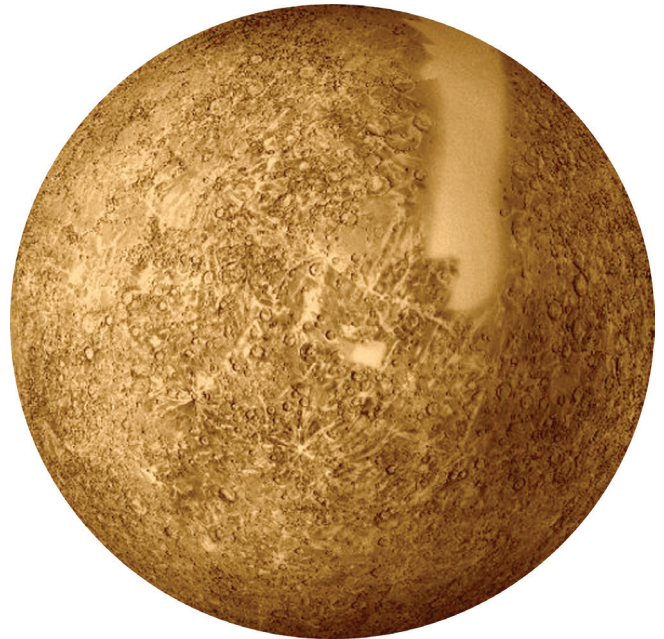
Mercury is one of the four terrestrial planets, meaning it is made mostly of rock. Its crust is stone, the mantle in the middle is silicates, and the core is iron.

Where Is It?:

Mercury is the closest planet to the sun. Earth is three times farther away.

Orbit and Rotation:

It takes 176 Earth days for Mercury to complete one rotation and 88 Earth days to orbit once around the sun. This means that one day on Mercury lasts 2 years.



Scrambles: Unscramble the words for the answer.

The section beneath the crust of a planet is called the:

TENALM

Mercury has a strong magnetic field because of this element at its core:

NROI

Mercury is only visible from Earth at these times every day:

SREINUS and TUNSSE

Know Your Planets:

URANUS!

This is a picture of the planet Uranus. Color in the cross-section drawing below using what you've learned.

Name:

Uranus is named after the Ancient Greek god of the sky.

Size:

Uranus is the third largest planet in our solar system. Its diameter is four times larger than Earth's.

What's It Made Of?:

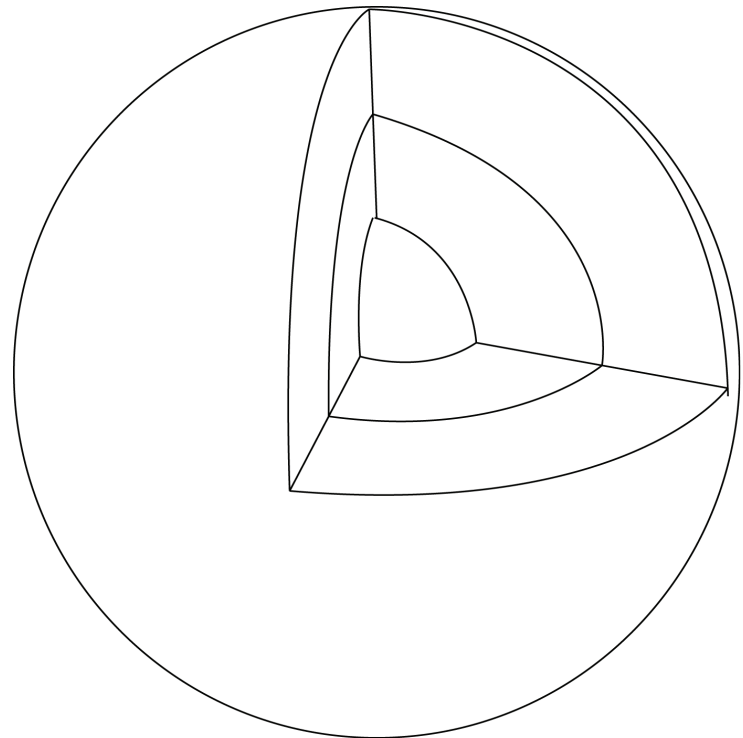
Uranus is one of the four gas giants. The outer crust is mostly helium, hydrogen and methane gases. The mantle in the middle is made out of frozen water, ammonia and methane. The core is ice and rock.

Where Is It?:

Uranus is the seventh planet from the sun. It wasn't discovered until 1781 and can only be seen with a telescope.

Weather:

Because it is so far from the sun and has a very thin atmosphere it is the coldest planet. It can be as cold as -144 degrees F.



Scrambles: Unscramble the words for the answer.

Uranus was discovered using this tool:

EEPLESCTO

Uranus is most similar to this planet:

TNENUPE

This gas gives the planet its blue color

EMEHNTA

THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Earth is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

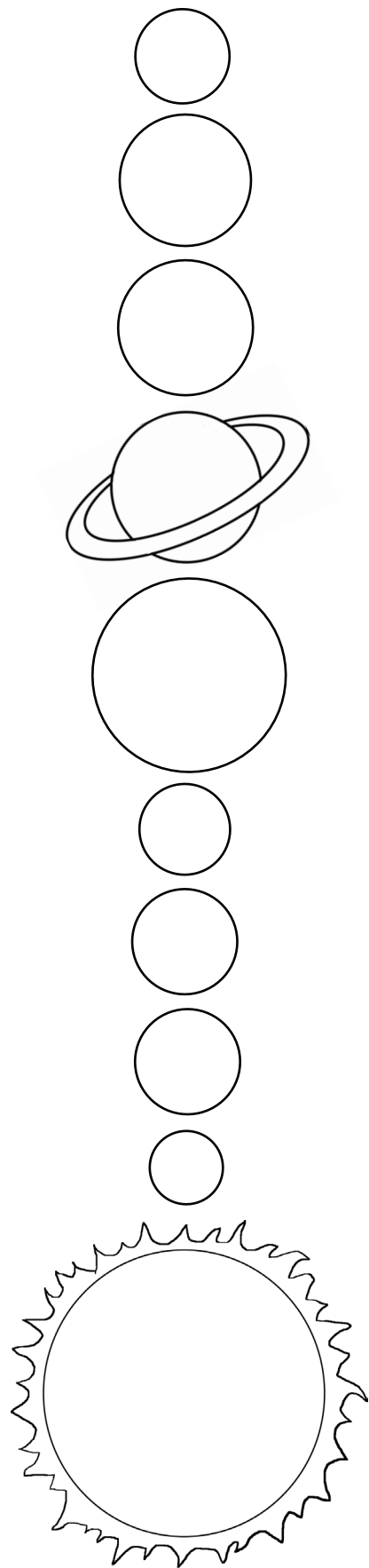
EARTH

“The Blue Planet” and 3rd from the sun



How much of Earth's surface is covered by water?

