



Exploring Our Solar System

Engage

In the space below write down anything you know about the planets of our solar system.

Share your information with a partner and write down anything new you learned in the space below.

Explore

Materials: Solar system booklet, scissors, construction paper, glue, colored pencils, Planetary Facts Sheet

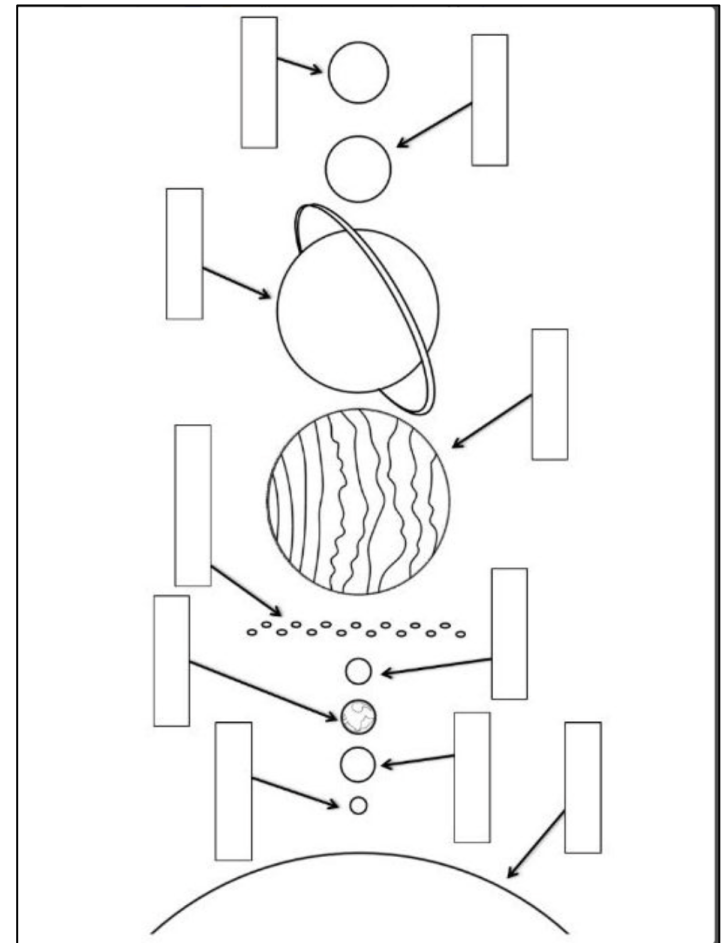
What To Do:

Part 1

1. Label the Sun and all the planets in the diagram below.
2. Determine which planet is missing.

Part 2

1. Make the Solar System Booklet as your teacher directs.
2. Color the pictures from the reading.
3. Use this booklet and the Planetary Facts Sheet to fill out the information on the next two pages.



Mercury



Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Venus



Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Earth



Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Mars



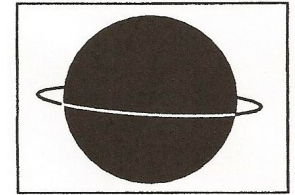
Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Jupiter



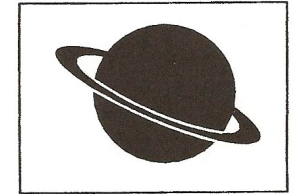
Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Saturn



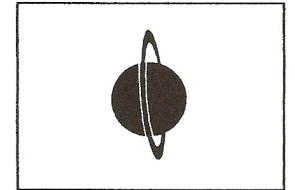
Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Uranus



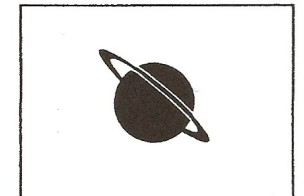
Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____

Neptune



Distance from the Sun _____

Density _____

Time to Orbit the Sun _____

Fascinating Fact _____



ALL ABOUT THE PLANETS	<div>Explain</div> <div></div> <div>PHYSICAL PROPERTIES</div>
	LOCATION
	MOVEMENT

Elaborate

1. Watch the Space School - Pluto video found at <https://www.youtube.com/watch?v=D9FGePDvwjA&t=1s>
2. Answer the questions below.



Questions:

1. Circle the rule or rules that Pluto broke.

- Is in orbit around the Sun
- Has sufficient mass to assume a nearly round shape
- Has cleared the neighborhood around its orbit.

