

# The Ringed Planet

*How much do you know about one of our solar system's most fascinating planets?*

1 The famous astronomer Galileo was the first to see that Saturn was shaped differently than the other planets. He thought the bulges on each side were caused by two other planets sitting right next to Saturn. The Cassini-Huygens spacecraft is named after the 17th century astronomers who concluded that Saturn was actually ringed: Giovanni Cassini and Christiaan Huygens.

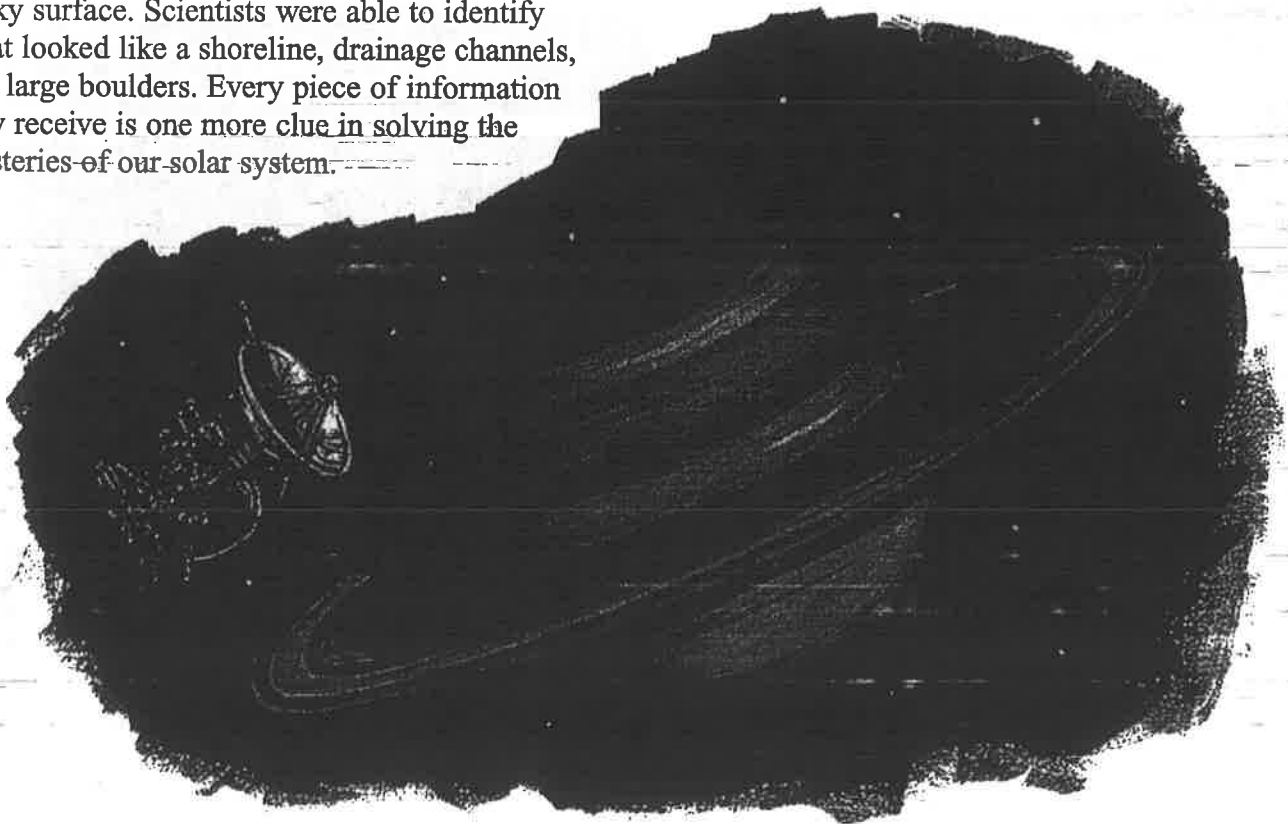
2 The Cassini-Huygens spacecraft was launched in October of 1997, but it took seven years to reach its destination—the planet Saturn. On July 1, 2004, the Cassini orbiter began circling the sixth planet from the sun. It will continue sending information back to Earth for the next four years.

3 On January 14, 2005, the Huygens probe was dropped onto Titan, one of Saturn's many moons. For about 90 minutes, it sent back data and images of the moon. People around the world were amazed to see pictures of Titan's rocky surface. Scientists were able to identify what looked like a shoreline, drainage channels, and large boulders. Every piece of information they receive is one more clue in solving the mysteries of our solar system.

4 Although four other spacecrafts have flown by Saturn, Cassini will be the first one to stay for a while. During its four years of orbiting, Cassini will take photographs and scientific measurements that will be transmitted back to scientists on Earth. Even before it arrived at its final stop, Cassini was amazing astronomers with the best photographs ever taken of Jupiter, as well as rare views of Saturn's moon Phoebe.

5 One of the trickiest parts of the mission was maneuvering the spacecraft through Saturn's famous rings. The rings are thought to be the remnants of a moon that was somehow destroyed in the past. Its many pieces still orbit the planet and create a solid-looking ring.

6 The rocks and ice that form the rings vary greatly in size, from as small as dust particles to as big as a car. Trying to get Cassini-Huygens through there was a risky and complex challenge. However, the international team of scientists did it successfully.



## Vocabulary Skills

Write the words from the passage that have the meanings below.