- a) 50%
- b) 25%
- c) 71%



THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Mars is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

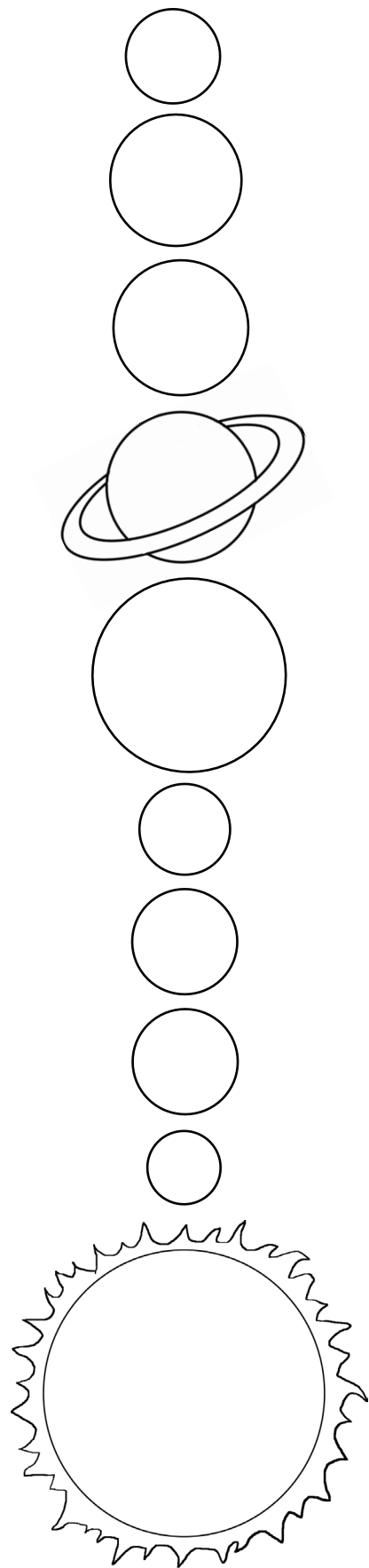
MARS

“The Red Planet” and 4th from the sun



All of the water on the surface of Mars is...

- a) gone
- b) frozen
- c) liquid



THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Jupiter is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

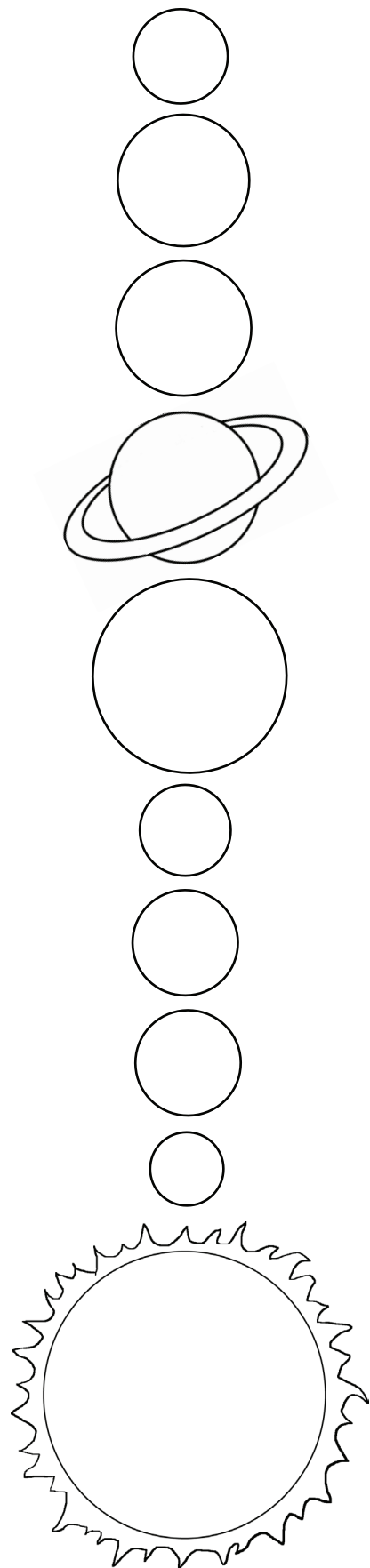
JUPITER

“The Biggest Planet” and 5th from the sun



How many moons have been discovered around Jupiter?

- a) 63
- b) 155
- c) 1



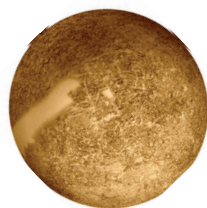
THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Mercury is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

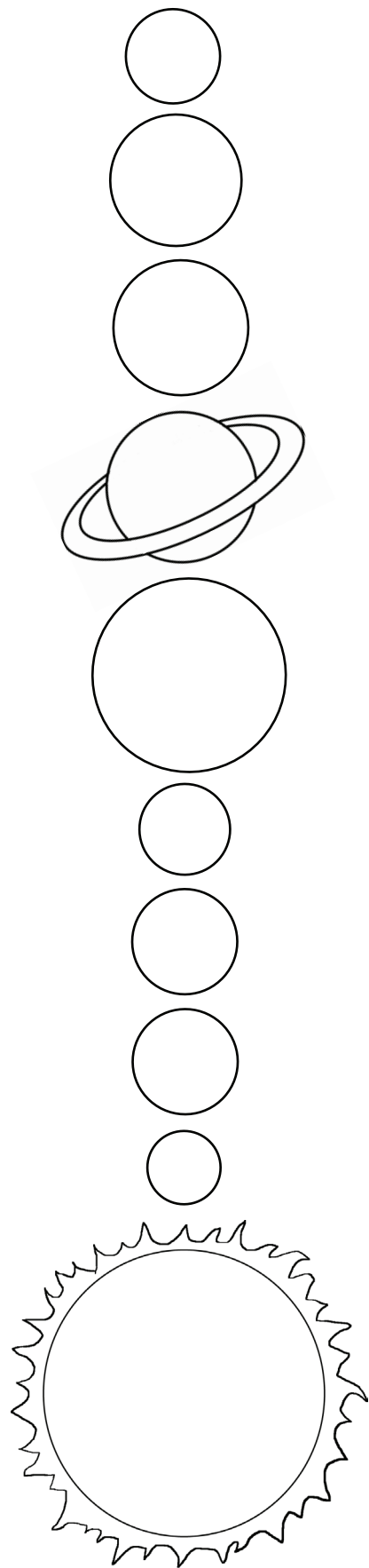
MERCURY

“The Smallest Planet” and closest to the sun.



What is the core of Mercury made of?

- a) iron
- b) glass
- c) stone



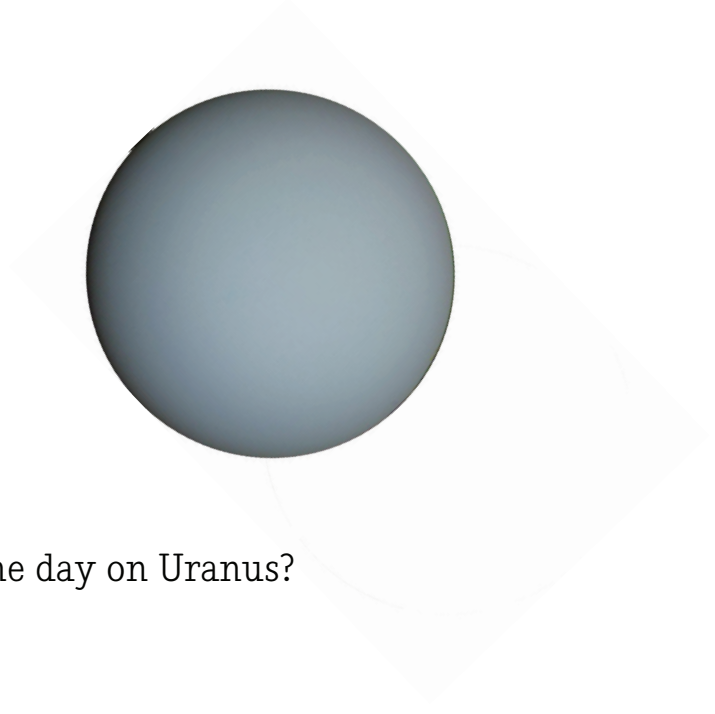
THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Uranus is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

