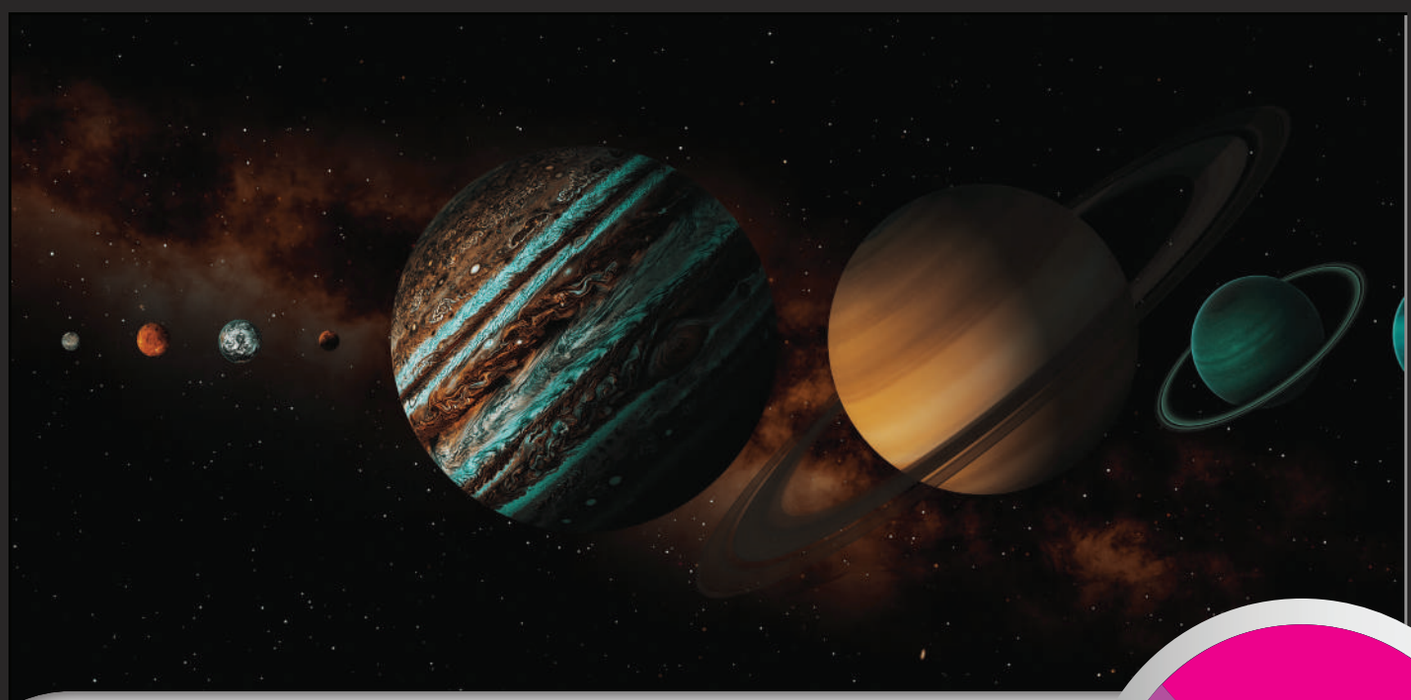
UNIT 3 SPACE

What is the Solar System?
Day and Night
Phases of the Moon

DISCOVER



Solar SYSTEM

LESSON 7

The Solar System
Orbits and Revolutions
What Role Does Gravity Play?
More About the Sun
Inner and Outer Planets

The Solar System

3

solar - of the sun about the sun	medium - average middle
asteroid - space rock orbiting rock	control - influence direct

LEGEND

Word **Synonym**

Give an example of something that orbits somethinig else.

REVIEW QUESTIONS:

a. Compare the Sun and solar system to other stars in the Galaxy.
b. What are some of the objects in our solar system?
c. Why do we call this area of space SOLAR system?

1. Compare the Sun and solar system to other stars in the Galaxy.

1. Suns dominate solar systems. Galaxies have many solar systems. Ours is medium-sized. Most stars have solar systems.

2. What are some of the objects in our solar system?

2. Solar systems have objects. They have planets and moons. There are also asteroids and comets of ice, rock and metal.

3. Why do we call this area of space the SOLAR system?

3. The Sun is the largest object in the solar system. The name SOLAR system means the Sun controls everything around it.

WATCH VIDEO

Besides the Sun, what are the orther large objects in the solar system?