Look at the picture to the left. These are dwarf planets compared to our moon.

2. How does Pluto's size compare to our moon?

3. Which of these dwarf planets is larger than Pluto? _____
4. Do you think Pluto should be reclassified as a planet? _____
5. If so, what would you do with Eris? _____



Our Solar System

O P E R P D O N Y A M I D H B
A C E N O T B C T J T D K N Z
U D M S U T P U U F Y P M X G
Y W K L X K A P K S R B Z B U
P A P H E R I T U S U E Q Z V
Q R E A R T H N E U C N J H Q
J F N K E U E U R R R U J P X
K P U R N V C S F F E T F V U
X L N R U T A S U V M P I L F
H A O R B I T Z X N Y E W B U
R N O U H V Q V H M A N T X B
C E B A M C G Q J S A R E G W
B T V X Y L D E J Y N R U Q M
Z H H I P T B S W Q W U S T N
H R D S C A O R H A V Q S J P

- | | | |
|---------|--------------|---------|
| Axis | Dwarf Planet | Earth |
| Jupiter | Mars | Mercury |
| Neptune | Orbit | Pluto |
| Rotate | Saturn | Sun |
| Uranus | Venus | |



Evaluate
Name _____ period _____

EXIT TICKET

Exploring Our Solar System

- Which two planets are similar in size?
A. Earth and Venus
B. Earth and Uranus
C. Jupiter and Saturn
D. Mercury and Saturn
- Which two planets are the most different in size?
A. Earth and Venus
B. Mercury and Mars
C. Jupiter and Saturn
D. Jupiter and Mercury
- Which planet has rings?
A. Mercury
B. Earth
C. Saturn
D. Mars
- Which planet takes the shortest time to orbit the Sun?
A. Mercury
B. Venus
C. Earth
D. Mars
- What is Pluto called now?
A. Planet
B. Moon
C. Dwarf Planet
D. Dwarf Moon

Directions: Cut on the dashed lines and then stack the pages in order. Staple the booklet along the left edge. Read the booklet with your partner and fill out the information. Color illustrations as time permits.

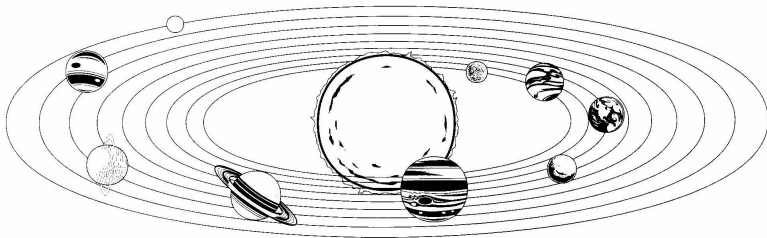
Solar System Booklet

My Book of the Solar System

Name: _____

①

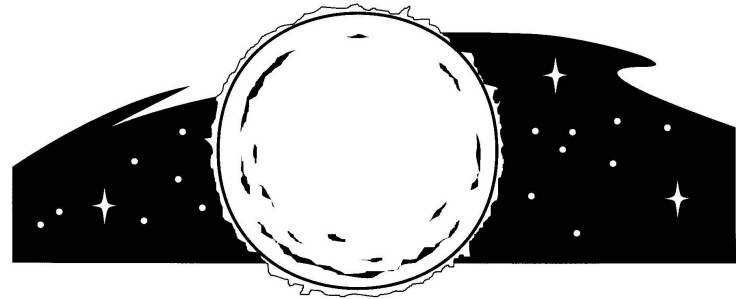
Our Solar System



Our solar system has nine planets. The inner planets are Mercury, Venus, Earth, and Mars. The outer planets are Jupiter, Saturn, Uranus, Neptune, and Pluto. We live on the planet Earth. All of the planets are in orbit around the sun. When a planet travels around the sun, one year has passed on the planet. Some planets have short years. Some planets have very long years.