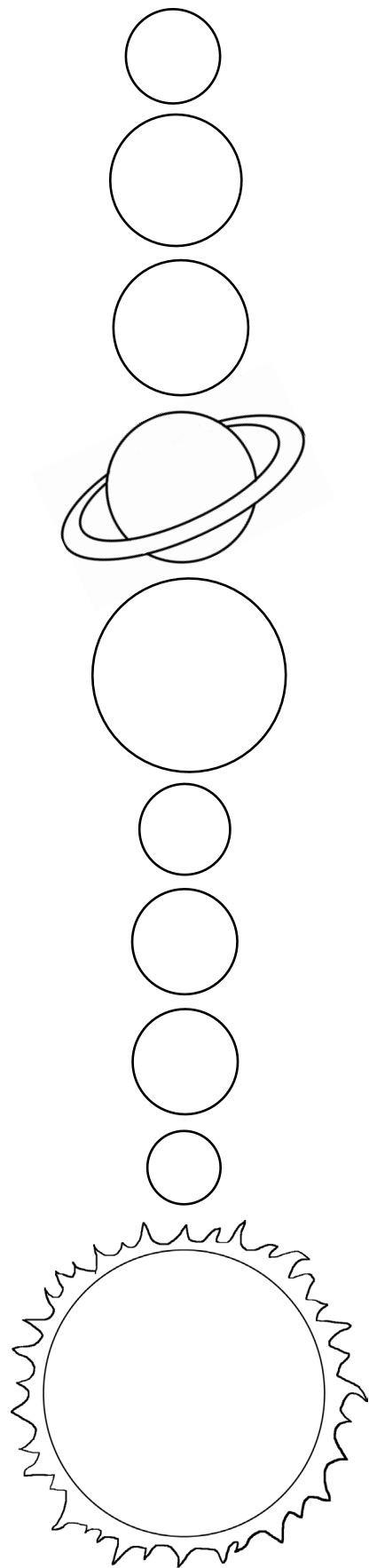
URANUS

“Neptune's Twin” and 7th from the sun



How long is one day on Uranus?

- a) 50 hours
- b) 112 hours
- c) 17 hours



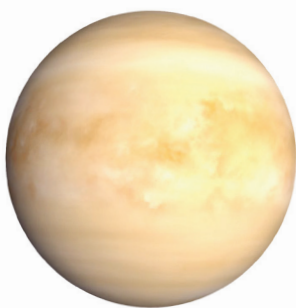
THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Venus is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

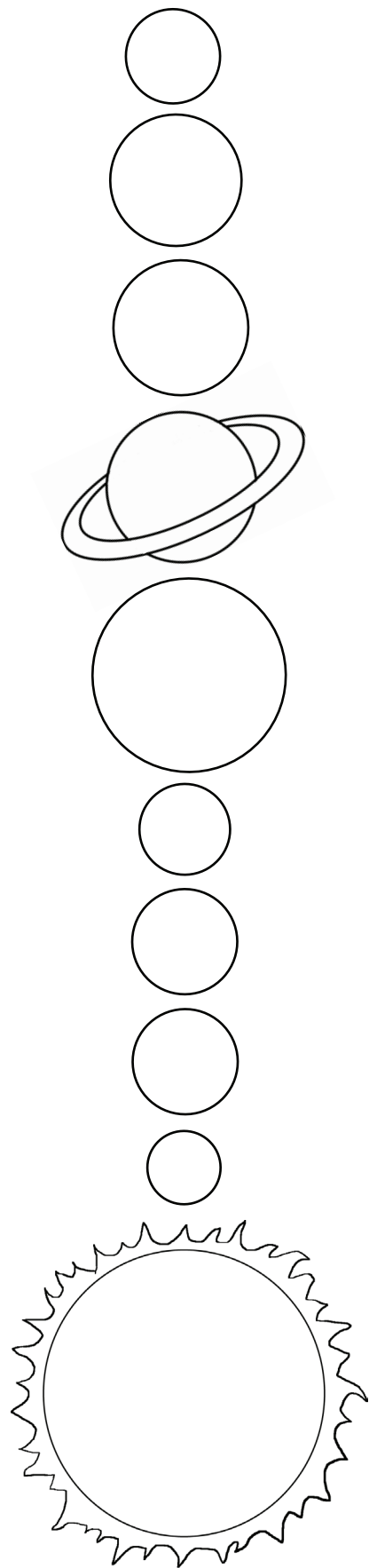
VENUS

“Earth's Twin” and 2nd from the sun



What is the average temperature on Venus?

- a) 850 degrees F
- b) -100 degrees F
- c) 75 degrees F



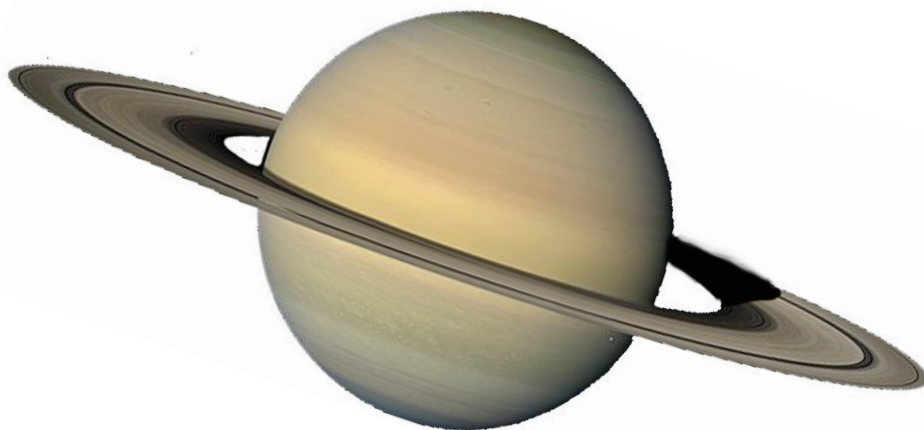
THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Saturn is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

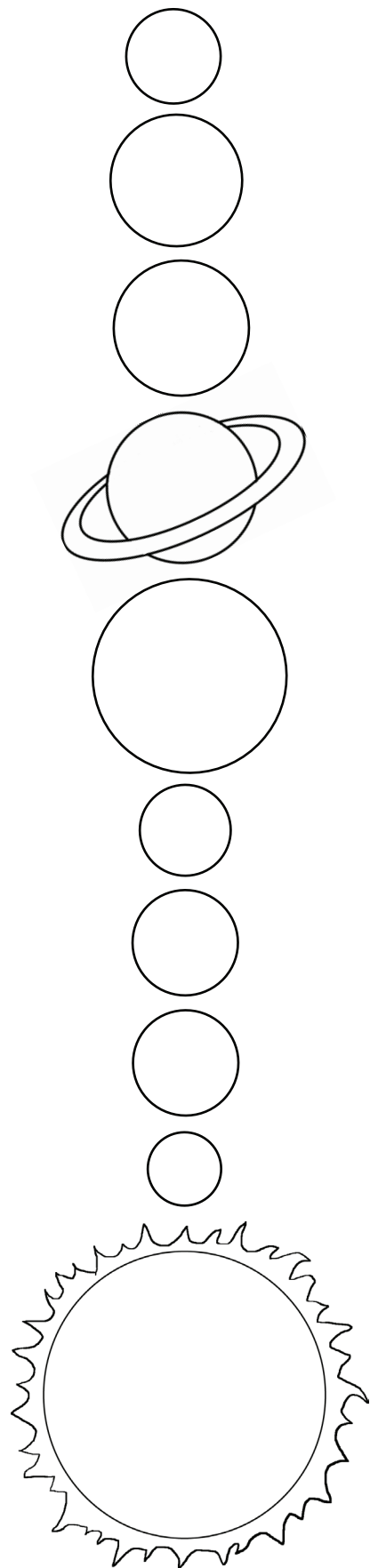
SATURN

“The Ringed Planet” and 6th from the sun



What are the rings of Saturn mostly made of?

