

THE SOLAR SYSTEM

When you look into the night sky, you see thousands and thousands of stars. During the day you see the sun. Did you know that the sun is a star? It looks much larger than the other stars because it is much closer to us. The Earth is not alone in space. There are 7 other planets that **orbit** the sun with us. Our sun is the center of our **solar system**.



The closest planet to the sun is called **Mercury**. Mercury is the smallest planet. It has no atmosphere. This means daytime on Mercury is extremely hot and night is extremely cold. It also means there is no air to breathe. It takes 88 Earth days for Mercury to orbit the sun one time.

The next planet is **Venus**. Venus is the hottest planet in our solar system. It has a very thick atmosphere which traps heat from the sun. Venus is almost the size of Earth. It takes 225 Earth days for Venus to orbit the sun.

Earth is the third planet from the sun. It is the only planet in our solar system with the air and water needed to support life. Earth's atmosphere protects its inhabitants from extreme temperatures. It takes 365 days for the Earth to orbit the sun one time. This is the length of a year on Earth.

Next is **Mars**. Mars is often called "the red planet" because of a mineral called iron oxide that gives it a rusty red color. Although smaller in size, Mars is similar to Earth in a lot of ways. It takes 687 days for Mars to orbit the sun.

After Mars there is a long stretch of empty space before you reach the next planet, **Jupiter**. Jupiter is the largest planet. Unlike the first four planets, Jupiter is not made of rock. It is made of gases. Jupiter is known for its violent storms and for having 64 moons! It takes 12 Earth years for Jupiter to orbit the sun one time.

After Jupiter is **Saturn**, another **gas giant**. Saturn is known for its rings which are made of ice. Saturn is the second largest planet and has 18 moons. It takes 29 Earth years for Saturn to orbit the sun.

Next is **Uranus**. Uranus has a blue green color and orbits the sun on its side. This gas giant has 27 moons. It takes 84 Earth years for Uranus to complete one orbit around the sun.

The last planet in the solar system is **Neptune**. Neptune is also made of gasses, not rock. Neptune has 13 moons. It takes 165 Earth years for Neptune to orbit the sun.

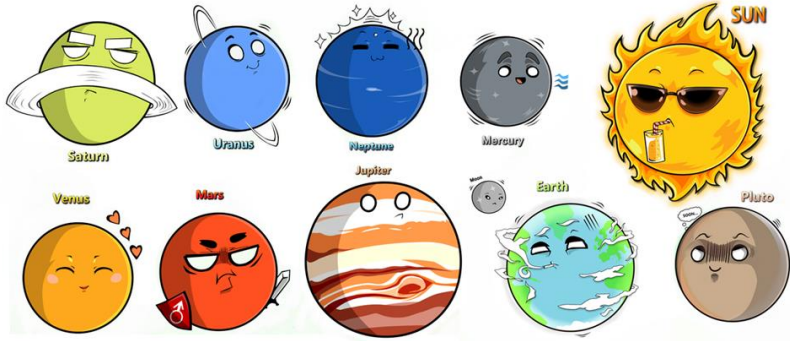
Grades 3 and 5

- Write at least 5 sentences that explain the most important ideas about your planet. You should pretend you are teaching someone who has never heard of this planet before new information.
- Remember to start with a topic sentence, include the most important details and end with a conclusion.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

MATH

Grades 3 and 5



Fifth Grade Only

1. Draw a picture or cut and paste pictures of the solar system on the back of the paper. Label each picture and tell their distances from the sun in kilometers. If you have time color each picture.
2. Mercury, Venus, Earth, and Mars, the inner planets, are 4,878 km, 12,104 km, 12,755 km, and 6,790 km in diameter. What is the total diameter for all four planets? Show all work.
3. Mercury, Venus, Earth, and Mars, the inner planets, are 4,878 km, 12,104 km, 12,755 km, and 6,790 km in diameter. Round each planet to the nearest thousands place and then find the total of the rounded numbers.

Third Grade Only

1. Mercury, Venus, Earth, and Mars, the inner planets, are 4,878 km, 12,104 km, 12,755 km, and 6,790 km in diameter Round each planet to the nearest hundreds place and then find the total of the rounded numbers.
2. What is the value of each of the underlined digits? ***Use a place value chart to show your thinking***

142,796 km 49,528 km 2,120,660 km

2,300 km 51,118 km

Outer Planets	Diameters in Kilometers
Jupiter	142,796
Saturn	120,660
Uranus	51,118
Neptune	49,528
Pluto	2,300

3. Read and write each number above in expanded and word forms.

Example:

Expanded Form

183 moons = $100 + 80 + 3$

Word Form

One hundred eighty- three moons

SCIENCE

Grades 3 and 5

Directions: Refer back to the passage to answer the following questions.

1. The largest planet is called _____.
 - A. Mercury
 - B. Jupiter
 - C. Saturn
 - D. Earth
2. Which planet orbits the sun on its side?
 - A. Mercury
 - B. Jupiter
 - C. Uranus
 - D. Neptune
3. Which planet is often called “the red planet?”
 - A. Venus
 - B. Saturn
 - C. Mars
 - D. Uranus
4. Which planet is surrounded by rings of ice?
 - A. Venus
 - B. Jupiter
 - C. Saturn
 - D. Neptune
5. Which planet has the most moons?
 - A. Jupiter
 - B. Saturn
 - C. Uranus
 - D. Neptune

Project-Based
Solar System Assignment
Grades 3 and 5

Using snacks is an amazing way to teach students about science!!

DIRECTIONS: Using any food or snack you may like, model each planet of our Solar System. No, Pluto is no longer considered to be a planet, but discuss why it is not. Be sure to write the name of each planet below each model.

Alternative for using food: PlayDough

Please send a picture of the completed assignment to lesterc1@scsk12.org

Rubric

	3 Exemplary	2 Good	1 Acceptable	0 Unacceptable
English	<p>Student completes an 8-10 sentence paragraph and has all components of an effective paragraph.</p> <ul style="list-style-type: none"> • Topic sentence • Text based details • Conclusion 	<p>Student completes a 5-6 sentence paragraph and has all components of an effective paragraph.</p> <ul style="list-style-type: none"> • Topic sentence • Text Based Details • Conclusion 	<p>Students attempts paragraph, but is missing one or more of the key components of an effective paragraph.</p>	<p>Student does not attempt paragraph.</p>
Math	<p>Student correctly answered each problem and showed their work for each problem.</p>	<p>Student has few inaccuracies with the answers, and shows considerable effort with their work.</p>	<p>Student has many inaccuracies in the mathematical problems, but does attempt to work the problems out.</p>	<p>Student does not attempt any of the math problems.</p>
Science	<p>Student correctly answers all five questions.</p>	<p>Student answers at least 3 questions correctly.</p>	<p>Student answers at least 2 questions correctly.</p>	<p>Student does not attempt to answer the questions.</p>
Project- Based Model	<p>The model resembles the planets. It is neatly done.</p>	<p>A few of the models may not be included. The models may look like they were done without effort.</p>	<p>Many planets are not included, or don't look like planets (wrong shape, color, etc.)</p>	<p>Student does not attempt to complete the assignment.</p>

Completeness/Neatness	The names of the planets are spelled correctly. The overall appearance is neat.	There are few spelling errors and missing planets	There are several missing planets and spelling errors.	The student does not complete the assignment.
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