

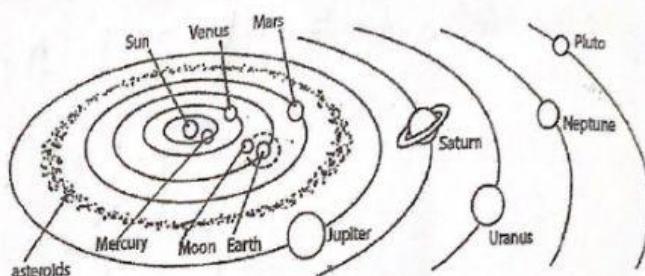
## Lesson 18

### The Planets



The sun and the bodies that move around it form the **solar system**.

Planets and moons are part of the solar system. A **planet** is one of the eight large bodies that move around the sun. A **moon** is a body that moves around a planet.



Most objects in the solar system travel in orbits around the sun. An **orbit** is a path on which an object travels as it moves around another planet. A planet's orbit is the oval-shaped path the planet travels around the sun. All planets are in **motion**. They **revolve** or move in orbit around the sun. The movement of a planet along its orbit around the sun is called a **revolution**. A planet's year is the time it takes that planet to complete one orbit or one revolution around the sun. Planets rotate or spin like a top.

An **axis** is a straight line that runs through an object. The turning or spinning of a planet on its axis is a **rotation**.

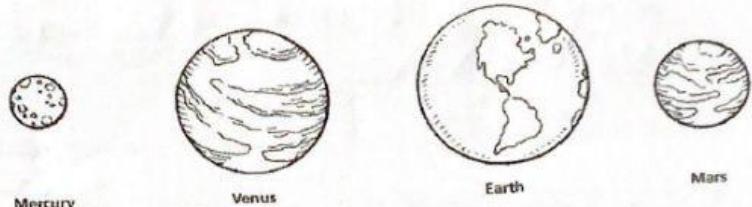
The time it takes a planet to rotate once on its axis is a planet's **day**. The time of rotation differs from planet to planet, so, the length of a day also differs. The sun is in the center of the solar system. It is a **star**. It is 93 million miles away from the earth. Stars are the only bodies that give off **radiant energy**. It is a ball of **burning gases** and molten material. The sun provides heat and light to all of the planets. There would be no life on earth if the sun stopped giving off radiant energy. Energy from the sun warms the earth and allows **green plants** to turn raw materials into **food**. Gravity on the sun is very strong. This is because of its great size.

The entire solar system can fit inside the sun. **Gravity** is the force of one object's pull on another.

The sun's gravity helps hold all the objects in the solar system in place or in orbit. The four closest planets to the sun are in one group.

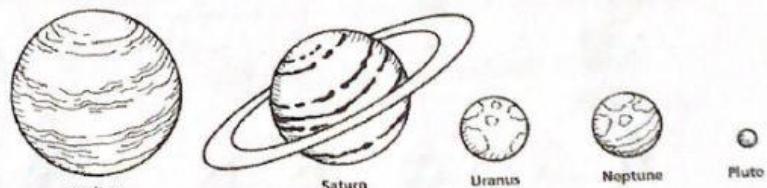
They are called the **Inner Planets**. These planets are **Mercury, Venus, Earth and Mars**. They are:

- Closest to the sun
- Smallest planets
- Have rocky surfaces
- Warmer than the other planets
- Have no more than 2 moons



The four other planets are called **Outer Planets**. They are **Jupiter, Saturn, Uranus and Neptune**. They are:

- The furthest from the sun
- Mostly frozen gases
- Surfaces are colder
- Have many moons
- Have rings of dust and ice around them



Answer questions in COMPLETE SENTENCES. Marks will be deducted for incomplete sentences.

1. Define what a solar system is. [2]

2. What are the only bodies that give off radiant energy? [1]

3. Name the only star in the solar system. [1].

4. Find the words in the passage to complete the definitions below. [2]

Word	Meaning
	turning or spinning of a planet on its axis
	move in orbits around the sun

5. Define the following terms: [4]

a. orbit:

b. axis:

6. Why is it important for leaves to get sun light? [1]

7. Define the term gravity. [1]

8. Explain why gravity is important for the Sun. [2]

9. List the inner and outer planets in the correct columns in the chart below. [8]

Inner Planets	Outer Planets