

Name: _____

The Inner Solar System

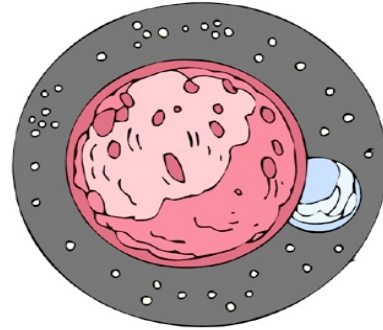
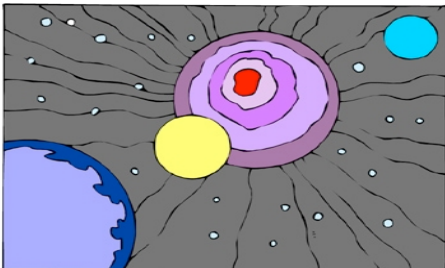
by Leslie Cargile

The inner solar system is the name of the terrestrial planets and asteroid belt. Terrestrial is just a fancy way of saying rocky. Like the Earth, terrestrial planets have a core of iron and rock.

At the center of the solar system is the Sun. The Sun is a big ball of hydrogen powered by nuclear reactions. Massive explosions are going on all of the time inside the Sun. It's what makes the light every day and keeps our planet warm. Light zips from the Sun to us in about eight minutes. The Sun is the most massive thing in our solar system. It is so big you could fit about a million Earths inside of it!

Closest to the Sun is the planet Mercury. You could squeeze about eighteen Mercury's inside of Earth. It is made of mostly rock, but it has a huge iron core and it generates a big magnetic field. Speedy little Mercury sails around the sun in only eighty-eight days. Mercury was the messenger of the gods in Roman mythology, known for his speed.

Second in line comes Venus, which is sometimes called Earth's twin. It's about the same size as Earth, but that's where the similarities end. Venus is always covered in thick clouds full of sulfuric acid. They whip around the planet at more than two hundred twenty mph. Violent winds shoot sand made of silicate around Venus's very dry, arid surface. The temperature averages nine hundred degrees, and the pressure's ninety times that on Earth. It takes two hundred and twenty four days to orbit the sun. Like Mercury, Venus was also named after a Roman Goddess, the Goddess of love.



You know what planet is next. You live on it! Yup, the Earth is number three. We have a rocky iron core at the center of our planet. We have liquid water, and our air is made of mostly nitrogen and oxygen. It takes three hundred and sixty-five days for us to circle the sun. We only have one moon.

Next to us in is Mars. Mars also has a core of rock and iron. It is a little more than half the size of Earth. The most distinct feature about Mars is its red color. Dust rich in iron oxide covers the planet. It's sort of like the planet is rusting. White caps at the poles are water, forever frozen because of the colder temperatures further from the Sun. The only place the temperature rises above freezing is at the equator, or the middle of the planet. Mars has two moons, Deimos and Phoebe but they are much smaller than our own moon. It takes nearly twice as long for Mars to circle the sun at almost 684 days.

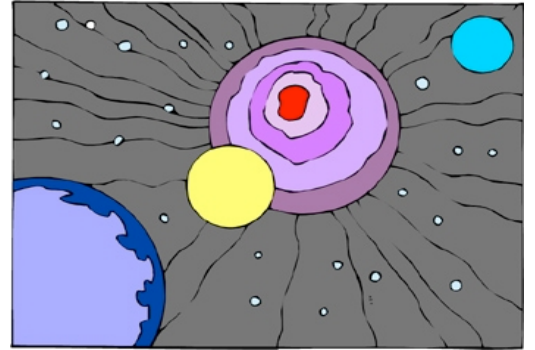
The last part of the inner solar system is called the Asteroid Belt. It's the line between the inner rocky planets and the outer gaseous planets. Unlike the rest of the Inner Solar System, the Asteroid Belt isn't a planet at all. It is a bunch of large rocky chunks, mostly meteoroids. There's also a dwarf planet named Ceres in the asteroid belt. The rest aren't very large.

The Earth is the only planet that we know of with life on it, but universe is a big place. Much of our solar system is still a mystery, there is still plenty to explore.

Name: _____

The Inner Planets

by Leslie Cargile



1. How does the size of Mercury compare to Earth?
 - a. Mercury is 18 times the size of Earth
 - b. Mercury is $\frac{1}{18}$ the size of Earth.
 - c. Earth is $\frac{1}{18}$ the size of Mercury.
 - d. Earth is 18 times smaller than Mercury.

