

# THE SOLAR SYSTEM

REM 650

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**A TEACHING RESOURCE FROM**



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# INTRODUCTION

Since the beginning of time, people have been captivated by objects in space. Early astronomers could only speculate about the nature of the universe. Today, with the help of telescopes, space probes, and sophisticated equipment, we know a great deal about the planets and the objects around them.

**The Solar System** presents fascinating facts about the sun, planets, and moon. Comprehension questions and follow-up cloze reading exercises reinforce understanding of the information and check students' recall of the facts learned. Research activities extend learning on the topics. Also included are a pre/post-test, vocabulary list, enrichment activity pages, an answer key, and a colorful, fold-out poster of the solar system.

The reading level is grades 3-5. The Flesch-Kincaid Readability Scale was used to ensure that all stories are at the desired reading level (RL).

\*In 2006, the International Astronomical Union (IAU) ruled that Pluto is a dwarf planet rather than one of the major planets in the solar system. While this ruling is "official," we recognize that controversy over the IAU's decision still lingers. We have therefore included a story about Pluto in **The Solar System**. We suggest that you use it as a springboard for additional lessons and discussions with your students.

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Name \_\_\_\_\_

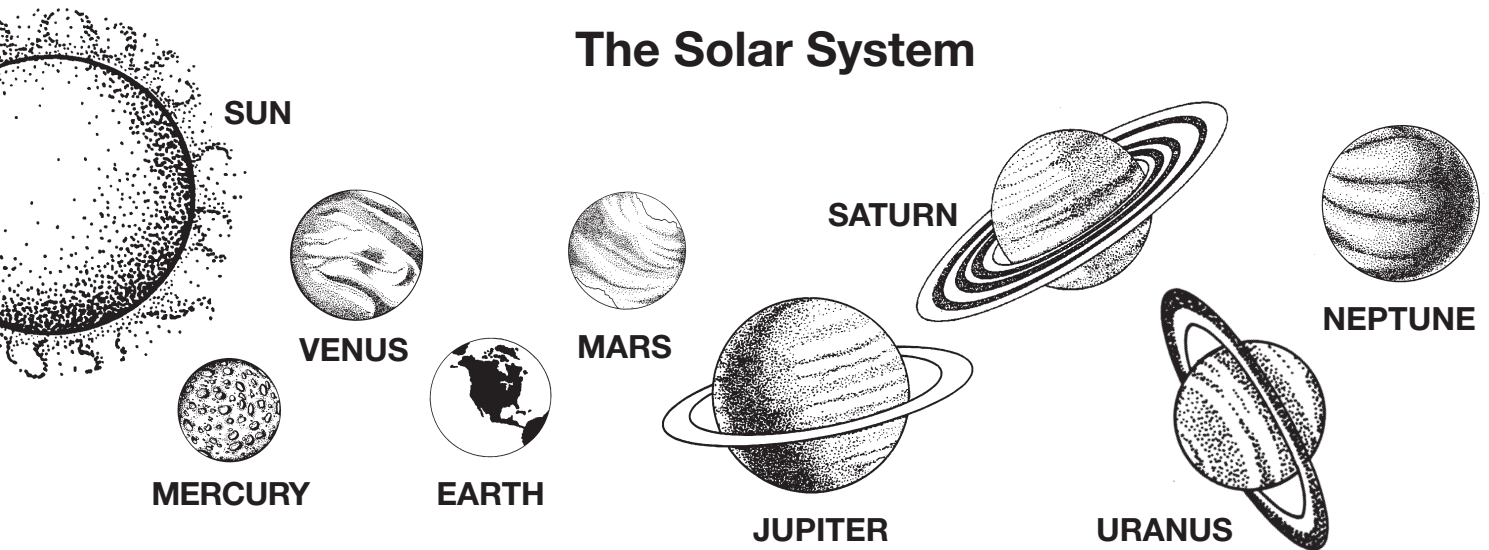
## Vocabulary

Before you begin studying the solar system, there are some words you need to know. Look up the following words in a dictionary and write a meaning for each word.

