

The Rocky Neighbors: The Inner Planets  
Word Splash

Mercury

Mars

Earth

Inner Planets

Rockies

planet

*gravity*

craters

*meteorites*

atmosphere

greenhouse effect

erosion

plates

wavelength

rotates

water

**axis**

oxygen

surface

orbiting

volcano

**The Rocky Neighbors: The Inner Planets  
Anticipation Guide**

**Directions:** Answer the following questions by circling the correct response. Do your best!

- |   |      |       |
|---|------|-------|
| 1. <i>Terrestrial</i> means Earth.  | True | False |
| 2. Mercury takes the longest of all planets to revolve around the sun.                        | True | False |
| 3. Mercury has a smooth surface.  | True | False |
| 4. Venus is the hottest planet.   | True | False |
| 5. The greenhouse effect happens when heat is trapped inside a planet's atmosphere.           | True | False |
| 6. Venus rotates on its axis similar to the way Earth rotates on its axis.                    | True | False |
| 7. Venus has thick clouds of sulfuric acid.   | True | False |
| 8. Mars is colored blue.  | True | False |
| 9. Mars has the largest volcano in the solar system.  | True | False |
| 10. Mars' volcano is active.  | True | False |
| 11. Mars has frozen water   | True | False |
| 12. Mars takes 50,000 years to rotate on its axis.  | True | False |
| 13. The four Inner Planets are Mercury, Mars, Earth, and Saturn.                              | True | False |
| 14. The Inner Planets are also known as the Rockies.  | True | False |
| 15. Mars is the only planet that an unmanned spacecraft has successfully landed and explored. | True | False |

After viewing the program, review your answers. See how many questions you answered correctly. Review the ones you answered incorrectly.

**The Rocky Neighbors: The Inner Planets****Video Quiz**

**Directions:** Now that you have viewed the program, let's challenge your memory by answering some quiz questions. Fill in the blanks with the correct words. Good luck!

1. The four Rocky Planets include \_\_\_\_\_ , Venus, Earth, and Mars.
2. The Rocky Planets are also called the Inner Planets and the Terrestrials. *Terrestrials* means \_\_\_\_\_ .
3. Because of bombardment from meteorites long ago, Mercury's surface looks like our \_\_\_\_\_ .
4. Mercury lacks an atmosphere because its \_\_\_\_\_ is too weak to hold it.
5. Venus' thick atmosphere traps heat because of the \_\_\_\_\_ effect.
6. On Venus and Uranus, the sun rises in what direction? \_\_\_\_\_
7. Earth lies between the planets \_\_\_\_\_ and \_\_\_\_\_ .
8. The earth's crust is cracked into a number of \_\_\_\_\_ that move.
9. Olympus Mons is three times taller than Mt. Everest, and is the tallest volcano in the \_\_\_\_\_ .
10. \_\_\_\_\_ is the only planet on which unmanned spacecraft have successfully landed and explored.

**The Rocky Neighbors: The Inner Planets  
Discussion Questions**

Directions: Answer the following questions as directed by your teacher.

1. Why do Mercury, Venus, Earth, and Mars have three names: Inner Planets, the Rockies, and the Terrestrials?
2. What is your favorite planet and why?
3. Why does Mercury revolve so quickly around the sun?
4. Why does Mercury look like the moon?
5. How is Earth's surface different from the other Inner Planets' surface?
6. What does atmosphere do for planets?
7. Describe Mercury's atmosphere.
8. How is Mercury's atmosphere different from Venus'?
9. What does Venus' atmosphere do for the planet?
10. What else is different about Venus, compared to the other planets? How does this affect Venus?
11. What allows Earth to have living things?
12. We hear a lot about Mars in current events. Why do you think Mars is more researched and discussed compared to other planets?
13. What does Mars have that is the largest in the solar system?
14. What is different about how the planets rotate on their axis? How does the rate affect a planet?
15. Scientists know quite a bit about these planets, but continue to study them. What else do you think they may discover?