2. Which statement about the inner planets' orbits is true?
 - a. Venus orbits the sun more quickly than Mercury.
 - b. Mercury orbits the sun more slowly than Mars.
 - c. Earth orbits the sun more quickly than Venus.
 - d. Mars orbits the sun more slowly than Earth.

3. What two types of gas make up most of Earth's atmosphere?
_____ and _____

4. According to information in the article, where would you find water on Mars?

4. How long does it take light to travel from the sun to the Earth?

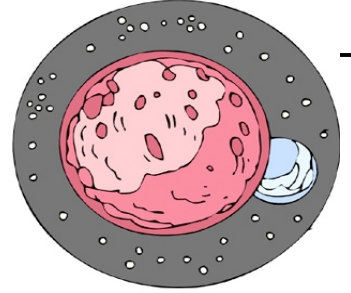
5. Which would be the most appropriate nickname for Venus?
 - a. the cold desert planet
 - b. the first inner planet
 - c. the windy planet
 - d. the triple mooned planet

Now Try This: Make a Venn diagram to compare and contrast Earth and Venus.

Name: _____

The Inner Planets

Vocabulary Activity



Fill in the missing letters to create a word from the article.

Then, write the full word on the line. Be sure you spell each word correctly.

1. ___ i ___ ___ ___ r ___ ___ e ___

clue: likenesses

1. _____

2. ___ ___ ___ a ___ ___ r

clue: an imaginary line around the center of a planet

2. _____

3. ___ a ___ e ___ u ___

clue: made of gas

3. _____

4. ___ r i ___

clue: lacking water or rainfall

4. _____

5. ___ e ___ ___ ___ s ___ ___ ___ a ___

clue: rocky

5. _____

6. ___ ___ ___ r ___ ___ e ___

clue: most abundant gas on Earth

6. _____

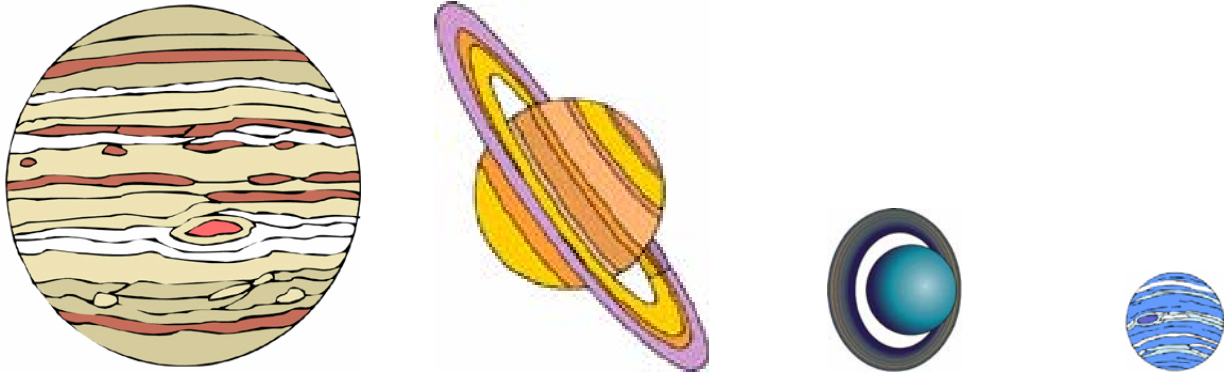
7. ___ a ___ ___ i ___ e

clue: containing a lot of mass; large

7. _____

Name _____ Date _____

THE OUTER PLANETS



The outer planets are the planets that are the farthest from the sun. There are four outer planets. Their names are Jupiter, Saturn, Uranus, and Neptune. Jupiter, Saturn, Uranus, and Neptune are called "gas giants" because they are mostly made of gases and are very big.

The gas giants are Saturn, Jupiter, Uranus and Neptune. These four planets are similar to each other in some ways. The gas giants are all very different from the inner planets. One way that the gas giants are different from the inner planets is that the gas giants all have rings. Saturn has the most colorful and largest number of rings. Each gas giant has many moons. Jupiter has sixty-three moons. Saturn has at least fifty-six moons. Uranus has twenty-seven moons, and Neptune has thirteen moons. None of the inner planets have rings, and only Earth and Mars have moons. Earth has one moon and Mars has two moons.

Name _____ Date _____

ANSWER THE QUESTIONS ABOUT *THE OUTER PLANETS*

1. What are the four planets that are **farthest** from the sun named?

2. Why are Jupiter, Saturn, Uranus, and Neptune called **gas giants**?

3. Which planets are bigger: inner planets or outer planets?

4. What are **two ways** that the gas giants are different from the inner planets?

5. Which **outer planet** has the **most** moons?