1. atmosphere \_\_\_\_\_
2. axis \_\_\_\_\_
3. crater \_\_\_\_\_
4. diameter \_\_\_\_\_
5. eclipse \_\_\_\_\_
6. gravity \_\_\_\_\_
7. journey \_\_\_\_\_
8. matter \_\_\_\_\_
9. orbit \_\_\_\_\_
10. revolve \_\_\_\_\_
11. rotation \_\_\_\_\_
12. satellite \_\_\_\_\_
13. Sol \_\_\_\_\_
14. spacecraft \_\_\_\_\_
15. visible \_\_\_\_\_

**BONUS:** Use each of the words in a separate sentence.

Name \_\_\_\_\_



We live on a planet called Earth. Earth is one of the eight planets that go around the sun. We call the sun, the planets, and other heavenly bodies the *solar system*.

The most important part of the solar system is the sun. The sun is a star. It is huge! The sun is bigger than all of the eight planets put together.

The planets come in all sizes. They each move around the sun in the same direction. This is called revolution. A planet revolves around the sun in a set path called an orbit. Planets also spin like tops. This motion is called rotation.

The eight planets are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. Uranus and Neptune are very dim. You need a telescope to see them. You do not need a telescope to see Venus, Mars, Jupiter, or Saturn. They look like bright stars. You do not need a telescope to see Mercury, either. You can see it in the early evening just after sunset. You can also see it in the early morning just before sunrise.

Earth's moon is part of the solar system. It does not go around the sun alone. The moon goes around Earth and travels with it around the sun. It is sometimes called "Earth's Satellite." *Satellite* can be another word for *moon*. Most of the other planets have satellites, too. Several of the planets have more than one moon.

- 
1. How big is the sun? \_\_\_\_\_
  2. The movement of the planets around the sun is called \_\_\_\_\_ .
  3. Name two planets that can be seen without a telescope.  
\_\_\_\_\_
  4. Another name for "Earth's Satellite" is \_\_\_\_\_ .