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4 Orbits and Revolutions

1. Do all objects take the same time to orbit the Sun?

1. Solar system objects orbit the Sun. The Sun is at the center. Earth orbits once per year, but other objects are different.

2. When does Hailey's Comet arrive and when can we see it?

2. Hailey's Comet orbits every 75 years. We only see it when it is close. An orbit is the path around another object.

3. What are two alternative names for orbit?

3. One orbit is also one revolution. We can also call it a circumnavigation. All objects orbit or circumnavigate our Sun.

How old will you be when Haley's Comet comes again?

_____

_____

_____

_____

_____

Orbit	Separate
-	-
revolve circumnavigate	divide break apart

Circumnavigation	revolution
-	-
orbit revolve	orbit circumnavigation

LEGEND

● Word ● **Synonym**

Can you name all of the planets in our solar system?

REVIEW QUESTIONS:

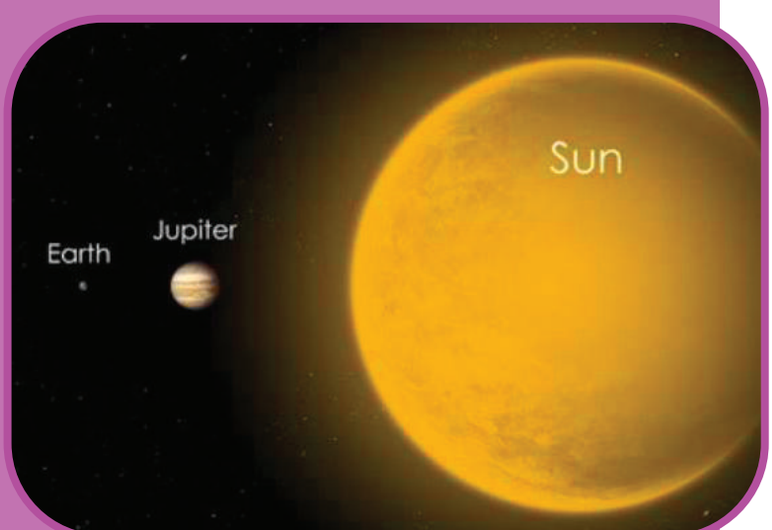
a. Do all objects take the same time to orbit the Sun?
b. When does Hailey's Comet arrive and when can we see it?
c. What are two alternative names for orbit?

What Role Does Gravity Play?

gravity - attraction pulling force	attraction - pulling force gravity
Jupiter - Jove 5th planet	stronger - powerful more energetic

LEGEND

● Word ● **Synonym**



Comment on the size of Earth, Jupiter and the Sun.

REVIEW QUESTIONS:

a. Describe the force that traps objects in orbits around the Sun?
b. How big is Earth when compared to Jupiter and the Sun?
c. Why is solar gravity more powerful than any other near object?

1. Describe the force that traps objects in orbits around the Sun?

1. Why do objects go in circle the Sun? It is the Sun's powerful gravity. Gravity is attraction, and all objects have gravity.

2. How big is Earth when compared to Jupiter and the Sun?

2. How big is the Sun? The Earth is 40,000 kilometers around. The Sun is 109 times that and ten times bigger than Jupiter.

3. Why is solar gravity more powerful than any other near object?

3. Gravity is attraction, and bigger objects have more gravity. The Sun is huge so its gravity is stronger than other objects.

WATCH VIDEO

How much bigger is Jupiter than the Earth?

_____

_____

_____

_____

_____

6 More About the Sun

1. What is the Sun, and how many Earth's could fit inside it?

1. A star is a giant ball of hot gas. The Sun powers the solar system. 1,000 Earth's could fit inside the Sun's area.

2. Do all solar systems in our galaxy have only one star?

2. Some systems have multiple stars. Our solar system only has the Sun. The Sun's temperature is millions of degrees.

3. What would happen if we had no solar energy from the Sun?

3. All our energy is from the Sun. Without the Sun, no plants could grow and no life could exist on Earth. We would die.

powers	fit
-	-
energizes	go into
animates	match in size

temperature	without
-	-
heat	absent
measurement	to not have

LEGEND

● Word ● **Synonym**

Have you ever had a sunburn? What happened?