1. came to a decision

\_\_\_\_\_ Par. 1

2. the place something or someone is going

\_\_\_\_\_ Par. 2

3. sent by one person or thing to another

\_\_\_\_\_ Par. 4

4. carefully moving or guiding

\_\_\_\_\_ Par. 5

5. remains; leftovers

\_\_\_\_\_ Par. 5

Compound words are divided into syllables between the two words that make the compound. For example, *play/ground*. Divide the words below into syllables using a slash (/).

6. spacecraft

7. somehow

8. takeoff

In each row, circle the word that does not belong.

9. Galileo Cassini Huygens Jupiter

10. Jupiter meteor Saturn Earth

11. sun moon Titan Phoebe

12. amaze astonish disappoint surprise

## Reading Skills

1. Check the line beside the word that best describes what type of passage this is.

\_\_\_\_\_ informational

\_\_\_\_\_ fiction

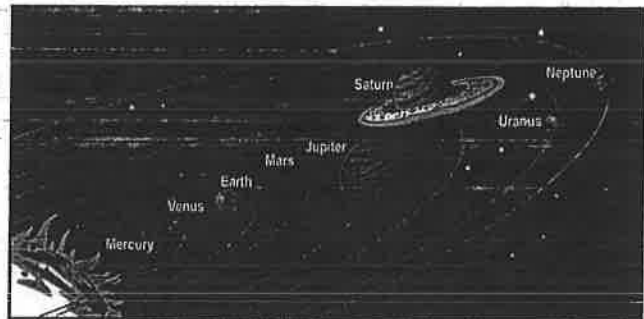
\_\_\_\_\_ myth

2. What did Galileo think the bulges on either side of Saturn were caused by?

3. How long did it take the Cassini-Huygens spacecraft to travel from Earth to Saturn?

4. How do scientists think the rings of Saturn were created?

## Study Skills



1. Which planet is closest to the sun?

2. Between which two planets is Earth located?

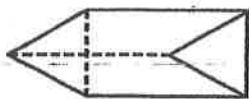
3. What is the name of the fifth planet from the sun?

Name: \_\_\_\_\_

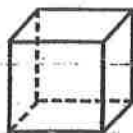
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### Solid Figures: Prisms, Cubes, and Pyramids

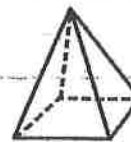
### Geometric Figures



A **prism** is a solid figure in which two faces are polygons in parallel planes and the other faces are parallelograms.



A **cube** is a solid figure in which every face is a square and every edge is the same length.



A **pyramid** is a solid figure in which the base is a polygon and the faces are triangles with a common vertex.

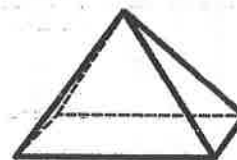
Label each solid figure as *prism*, *cube*, or *pyramid*.

1.



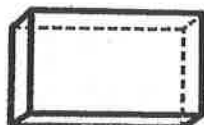
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2.



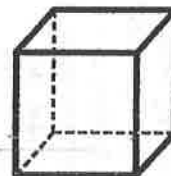
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3.



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4.



\_\_\_\_\_

5.



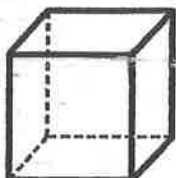
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6.



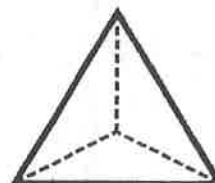
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7.



\_\_\_\_\_

8.



\_\_\_\_\_

# Bartering for Basics

## Cross-Curricular Focus: History/Social Science

Early Native American groups lived in different cultural regions. Their environments had different resources. Each group specialized in making particular products or developing certain skills, based on their resources. As they perfected their techniques, something exciting began to happen. For the first time in their tribes' history, they had a surplus of materials. They had enough to meet their own needs with some left over. The conditions were perfect for an economy to develop. In an economy, goods, services and often money are organized into a system to manage those resources.

Native American groups began to work with each other to simplify their work and share items they wanted or needed. They began to barter as they began to interact with each other. Bartering is trading goods or services directly for other goods or services rather than using any form of money. Having the ability to barter with other tribes meant that it was easier on all the groups. No one group had to work as hard to make or find everything they needed for survival.

Native American tribes would often travel long distances for the opportunity to trade with each other. In between trading times, they would gather or create surplus products. They set things aside especially for the purpose of bartering with other tribes at their trade meetings.

An additional benefit of trading between cultural regions was the ability to enjoy products that were impossible to make with the resources in the tribe's home territory. Tribal members of the Desert Southwest region wanted tools fashioned from whalebone. There is no whalebone available in the desert. However, they could get it from the tribes of the Pacific Northwest region, who had access to resources found on the beach or in the sea.

Some people still use bartering today to get the something they need or want. For example, you might offer to do the dishes for your brother if he will take you to the movies. Especially in tough economic times, people return to this age-old way of getting things that they need. We will probably always have some form of money, but we don't always have to use it.

Name: \_\_\_\_\_

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What is the purpose of this passage?

\_\_\_\_\_

\_\_\_\_\_

2) What was one advantage to bartering for the Native Americans?

\_\_\_\_\_

\_\_\_\_\_

3) What does it mean to specialize?

\_\_\_\_\_

\_\_\_\_\_

4) What is an economy?

\_\_\_\_\_

\_\_\_\_\_

5) Do you think that you would like to try bartering with someone in the future? Why, or why not?

\_\_\_\_\_

\_\_\_\_\_