Name \_\_\_\_\_

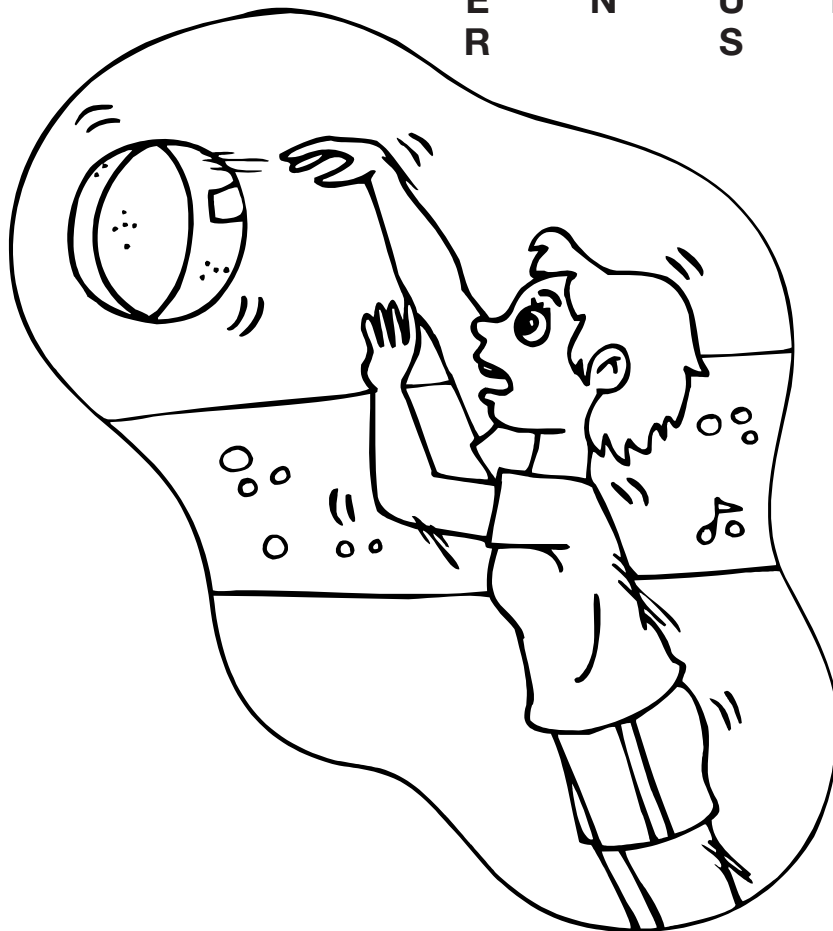
## Planet Order

The sun is at the center of the solar system. Eight planets circle the sun. Their order from the sun is: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

Make a sentence picture to remember this order. The first letter of each word in the sentence should be the first letter of each planet's name. Here is an example:

**Morgan Very Easily Made Jump Shots Until Noon.**

<b>E</b>	<b>E</b>	<b>A</b>	<b>A</b>	<b>U</b>	<b>A</b>	<b>U</b>	<b>E</b>
<b>R</b>	<b>N</b>	<b>R</b>	<b>R</b>	<b>P</b>	<b>T</b>	<b>R</b>	<b>P</b>
<b>C</b>	<b>U</b>	<b>T</b>	<b>S</b>	<b>I</b>	<b>U</b>	<b>A</b>	<b>T</b>
<b>U</b>	<b>S</b>	<b>H</b>		<b>T</b>	<b>R</b>	<b>N</b>	<b>U</b>
<b>R</b>				<b>E</b>	<b>N</b>	<b>S</b>	<b>N</b>
<b>Y</b>				<b>R</b>			<b>E</b>



**Write the names of the eight planets in their correct order from the sun.**

- |          |          |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

Name \_\_\_\_\_

## The Most Important Star

All life on Earth depends on a single star. This star is about 93 million miles away. Without it, the oceans would freeze, and the planets would die. We would be in total darkness.

This important star is the sun. The sun is much bigger than any planet. It has a diameter of about 864,000 miles. The sun is made of hot gases. Most of the sun is hydrogen and helium.

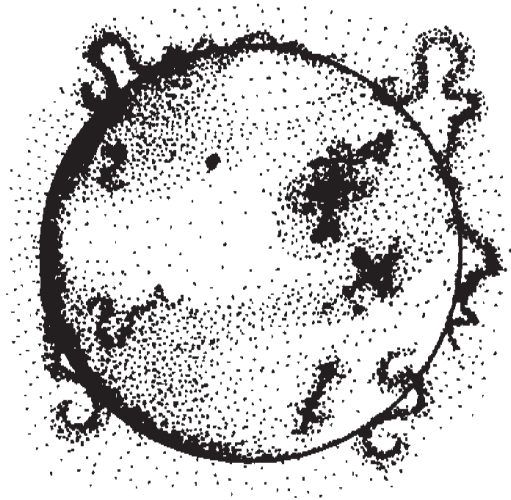
Talk about hot! The sun is about 10,000 °F on its surface. Deep inside, near its core, it reaches about 27 million °F.

Study a sunbeam. It took about eight minutes for this bit of light to reach you.

Sometimes dark spots form on the sun. These sunspots are cooler than the rest of the sun's surface. One sunspot can be larger than Earth. They come and go from week to week.

All the planets and moons that circle the sun are called the solar system. At rare times, the moon moves between Earth and the sun. It blocks most sunlight. This is called an eclipse. We learn much about the sun's atmosphere when this happens.

You must never look directly at the sun. It is so bright that it will damage your eyes. Even scientists must use special equipment to study the sun.



- 
1. How large is the sun? \_\_\_\_\_
  2. Name two gases that make up the sun. \_\_\_\_\_
  3. What are the dark, cool spots on the sun called? \_\_\_\_\_
  4. What are all the planets and moons that circle the sun called? \_\_\_\_\_

**RESEARCH:** Use an encyclopedia to answer this question.

How old is the sun? \_\_\_\_\_