- a) lava
- b) metal
- c) ice



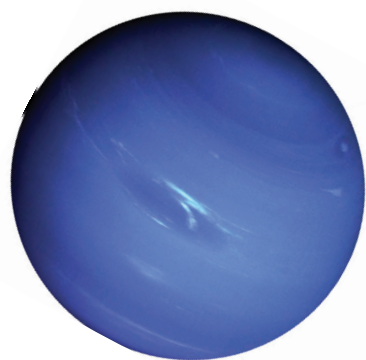
THE PLANETS

Where are they?

All of the planets in the Solar System revolve around the Sun. Some are close to the Sun, while others are farther away. Color in the circle where Neptune is on the diagram to the right. Then, cut out the planet image below and add it to your own diagram of the Solar System.

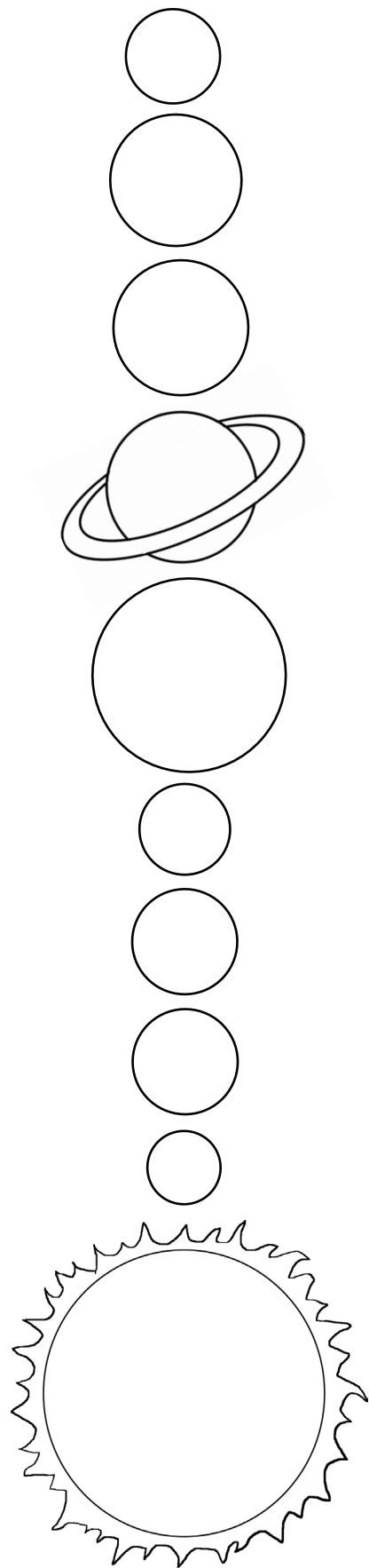
NEPTUNE

“The Ice Giant” and 8th from the sun



What year was Neptune discovered?

- a) 2008
- b) 1846
- c) 5000 BC



Answer Sheets

20 Worksheets to Learn the Planets

Sort Out the Solar System
Name the Planets
Know Your Planets: Venus
Know Your Planets: Mars
Know Your Planets: Earth
Know Your Planets: Neptune
Know Your Planets: Saturn
Know Your Planets: Jupiter
Know Your Planets: Mercury
Know Your Planets: Uranus

sorting out the SOLAR SYSTEM

3RD
GRADE

Use the following clues to determine the order of the planets in the solar system. The complete list of planets is given below.

ANSWERS

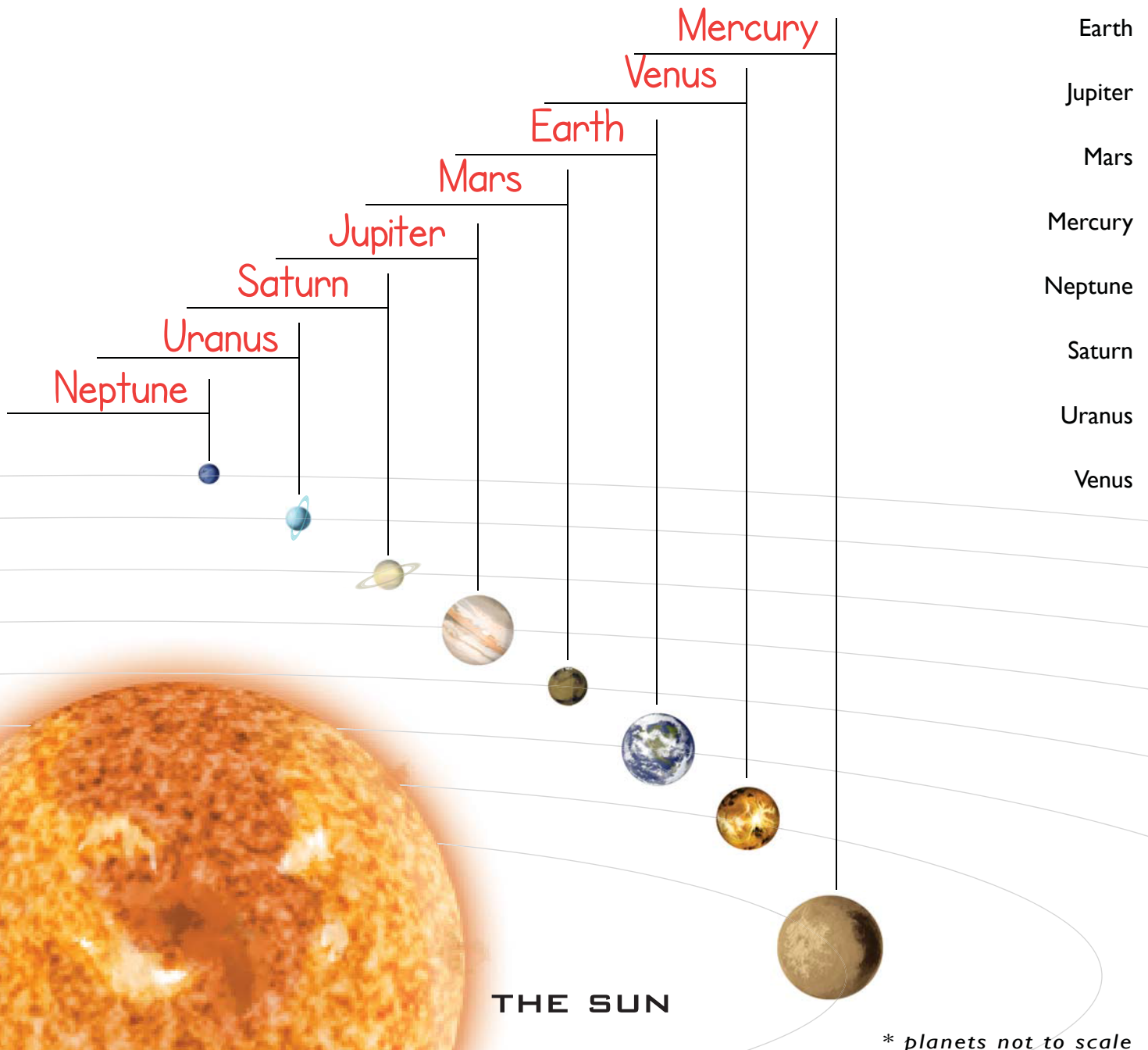
There is exactly one planet between Earth and Jupiter ●