②

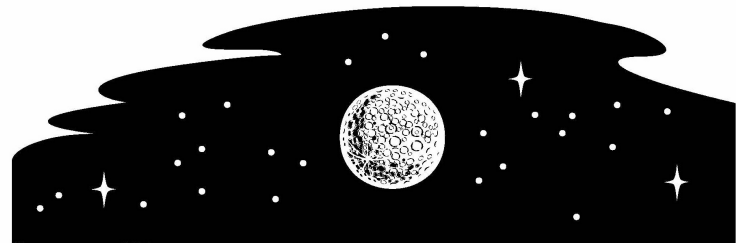
The Sun



The sun is really a star. It is the closest star to Earth. It is a fiery ball of gas. The sun is important to us. It gives warmth and light to our planet. The sun changes the season and the weather. The nine planets in the solar system revolve around the sun.

③

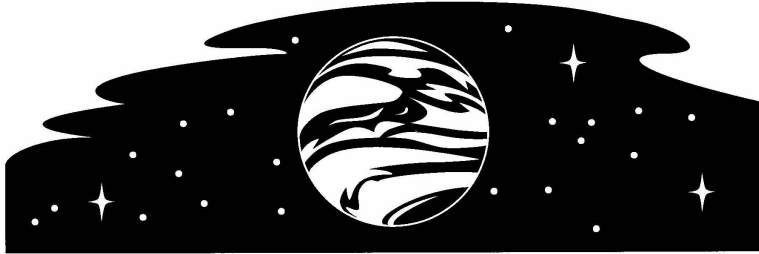
Mercury



Mercury is the closest planet to the sun. It is the smallest of the inner planets. It does not have any moons. Mercury is covered with craters. It looks a lot like our moon. One side of Mercury is always burning hot and one side is always freezing cold.

④

Venus



Venus is the second planet from the sun. It has no moons. It is called Earth's twin planet because the two are about the same size. Venus is a very hot planet. It has thick clouds that hold in heat. It rotates in the opposite direction of the other planets. Venus has earthquakes, volcanoes, and loud thundering storms.

5

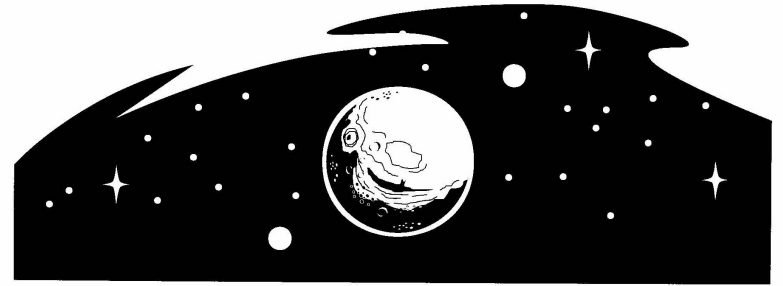
Earth



Earth is the third planet from the sun. It has one moon. It is an amazing planet because it has life. No other planet in the solar system has people, animals, and plants.

6

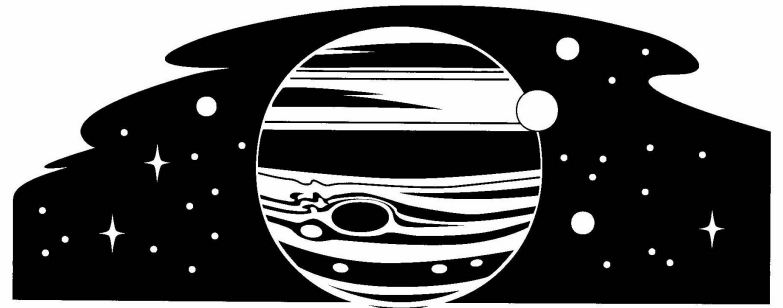
Mars



Mars is the fourth planet from the sun. It has two moons. It is called The Red Planet because of its color. It is much smaller than Earth. Mars has seasons that are similar to Earth's.

7

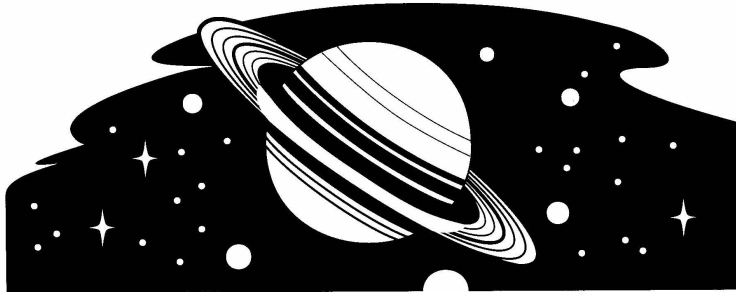
Jupiter



Jupiter is called the King of Planets. It is the largest planet and is the fifth from the sun. Jupiter is covered with colorful clouds. This planet has four large moons and many other small moons. It has rings like Saturn, but they are not easily seen.

