



# Earth and Space

## Galileo Galilei (1564-1642)

### Objectives

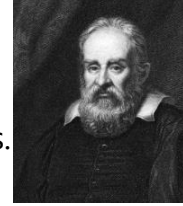
- 1) Describe the movement of the Earth and other planets relative to the sun in the solar system
- 2) Describe the movement of the moon relative to the Earth
- 3) Describe the sun, Earth and moon as approximately spherical bodies
- 4) Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

All the planets in our solar system **orbit the Sun**. The Sun is at the **centre of our solar system**. Each planet takes a different amount of time to orbit the Sun, depending on how far away it is and how slowly it moves.

### Questions

- 1) What are the names of the planets in the solar system?
- 2) Is the Sun a planet, star or meteorite.
- 3) Which word best describes the shape of the Earth, Sun and Moon? a) round b) circle c) spherical d) oval
- 4) How long does it take for Earth (and other planets) to orbit the Sun once?
- 5) What does the word orbit mean?
- 6) How long does it take for the Earth to orbit the Sun?
- 7) The further away for the Sun the planet is, the \_\_\_\_\_ it takes to make one full orbit.  
The closer the planet is to the Sun, the \_\_\_\_\_ the time taken to make one full orbit.
- 8) Name some objects that orbit the Earth. How many can you think of?
- 9) Why is there day and night on Earth?

In 1609, Galileo developed a powerful telescope and discovered the four moons that orbit Jupiter. He also observed 'phases' of Venus. Galileo published his findings suggesting that the sun was the centre of our solar system, not the Earth. Galileo also discovered Saturn's rings and that our moon had mountains and craters on its



Mercury	87.97 Earth days
Venus	224.70 Earth days
Earth	365.25 Earth days
Mars	686.98 Earth days
Jupiter	4332.82 Earth days
Saturn	10,755.70 Earth days
Uranus	30,687.15 Earth days
Neptune	60,190.03 Earth days

## Scientific Terminology

**Astronomy** – the study of stars, moons, planets and other 'celestial' objects.

**celestial body**- a natural object found outside earth's atmosphere, such as a planet, moon, star, or asteroid.

**dwarf planets**- objects that orbit the Sun, and are nearly round, but have not been able to clear their orbit of debris.

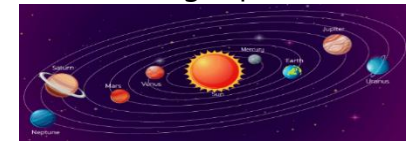


**gravity** - the force of attraction between objects that pulls them towards each other. It keeps us on the ground and planets in orbit.

**orbit** - the curved path around a star, planet or moon



**solar system**- consists of the sun, the eight planets and their moons, dwarf planets, and countless asteroids and comets



**star** - an object in space made of luminous plasma (bright gas) held together by its own gravity