Jupiter is between Mars and Saturn ●

Mercury is the closest planet to the Sun ●

Venus is next to Mercury ●

Saturn and Uranus have rings ●



Name _____

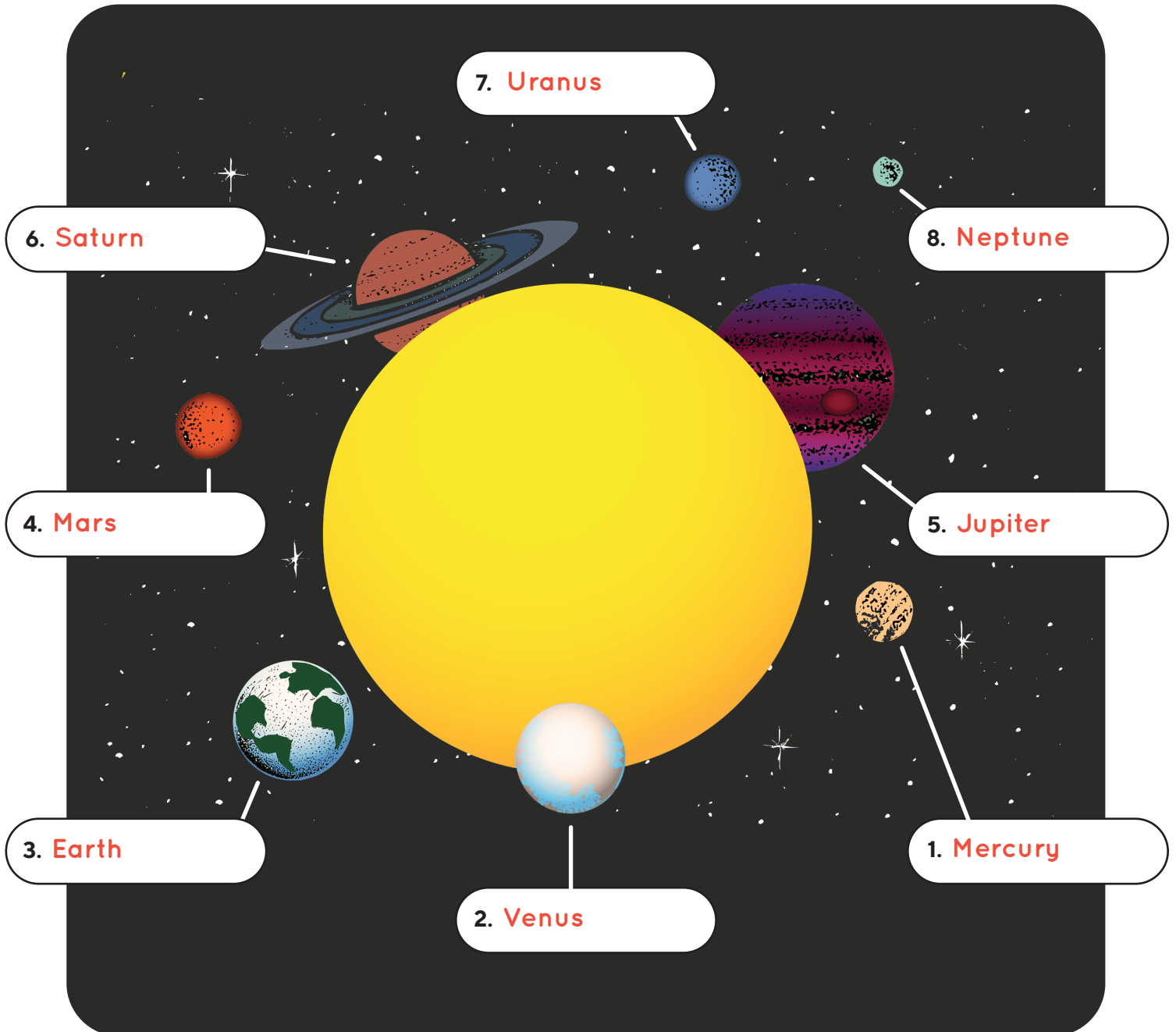
Date _____

Answer Key

Our Solar System

How many planets can you name? Label the planets of our solar system on the diagram below.

Hint: The numbers list the planets in order of how far each one is from the sun, from closest (1) to farthest (8).



Know Your Planets:

VENUS!

This is a picture of Venus. Color in the the cross-section drawing below using what you've learned.

Name:

Venus, named after the Roman goddess of love.

Size:

Venus is the sixth largest planet in the solar system and is only slightly smaller than Earth. Earth and Venus are called sister planets because of this.

What's It Made Of?:

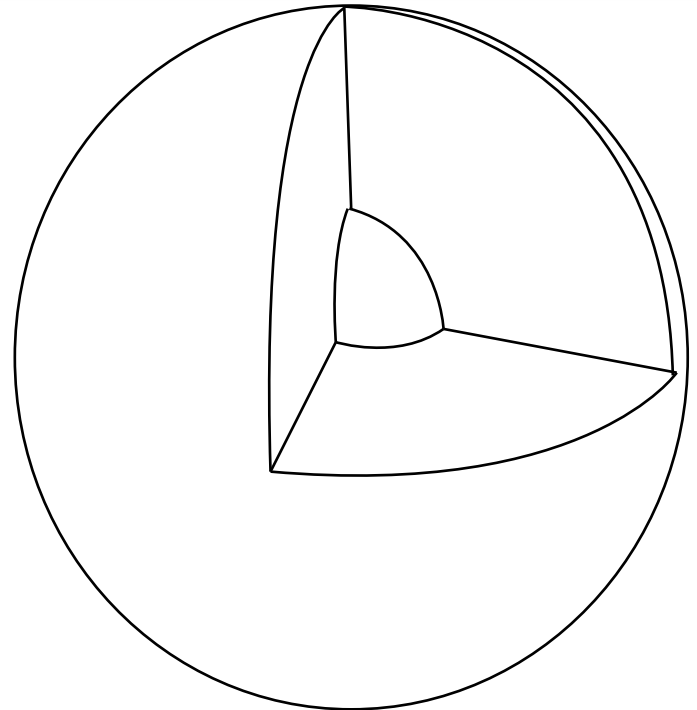
Venus is called a terrestrial planet, which means it is made mostly of rocks and hard substances. Mercury, Earth and Mars are the only other planets considered terrestrial.

Where is it?:

Venus is the second planet from the sun and is the brightest object in the night sky after the moon. Look for it right after sundown and right before sunrise. It is on average 67 million miles away from the sun and orbits it in the opposite direction of all the other planets

Surface:

In the picture all we can see is the thick layer of clouds around Venus. On the surface it is mostly volcanic rock with many active volcanoes and many craters. The average high temperature is 860 degrees!



Scrambles:

 Unscramble the words for the answer.

