

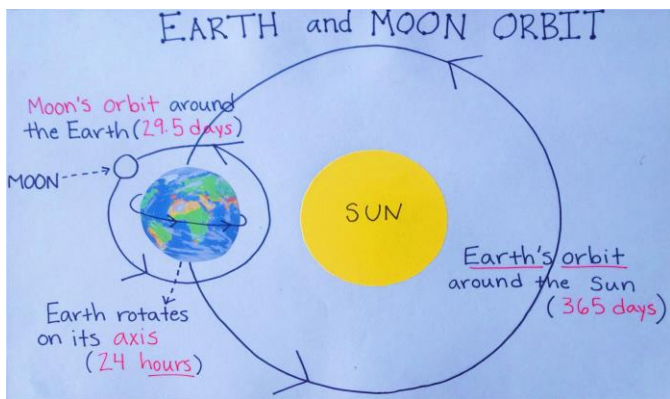
Science Focus: Earth & Space	Year Group: 5	Autumn Term 2
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Key Knowledge:

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 (centres) made up of rock and metal.

Pluto was considered a planet but, in 2006, it was reclassified as a dwarf planet.

The Moon orbits the Earth in an oval-shaped path, while spinning on its axis.



The Earth rotates on its axis. It does a full rotations once every 24 hours (a day). The Earth is also rotates around the Sun, taking just over 365 days to complete a full orbit.

When one side of the Earth is facing the Sun, it is daytime. When one side of the Earth faces away from the Sun, it is night.

Key Vocabulary:

Sun: A large star that earth and other planets orbit around.

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

Moon: A natural satellite which orbits earth and other planets.

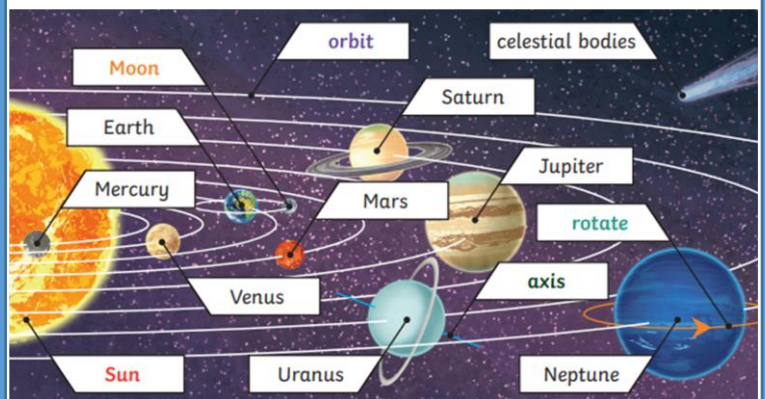
Planet: A large object (usually spherical) that orbits a star.

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

Spherical bodies: Astronomical objects shaped like spheres.

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

Diagrams and Symbols:



Possible Experiments:

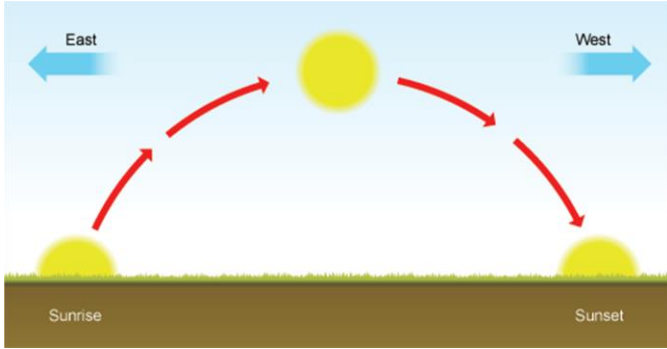


Making a model Solar System

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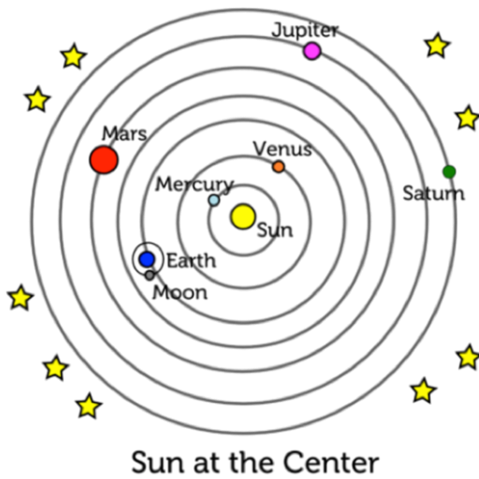
Key Knowledge:

The Sun appears to move across the sky, however, the Sun doesn't move. The Earth's movements create the different positions of the Sun in the sky.



Heliocentric Model:

Scientists and astronomers (such as Copernicus and Kepler) discovered that the planets actually orbited the Sun. Galileo's work on gravity allowed scientists to understand how planets stayed in orbit.



Possible Experiments:

Scientist and astronomer fact files.

Models of individual planets:



Key Vocabulary:

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

Rotate: To spin. E.g. The earth rotates on its own axis.

Axis: An imaginary line that a body rotates around. E.g. The Earth's axis 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 the 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).

Diagrams and Symbols:

Geocentric Model:

Many years ago, people believed that planets moved around the Earth. This was later found to be incorrect.

