

Explore Space

Our Solar System

Our solar system is made up of the sun and eight **planets**. A planet is a large ball made of rock or gas. Each planet **orbits**, or travels around, the sun. The sun is at the center of the solar system.



NASA

The planets in our solar system are all different sizes.

The **sun** is a star. It is a ball of hot gas. It gives off light and heat. Why does the sun look different from other stars? The sun is the star closest to Earth.

Mercury is the closest planet to the sun. It is also the smallest. It has mountains and **craters**. Craters are holes in the ground that were made when space rocks crashed into it.

Venus is the hottest planet. It is hot enough to melt a rocket ship. Venus is about the same size as Earth.

Earth is our home. It is also the only planet with oceans. In fact, Earth is covered mostly with water. That is why it is called the Blue Planet.

Mars is called the Red Planet. It has reddish dirt. It also has mountains, volcanoes, ice caps, and **canyons**. A canyon is a deep, narrow valley with steep sides.

Jupiter is the largest planet. It is made of thick gases. Very strong winds blow on this planet.

Saturn is the second-largest planet. It has rings around it. The rings are made of rock, dust, and ice.

Uranus was the first planet to be discovered using a telescope. It is cold and windy there.

Neptune is the coldest planet because it is farthest from the sun. The planet is made of gases.

canyon

can · yon

Advanced Definition**noun**

1. a deep, narrow chasm with steep sides, often with a stream flowing along the bottom.
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These are some examples of how the word or forms of the word are used:

1. A **canyon** is a deep, narrow valley with steep sides.
2. On August 5th, the men came into a **canyon** with very high walls. Powell named it Marble Canyon.
3. It is one mile from the top of the cliffs to the floor of the **canyon**. The Colorado River flows along the canyon floor.
4. Together, the wind and water created the **canyon** we see today. Even today, wind and water continue to change the canyon by reshaping the rocks and battering the cliffs.

crater

cra · ter

Advanced Definition**noun**

1. a bowl-shaped depression with a raised rim, such as the mouth of a volcano or geyser, or the circular depressions on the surface of the moon, usu. with a mountain at their center.
2. a similar depression in the surface of the earth or other heavenly bodies caused by the impact of falling meteorites or the explosion of a mine or bomb.

transitive verb & intransitive verb

1. to make craters in or become filled or marked with craters.

Spanish cognate

cráter. The Spanish word *cráter* means crater.

These are some examples of how the word or forms of the word are used:

1. It has mountains and **craters**. Craters are holes in the ground that were made when space rocks crashed into it.
2. It is covered with deep holes called **craters**. The moon may look as though it gives off light, but it does not.

orbit or bit

Advanced Definition

noun

1. the curved path in which a planet, satellite, or spacecraft revolves about another body.

Earth's orbit around the sun is elliptical.

2. one complete revolution along such a path.

A little more than 365 days is the amount of time that the earth takes to complete one orbit around the sun.

3. a sphere or area of experience, knowledge, control, or power.

Such questions are really outside of my orbit.

4. one of the two bony sockets that encase the eyeballs.

transitive verb

1. to revolve about (another body) in a curved path.

Several moons orbit Jupiter.

2. to send into an orbit.

intransitive verb

1. to travel in an orbit.

The space station is now orbiting.

Spanish cognate

órbita: The Spanish word *órbita* means orbit.

These are some examples of how the word or forms of the word are used:

1. Jeremy noticed that some of the charts showed patterns: numbers that repeated, timings separated by exactly one hour. The professor showed him that the repeating numbers were distances between planets, or between planets and their moons, or distances between stars, and showed him how the **orbits** of these planetary bodies created patterns of collective behavior.

Name: _____ Date: _____

1. What is a planet?

- A. a large ball made of only rock
- B. a large ball made of rock or gas
- C. a ball of hot gas that gives off light

2. The author provides a list of what in the passage?

- A. planets in our solar system
- B. stars in our solar system
- C. moons in our solar system

3. The sun is at the center of our solar system. What evidence from the passage best supports this statement?

- A. The planets in our solar system orbit the sun.
- B. A star is a ball of gas that gives off heat and light.
- C. The sun is the star that is closest to Earth.

4. Read the following sentence: "**Uranus** was the first planet to be discovered using a telescope." Based on this information, what conclusion can you make about Uranus?

- A. Uranus is too far away to see with the naked eye.
- B. Uranus is blocked by Saturn so it is hard to see.
- C. Uranus is the planet that is farthest from the sun.

5. What is this passage mostly about?

- A. why the Earth is called the Blue Planet
- B. what the rings around Saturn are made of
- C. the sun and the planets in our solar system

6. Read the following sentences: "Mars is called the Red Planet. It has **reddish** dirt."

As used in this sentence, what does the word "**reddish**" mean?

- A. moist and fertile
- B. mostly brown in color
- C. slightly red in color

7. Choose the answer that best completes the sentence below.

Neptune is the farthest planet from the sun, ____ it is the coldest planet.

- A. but
- B. so
- C. because

8. What is at the center of our solar system?

9. Why is Earth called the Blue Planet?

10. Compare Venus and Earth by explaining how they are similar and how they are different.

Name: _____ Date: _____

1. What is a meaning of the word **canyon**?

- A. an open clash between two opposing groups or people
- B. the act of seeing things as different and distinct
- C. a deep and narrow valley created by a river in an area with little rainfall

2. What is another meaning of the word **canyon**?

- A. a future expected or possible event
- B. a deep valley with steep sides
- C. a specific date

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. Rivers can dig _____ in the land.

- A. canyons
- B. canyon

4. You'll be out of this _____ soon.

- A. canyons
- B. canyon

5. Please write your own sentence using the word **canyon**.

6. What would you like to remember about the meaning of the word **canyon** so that you can use it when you write or speak?

Name: _____ Date: _____

1. What is a meaning of the word **orbit**?

- A. a feeling of self-respect and personal worth
- B. the path of a moon, planet, or space object
- C. buying or selling securities or things

2. What is another meaning of the word **orbit**?

- A. the science of what things are made of
- B. the uniform of a chef
- C. a circle of influence

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. The _____ itself looked like a stubby airplane.

- A. orbited
- B. orbits
- C. orbit
- D. orbiter
- E. orbiting

4. All the planets in our solar system _____, or move around, the sun.

- A. orbited
- B. orbits
- C. orbit
- D. orbiter
- E. orbiting

5. Many comets have _____ that are tilted.

- A. orbited
- B. orbits
- C. orbit
- D. orbiter
- E. orbiting

6. In the past, many objects sent to space _____ the earth, passing over most of its countries in turn.

- A. orbited
- B. orbits
- C. orbit
- D. orbiter
- E. orbiting

7. Traveling around an object in space is called _____.

- A. orbited
- B. orbits
- C. orbit
- D. orbiter
- E. orbiting

8. Please write your own sentence using the word **orbit**.

9. What would you like to remember about the meaning of the word **orbit** so that you can use it when you write or speak?

Name: _____ Date: _____

1. What is a meaning of the word **crater**?

- A. a bowl-shaped low spot created by the impact of a meteorite or bomb
- B. a certificate that is agreed upon
- C. something that transforms

2. What is another meaning of the word **crater**?

- A. to the side of one's bed
- B. a brown chocolate powder
- C. the opening of a volcano

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. This road will take us all around Kilauea _____.

- A. craters
- B. crater

4. With a telescope, you can see that the moon has many mountains and pits, or _____.

- A. craters
- B. crater

5. Please write your own sentence using the word **crater**.

6. What would you like to remember about the meaning of the word **crater** so that you can use it when you write or speak?