The atmosphere of Venus is 96%
this gas:

RBCNAO XODEIDI
CARBON DIOXIDE

Venus is in this galaxy:

KMLYI YWA
MILKY WAY

Molten rock is called this:

AVLA
LAVA

Know Your Planets:

MARS!

This is a picture of Mars. Color in the cross-section drawing below using what you've learned.

Name:

Mars is named after the Roman god of war. It is sometimes called the "Red Planet".

Size:

Mars is the seventh largest planet. It is about half the size of Earth and slightly larger than Mercury.

What's It Made Of?:

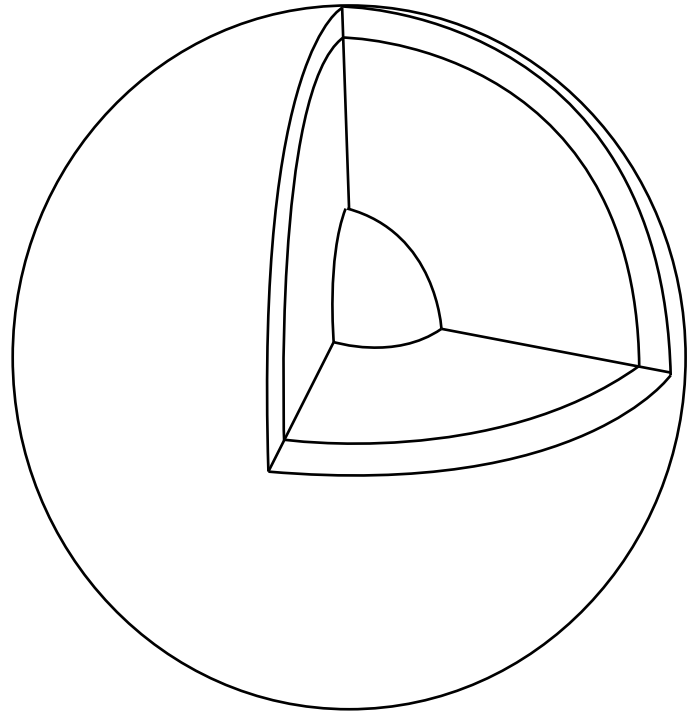
Mars is called a terrestrial planet, which means it is made mostly of rocks. The outer crust contains ice, soil, and rust, which is what makes it look red. The mantle is silicates and the core is iron.

Where Is It?:

Mars is the fourth planet from the sun and the fourth brightest object in the night sky. Earth and Mars are the only two planets that are the right distance away from the sun so that it is not too hot or too cold to support life.

Water and Ice:

At the north and south pole of Mars there are giant sheets of ice, called ice caps. Some scientists believe that there is water beneath the surface. There is evidence on the rocks that at one time there was liquid water on the surface.



Scrambles:

 Unscramble the words for the answer.

This part of Mars is very thin and is mostly carbon dioxide:

SOHMAPTREE
ATMOSPHERE

The seasons on Mars are most like this planet's:

TRAHE
EARTH

Rocks called this created the many craters on Mars:

ATIREOSD
ASTEROIDS

EARTH!

Know Your Planets:

This is a picture of Earth, our home planet. Color in the cross-section drawing below using what you've learned.

Name:

Earth is named after the Ancient Greek goddess of mountains and streams.

Size:

Earth is the fifth largest planet in our solar system. Earth and Venus are nearly the same size, but Earth is slightly larger.

What's It Made Of?:

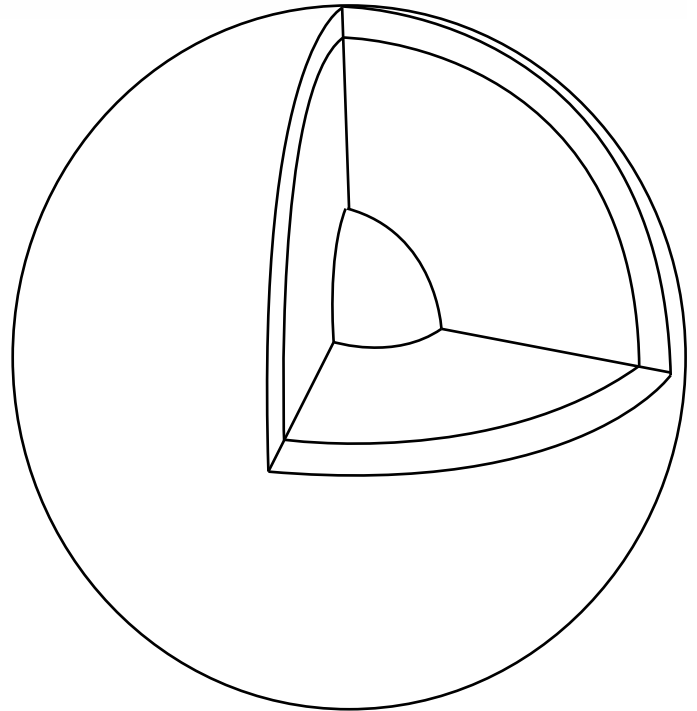
Earth is called a terrestrial planet, which means it is made mostly of rocks. The outer crust contains rocks and metals such as iron and magnesium. The mantle is made of metals and silicates. The core is made of liquid and solid iron and nickel.

Where Is It?:

Earth is the third planet from the sun. Earth and Mars are the only two planets that are the right distance away from the sun so that it is not too hot or too cold to support life.

Life:

High amounts of water and metals, as well as a thick atmosphere that keeps a stable temperature, have made Earth a place where life thrives.



Scrambles: Unscramble the words for the answer.

70% of the Earth's surface is covered with this:

LTSA RTEWA
SALT WATER

Earth's internal heat comes from this section:

REOC
CORE

This protects the Earth from the sun's radiation:

ZOEON
OZONE

Know Your Planets:

NEPTUNE!

This is a picture of Neptune. Color in the cross-section drawing below using what you've learned.

Name:

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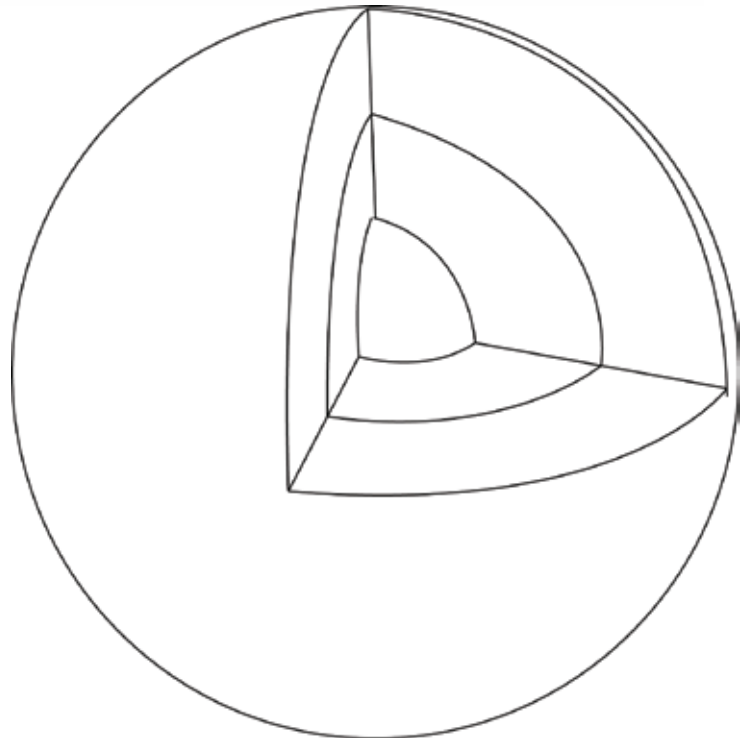
Neptune is one of the four gas giants. The outer crust is mostly helium and hydrogen gases with some methane. The mantle is frozen water, ammonia and methane. The core is ice with some rock and metals.