8

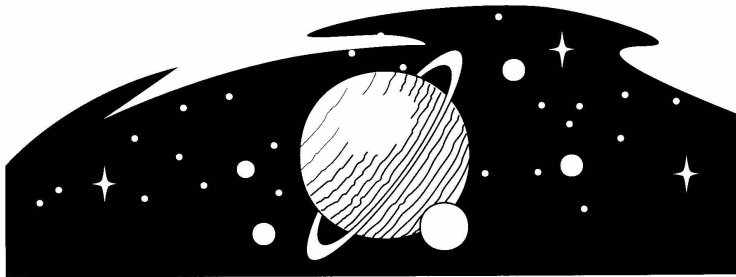
Saturn



Saturn is the sixth planet from the sun. It is yellow and gray in color. The only planet larger than Saturn is Jupiter. It is known for its rings. Saturn has more than 20 moons!

9

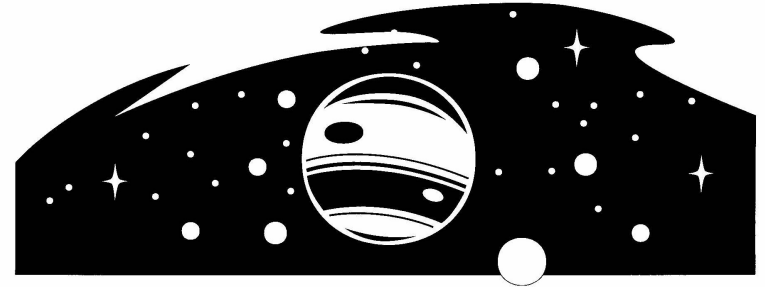
Uranus



Uranus is the seventh planet from the sun. It has a bluish-green color. Uranus has rings and five large moons. Uranus spins on its side. Scientists think that it was hit by a large object and tipped over.

10

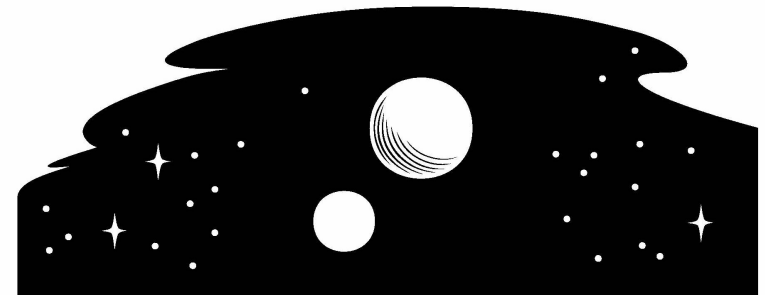
Neptune



Neptune is the eighth planet from the sun. It also has rings. It is blue in color. Neptune has a spot called the Great Dark Spot. It is really a large storm. Neptune has eight moons.

11

Pluto



Pluto is the smallest planet. It is the ninth and farthest planet from the sun, so it is covered with ice. Pluto has one moon that is almost its size.

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PLANETARY FACTS SHEET

Characteristic	Mercury	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune
Distance from Sun (km)	57,909,175	108,208,930	149,597,890	227,936,640	778,412,020	1,426,725,400	2,870,972,200	4,498,252,900
Density g/cm ³	5.427	5.24	5.515	3.94	1.33	0.70	1.30	1.76
Time to orbit the Sun	88 days	225 days	365 days	687 days	12 years	29 years	84 years	165 years
Min/Max Surface Temp. °C	-173/427	462	-88/58	-87/-5	-148	-178	-216	-214
Atmospheric Gases		Carbon Dioxide, Nitrogen	Nitrogen, Oxygen	Carbon Dioxide, Nitrogen, Argon	Hydrogen, Helium	Hydrogen, Helium	Hydrogen, Helium, Methane	Hydrogen, Helium, Methane
Number of Moons	0	0	1	2	49	52	27	13
Rings	No	No	No	No	Yes	Yes	Yes	Yes
Composition	Rock and metal	Rock and metal	Rock and metal	Rock and metal	Gas	Gas	Gas	Gas