Describe what Earth would be like without the Sun?

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_____

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REVIEW QUESTIONS:

a. What is the Sun, and how many Earth's could fit inside it?
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Inner and Outer Planets

inner	outer
-	-
inside internal	outside exterior

atmosphere	core
-	-
surrounding gas gas blanket	centre nucleus

LEGEND

● Word ● **Synonym**

Research: Comment on the images of Saturn taken by the Cassini probe.

REVIEW QUESTIONS:

a. How many outer planets are there, and where are they?
b. Describe the atmospheres and the cores of the gas giants.
c. How many moons does Jupiter have and why do gas giants have many?

1. How many outer planets are there, and where are they?

1. Our solar system has outer and inner planets. Four are far and four are close. Outer and inner planets are different?

2. Describe the atmospheres and the cores of the gas giants.

2. The outer planets are larger. They have gas atmospheres, but under the clouds they have smaller cores of rock or ice.
conditioners.

3. How many moons does Jupiter have and why do gas giants have many?

3. Outer planets are very cold and very large. Their gravity traps many moons around them. Jupiter has over 53 moons.

Can you think of something that expands?

_____

_____

_____

_____

_____

Question Pages

Compare the Sun and solar system to other stars in the Galaxy. Lorem ipsum

What are some of the objects in our solar system?

Why do we call this area of space SOLAR system?

Do all objects take the same time to orbit the Sun?

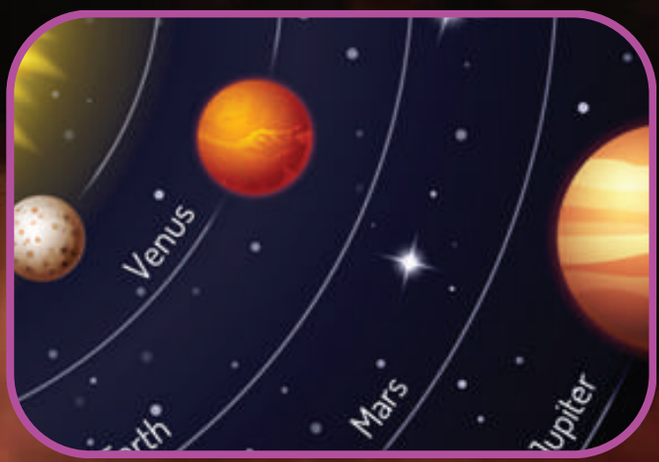
When does Hailey's Comet arrive and when can we see it?

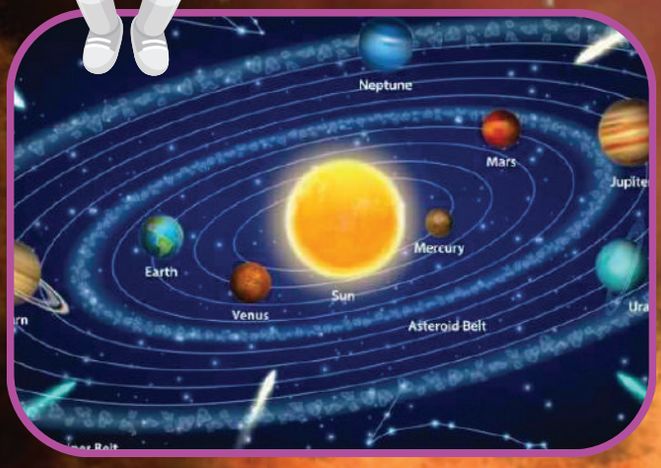
What are two alternative names for orbit?

Describe the force that traps objects in orbits around the Sun?

How big is Earth when compared to Jupiter and the Sun?

Why is solar gravity more powerful than any other near object?





How many outer planets are there, and where are they?

Describe the atmospheres and the cores of the gas giants.

How many moons does Jupiter have and why do gas giants have many?

What is the Sun, and how many Earth's could fit inside it?

Do all solar systems in our galaxy have only one star?

What would happen if we had no solar energy from the sun?

Summary Page

Sumarize **Page One** of this unit.

Sumarize page two of this unit.

Sumarize page three of this unit.

Sumarize page four of this unit.

Sumarize page five of this unit.