Where Is It?:

Neptune is the eighth planet from the sun. Of all the recognized planets it is the furthest from the sun.

Rings:

Like Saturn, Uranus and Jupiter, Neptune has rings around it. They may have come from an old moon that was hit and exploded into many tiny pieces. Saturn has the most distinct and visible rings.



Scrambles:

 Unscramble the words for the answer.

Neptune and Uranus are sometimes called this

CEI NTSIAG

ICE GIANTS

Neptune is most similar to this planet:

USRANU

URANUS

This element is found in Neptune's core with iron :

NKLCIE

NICKEL

Know Your Planets:

SATURN!

This is a picture of Saturn. Color in the cross-section drawing below using what you've learned.

Name:

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Size:

Saturn is the second largest planet in the solar system. 763 Earths could fit inside of Saturn!

What's It Made Of?:

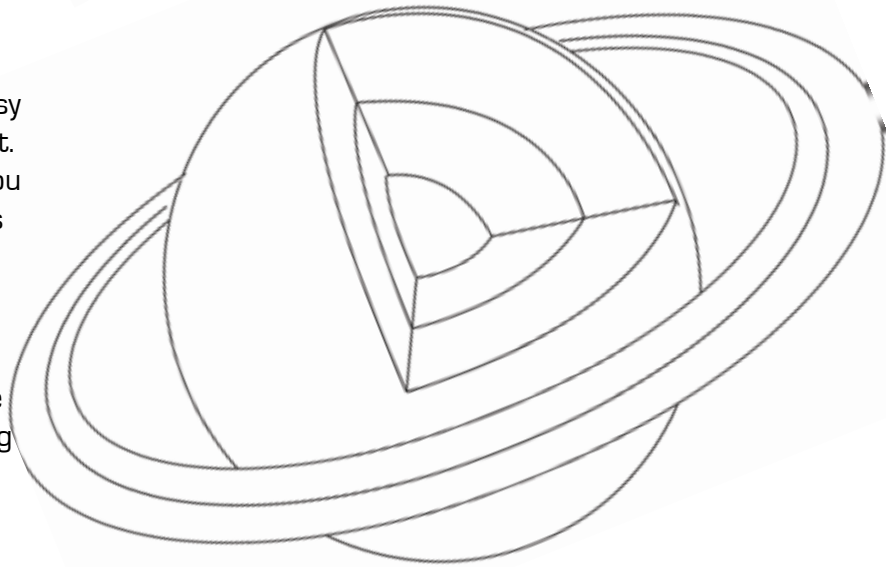
Saturn is considered one of the gas giants along with Jupiter, Uranus and Neptune. It has a rocky core but is mostly made of hydrogen and helium gas.

Where Is It?:

Saturn is the sixth planet from the sun. It is not easy to spot at night. It is the fifth brightest visible planet. It is a yellow point in the sky but with a telescope you can see its rings. It is on average 888 million miles away from the sun!

Rings:

Saturn has nine rings. They are made mostly of ice with some dust. Saturn also has 62 moons orbiting it and most of them have names!



Scrambles: Unscramble the words for the answer.

The fifth planet from the sun is:

PRUJETI

JUPITER

The lightest element is:

RDHOGYNE

HYDROGEN

This civilization gave Saturn its name:

ORMAN IRMEPE

ROMAN EMPIRE

Know Your Planets:

JUPITER!

This is a picture of Jupiter. Color in the cross-section drawing below using what you've learned.

Name:

Jupiter is named after the Roman god Jupiter.

Size:

Jupiter is the largest planet in our solar system by far. 1,300 Earths could fit inside of Jupiter!

What's It Made Of?:

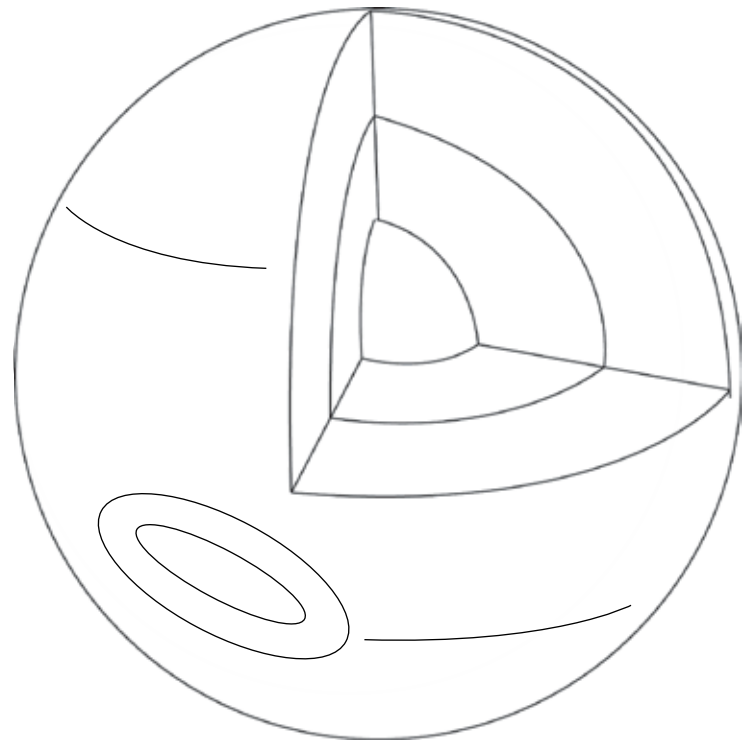
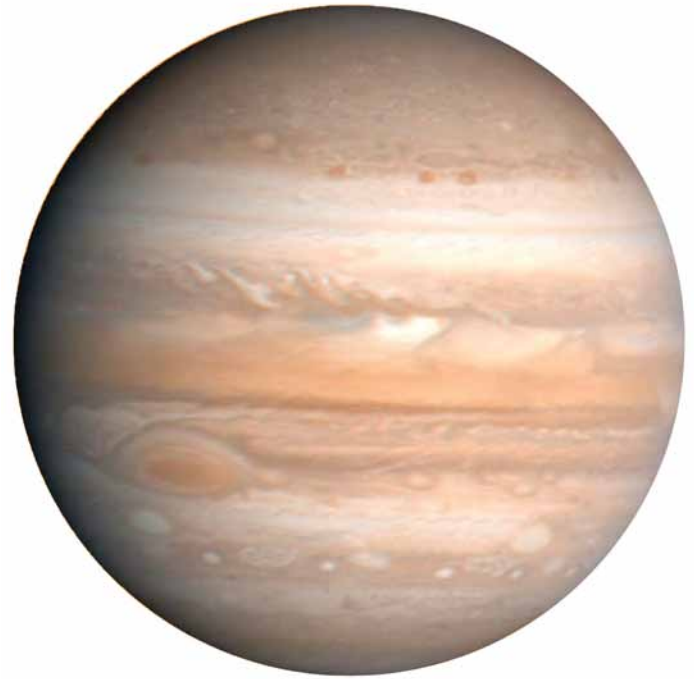
Jupiter is a gas planet, which means almost all of it is made of gases, only a tiny bit at the core is solid. The gases are mostly hydrogen with some helium, methane and water.

