



Year 5 Science Knowledge

Organiser: Earth and Space



Subject Specific Skills

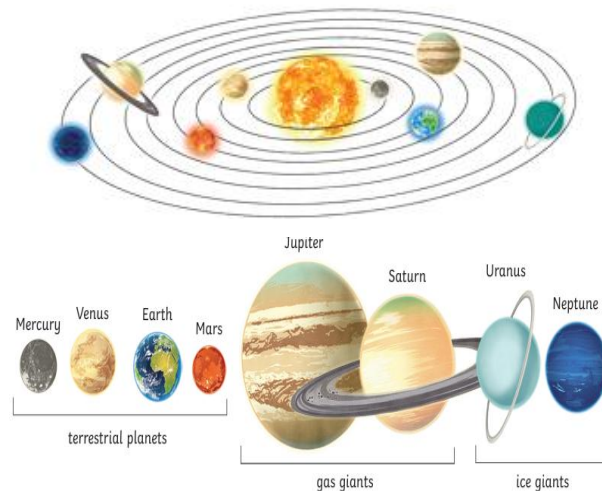
- Describe the movement of the Earth and other planets relative to the sun in the solar system
- Describe the movement of the moon relative to the Earth
- Describe the sun, Earth and moon as approximately spherical bodies
- Use the idea of the Earth's rotation to explain day and night and the apparent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

Prior Learning

- Observe changes across the 4 seasons
- Observe and describe weather associated with the seasons and how day length varies
- Recognise that they need light in order to see things and that dark is the absence of light
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Distinguish between an object and the material from which it is made
- Compare and group materials together, according to whether they are solids, liquids or gases
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)

Key Knowledge:

The Solar System is home to our own planet, Earth, as well as seven other planets and their moons. At the centre of the Solar System is a star: the Sun. It sends heat and light out to the far reaches of space and its gravitational pull keeps the other celestial bodies in the Solar System in orbit round it.



Key Vocabulary

Celestial body A celestial body is a natural object outside Earth's atmosphere, such as the planets, the Sun and the Moon.

Earth Earth is the third planet from the Sun and the only planet known to support life.

Moon A moon is a natural satellite that orbits a planet. Earth's moon is called the Moon.

Orbit An orbit is a regular, repeating curved path that an object follows round another object.

Planet A planet is a large, spherical celestial body that orbits a star.

Satellite A satellite is a natural or human-made object or body that orbits a larger object such as a planet or a star.

Solar System The Solar System is the collection of eight planets, their moons and other celestial bodies that orbit the Sun.

Space 'Space' is the term given to the area of the universe outside of Earth's atmosphere.

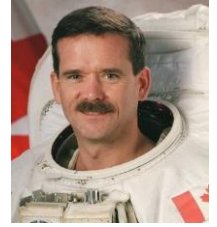
Spherical A spherical object is sphere-shaped, like a ball.

Star A star is a giant, glowing ball of hot, burning gas (mainly helium and hydrogen) held together by gravity.

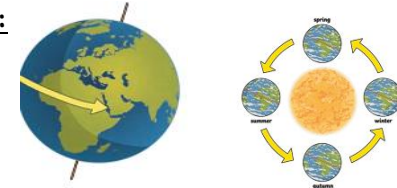
Sun The Sun is the name of the huge star at the centre of our Solar System that provides light and heat to the planets that orbit it.

Key Individuals:

Chris Hadfield/NASA



Key Knowledge:



Day and Night Every 24 hours, Earth rotates on its axis, which is an imaginary line that passes through its centre. This rotation causes the Sun to appear to move across the sky and is what causes the cycle of day and night, as one side faces the Sun and the other side faces away from the Sun. The side facing the Sun will be experiencing daytime, as it is lit and heated by sunlight. The side facing away from the Sun will be experiencing nighttime, as it is in shadow.

Seasons Each year, many places on Earth experience four seasons, each lasting for three months. These are spring, summer, autumn and winter. The seasons are due to Earth's tilt as it orbits round the Sun. Earth is tilted at an angle of about 24°. This means that, at different times throughout the year, parts of Earth are either tilted towards or tilted away from the Sun, which changes temperatures and weather conditions

The Moon

The Moon is Earth's natural satellite. It is made of rock and metal, is approximately spherical and is a quarter of the diameter of Earth. The Moon orbits round Earth once approximately every 27 days. It takes the same amount of time to rotate on its axis. This means we always see the same side of the Moon. The Moon appears to change shape over the course of its 27-day orbit as different parts of it are lit or in shadow