

# Bomere and the XI Towns Federation Knowledge Organiser—Earth and Space

Topic: Science— Earth and Space

Class/Year Groups: Year 5

Term: Autumn

**What you already know?**

Pupils will not have studied space before but will have studied shadows and their formation in Year 3.

**Extra vocabulary**

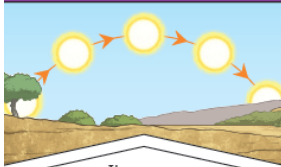
**Orbit** To move in a regular, repeating curved path around another object.

**Rotate** To spin, E.g. Earth rotates on its own axis.

**Axis** An imaginary line that a body rotates around. E.g. Earth's axis runs from the North Pole to the South Pole.

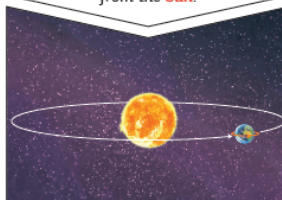
**Astronomer** Someone who studies or is an expert in astronomy (space science)

**Key Knowledge**

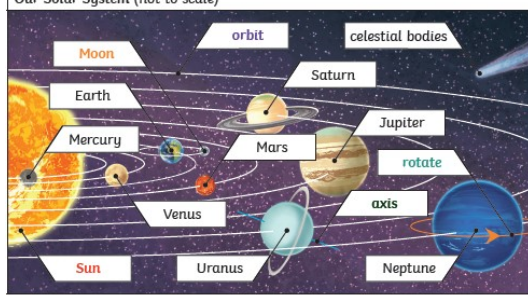


Earth **rotates** (spins) on its **axis**. It does a full **rotation** once in every 24 hours. At the same time that Earth is **rotating**, it is also **orbiting** (revolving) around the **Sun**. It takes a little more than 365 days to **orbit** the **Sun**. Daytime occurs when the side of Earth is facing towards the **Sun**. Night occurs when the side of Earth is facing away from the **Sun**.

It appears to us that the **Sun** moves across the sky during the day but the **Sun** does not move at all. It seems to us that the **Sun** moves because of the movements of Earth.



**Our Solar System (not to scale)**



The **Moon** orbits Earth in an oval-shaped path while spinning on its **axis**. At various times in a month, the **Moon** appears to be different shapes. This is because as the **Moon** **rotates** round Earth, the **Sun** lights up different parts of it.

**Vocabulary:**

**Sun** A huge star that Earth and the other planets in our solar system orbit around.

**Star** A giant ball of gas held together by its own gravity.

**Moon** A natural satellite which orbits Earth or other planets

**Planet** A large object, round or nearly round, that orbits a star.

**Sphere** A round 3D shape in the shape of a ball.

**Spherical Bodies** Astronomical object shapes like spheres.

**Satellite** Any object or body in space that orbits something else, for example: the moon is a satellite of Earth.



- National Curriculum Objectives:
- 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.