**The Rocky Neighbors: The Inner Planets****Cloze Activity: The Greenhouse Effect**

**Directions:** Choose the correct word from the word box to complete the paragraph below.

sun's	atmosphere	radiates	
heat		wavelengths	Earth
planets	Venus	surface	
	Inner Planets	Mercury	

You have heard the term greenhouse effect before. It is affecting us here on Earth, as well as on distant (1.) \_\_\_\_\_. But what is the greenhouse effect? Let's look at a planet that exemplifies this process. (2.) \_\_\_\_\_ is one of the (3.) \_\_\_\_\_.

Though Venus is farther from the sun than (4.) \_\_\_\_\_, its 800 degrees Fahrenheit /450 degrees Celsius (5.) \_\_\_\_\_ temperature makes it the hottest of all planets. It has a very dense (6.) \_\_\_\_\_, 90 times heavier than Earth's. When heat leaves the sun in energy waves, they pass through the atmosphere and heat Venus' surface. The surface then (7.) \_\_\_\_\_ some of the heat, but in different size (8.) \_\_\_\_\_, which cannot pass easily through Venus' thick atmosphere. Therefore, (9.) \_\_\_\_\_ is trapped. This makes temperatures higher than expected. At 93 million miles/149 kilometers from the sun, (10.) \_\_\_\_\_ has a small greenhouse effect. Due to the atmosphere trap of one billionth of the (11.) \_\_\_\_\_ heat and light, our planet has life. Atmosphere helps planets in other ways as well. Can you think of some?

**The Rocky Neighbors: The Inner Planets****Terrestrial Graphic Organizer**

**Directions:** Fill in the chart below with as much descriptive information as possible. Review the program and use additional materials if needed. Double-check your work for accuracy.

	<b>Orbit around the sun time</b>	<b>Rotation on axis time</b>	<b>Describe the surface</b>	<b>Size of planet</b>
<b>Mercury</b>				
<b>Venus</b>				
<b>Earth</b>				
<b>Mars</b>				

The Rocky Neighbors: The Inner Planets

Connected or not connected?

Directions: Pick two words from below and "connect" or "NOT connect" those words so the sentence makes sense and is true. Focus on the similarities and differences between the Inner Planets. Make as many connections as you can, use the back if necessary.

Mercury  
Rockies  
craters  
greenhouse effect  
water  
Inner Planets

Mars  
terrestrial  
meteorites  
heat  
oxygen  
gravity

Earth  
orbiting  
atmosphere  
wavelength  
surface  
plates

Venus  
planet  
erosion  
rotates  
volcano  
axis

1. Example: Mars is connected to Venus because they are both Inner Planets.

2. \_\_\_\_\_ is connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_ is connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_ is connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

5. \_\_\_\_\_ is connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Example: Mercury is NOT connected to Earth because Mercury does not have an atmosphere and Earth does have an atmosphere.

7. \_\_\_\_\_ is NOT connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

8. \_\_\_\_\_ is NOT connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

9. \_\_\_\_\_ is NOT connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

10. \_\_\_\_\_ is NOT connected to \_\_\_\_\_ because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## The Rocky Neighbors: The Inner Planets

### Post-Test

**Directions:** Answer the following questions by circling the correct answer. Remember to double-check your work for accuracy after you have completed the test. Do your best!

- Which of the following is not an Inner Planet?
  - Earth
  - Venus
  - Sun
  - Mars
- Which of the following is the smallest Inner Planet?
  - Mercury
  - Venus
  - Earth
  - Mars
- Which planet orbits the sun the fastest?
  - Mercury
  - Venus
  - Earth
  - Mars
- Which planet has a surface that changes constantly?
  - Mercury
  - Venus
  - Earth
  - Mars
- What can make a planet's surface change?
  - temperature
  - erosion
  - moving plates
  - both B & C
- Which planet has the densest atmosphere?
  - Mercury
  - Venus
  - Earth
  - Mars
- What is necessary for a planet to have the greenhouse effect?
  - electromagnet radiation
  - atmosphere
  - plates
  - gases
- Which planet rotates the slowest on its axis?
  - Mercury
  - Venus
  - Earth
  - Mars
- Which planet is the most similar to Earth?
  - Mercury
  - Venus
  - Pluto
  - Mars
- Which is not a name that identifies Mercury, Venus, Earth, and Mars?
  - Terrestrial
  - Gas Giant
  - Inner Planets
  - The Rockies