Where Is It?:

Jupiter is the fifth planet from the sun and the third brightest object in the sky at night, after the moon and Venus. Jupiter is about 483 million miles away from the sun, which it orbits around once every 11 years.

Weather:

If you look at the picture you can see a large red oval in the lower left of the planet. This is a massive storm on Jupiter. The storm has been going on for at least 300 years and is bigger than Earth.



Scrambles: Unscramble the words for the answer.

The Greek king of the gods is:

ESUZ
ZEUS

The second largest planet is:

UTRSAN
SATURN

One of the four Gas Giants:

TNUEEPN
NEPTUNE

Know Your Planets:

MERCURY!

This is a picture of Mercury. Color in the cross-section drawing below using what you've learned.

Name:

Mercury is named after the Roman god Mercury, messenger of the gods.

Size:

Mercury is the smallest planet in our solar system. Its diameter is one third the size of Earth's.

What's It Made Of?:

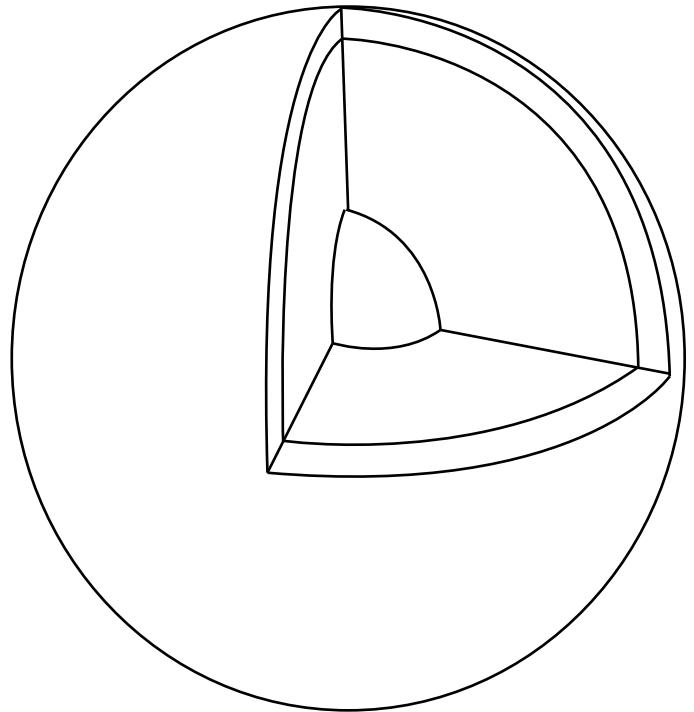
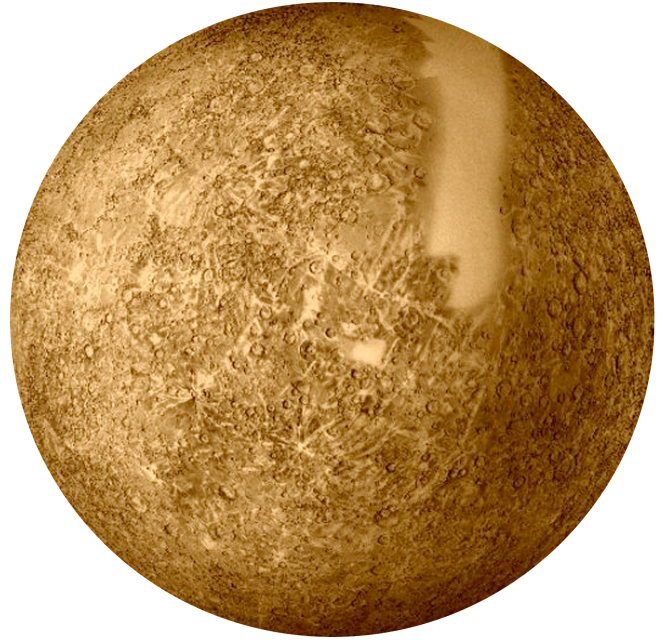
Mercury is one of the four terrestrial planets, meaning it is made mostly of rock. Its crust is stone, the mantle in the middle is silicates, and the core is iron.

Where Is It?:

Mercury is the closest planet to the sun. Earth is three times farther away.

Orbit and Rotation:

It takes 176 Earth days for Mercury to complete one rotation and 88 Earth days to orbit once around the sun. This means that one day on Mercury lasts 2 years.



Scrambles: Unscramble the words for the answer.

The section beneath the crust of a planet is called the:

TENALM
MANTLE

Mercury has a strong magnetic field because of this element at its core:

NROI
IRON

Mercury is only visible from Earth at these times every day:

SREINUS and TUNSSE
SUNRISE AND SUNSET

Know Your Planets:

URANUS!

This is a picture of the planet Uranus. Color in the cross-section drawing below using what you've learned.

Name:

Uranus is named after the Ancient Greek god of the sky.

Size:

Uranus is the third largest planet in our solar system. Its diameter is four times larger than Earth's.

What's It Made Of?:

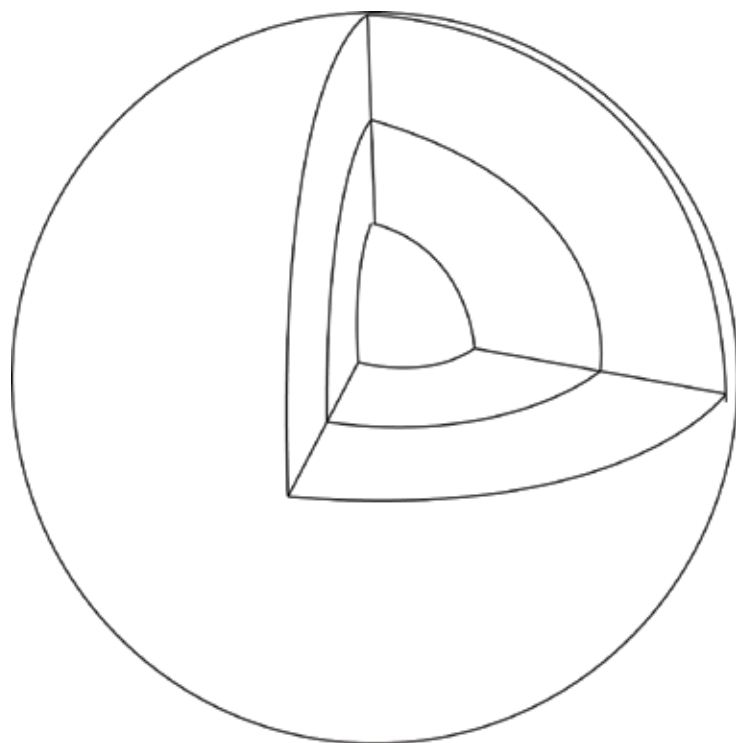
Uranus is one of the four gas giants. The outer crust is mostly helium, hydrogen and methane gases. The mantle in the middle is made out of frozen water, ammonia and methane. The core is ice and rock.

Where Is It?:

Uranus is the seventh planet from the sun. It wasn't discovered until 1781 and can only be seen with a telescope.

Weather:

Because it is so far from the sun and has a very thin atmosphere it is the coldest planet. It can be as cold as -144 degrees F.



Scrambles: Unscramble the words for the answer.

Uranus was discovered using this tool:

EEPLESCTO

TELESCOPE

Uranus is most similar to this planet:

TNENUPE

NEPTUNE

This gas gives the planet its blue color

EMEHNTA

METHANE