

Science - Year 5 – Autumn 2- What is the Earth's position in the solar system and how does it move?

What I already know:

Our eyes are associated with the sense of sight.
We need light in order to see things. Darkness is the absence of light.
Some surfaces reflect light.
Light from the sun can be dangerous and we must therefore protect our eyes.
Shadows are formed when the light from a light source is blocked by an opaque object.
A force can be thought of as a push or a pull.
Gravity is a force that acts between all objects.
Isaac Newton built on the work of Galileo to develop the theory of gravity.
Gravity acts stronger when objects have more mass and are close together.

What I need to know:

The solar system has 8 planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Each planet has its own properties and characteristics.
Planets were named by astronomers who observed or discovered them. They are named after ancient gods and goddesses and their names have links to their properties.
The sun is at the centre of the solar system. This is known as the heliocentric system.
The scientific knowledge about the solar system has developed over time.
The Earth takes 24 hours to rotate on its axis. The rotation of the Earth is what gives us day and night.
Planets of the solar system take different amounts of time to rotate.
The Earth takes approximately 365 days to orbit the sun. Other planets take different lengths of time to orbit the sun.
The moon orbits the Earth and this impacts its appearance from Earth.
Space exploration has developed over time. There are many careers associated with space exploration.



Vocabulary Focus

Tier 2:

temperature – the degree of heat or cold in an object or environment.
spherical – having or nearly having the shape of a sphere.
atmosphere – the gases that are in the space around the Earth and other similar objects in outer space.
properties - materials and characteristic that help identify and classify.
characteristics – typical qualities of an object, sometimes unique or distinctive.
Latin – the language of ancient Rome.
axis - a real or imaginary line through the centre of an object, around which the object turns.
rotation - the action of turning on or around an axis.
tilt – to lean to one side; to slant.
lunar – associated with the moon.
mission – a special job given to a person or group of people.
Apollo – the god of light.
engineer – a person whose job it is to plan and design structures, systems or machines.

Tier 3:

solar system – the sun, eight planets and their moons and all other bodies that travel around the sun.
orbit – the curved path in which a planet, satellite or spacecraft moves in a circle around another body.
astronomer – a scientist who studies the universe beyond Earth.
telescope – an instrument that uses lenses and sometimes mirrors to make distant objects appear larger.
geocentric – designating the Earth as the centre of the universe.
heliocentric – designating the sun as the centre of the universe or solar system.

