



SCIENCE KNOWLEDGE ORGANISER – YEAR FIVE

EARTH AND SPACE

FLASH BACKS TO REMEMBER

- What senses do I need to see, hear and feel the world around me? (Reception – Earth and space)
- What are the four seasons? (Y1 - Seasonal changes)
- What types of weather do we get in the different seasons? (Y1 - Seasonal changes)
- What happens to the length of the day in winter? (Y1)
- What happens to the length of day in summer? (Y1)

Pluto used to be considered a **planet** but was reclassified as a dwarf **planet** in 2006.



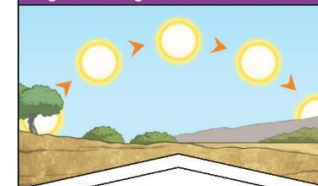
Key Knowledge

Mercury, Venus, Earth and Mars are rocky **planets**. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal.



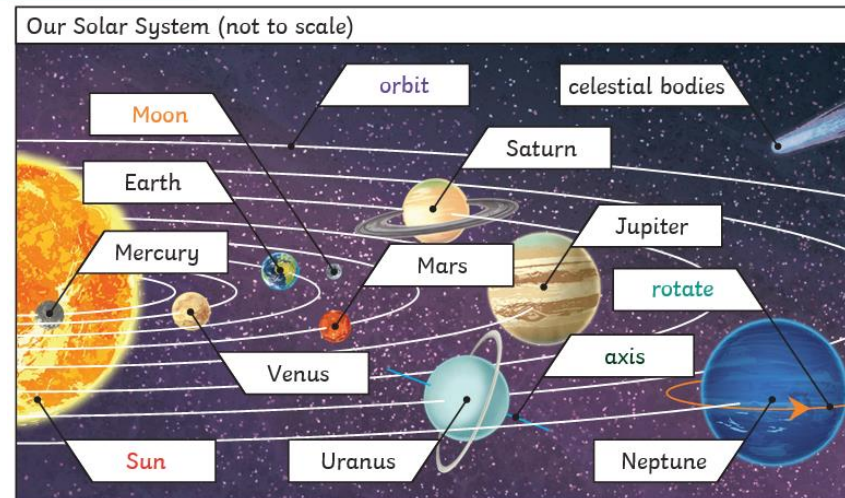
The **Moon** orbits Earth in an oval-shaped path while spinning on its axis. At various times in a month, the **Moon** appears to be different shapes. This is because as the **Moon** rotates round Earth, the **Sun** lights up different parts of it.

Key Knowledge



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.

HOW DO PLANETS MOVE IN THE SOLAR SYSTEM?



KEY 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 objects shapes like spheres.

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

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

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

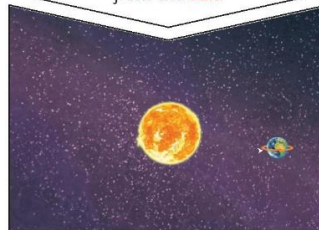
Axis- An imaginary line that a body rotates around. E.g. Earth's axis (imaginary line) runs from the North Pole to the South Pole.

geocentric model -A belief people used to have that other planets and the Sun orbited around Earth.

heliocentric model- The structure of the Solar System where the planets orbit around the Sun.

astronomer- Someone who studies or is an expert in astronomy (space science).

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**.



KEY QUESTIONS TO LEARN

- Can you identify what shape the earth, sun and moon are?
- Can you name the planets? Can you order the planets?
- Can you explain how the planets are moving?
- Can you explain how the rotation of the Earth causes night and day?
- Can you explain why night and day occur at different times of the day around the world?
- Can you explain how the moon orbits the earth?