Knowledge is Power…

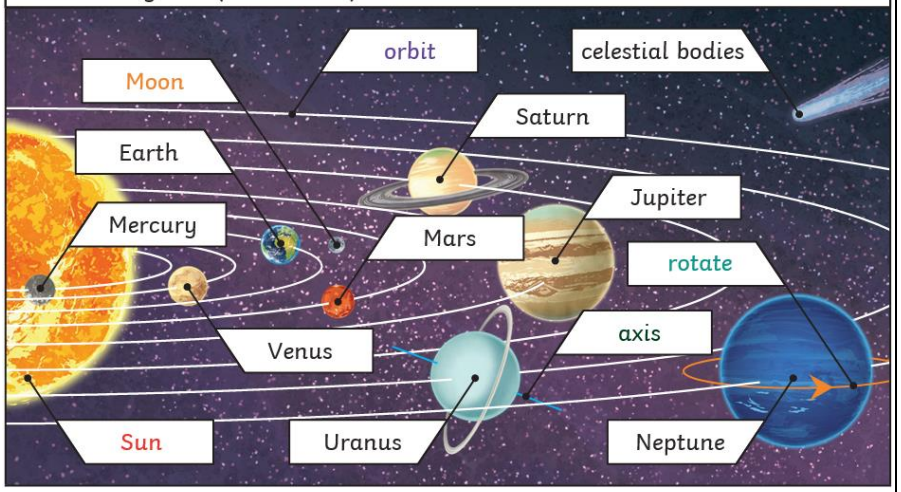
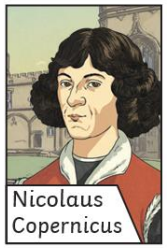
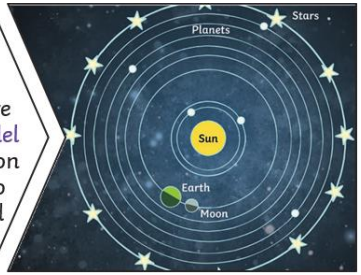
IVINGTON CE PRIMARY AND PRE-SCHOOL KNOWLEDGE ORGANISER

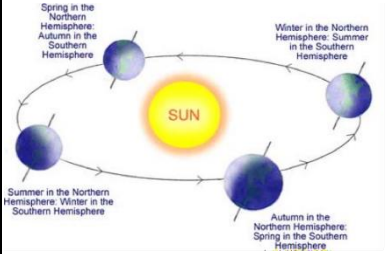
Reaching together… stand firm in your faith, be courageous and strong - 1 Corinthians 16:13

SUBJECT: Science	YEAR: B	TERM: Spring 1/2	YEAR GROUP: 6

EARTH AND SPACE

Previous Knowledge: We have four seasons (autumn, winter, spring and summer). The Sun is a source of light but the Moon is not. Know that a shadow is caused when an object blocks light from passing through it. To know some of the history of space travel.

Question/ lesson aims	Vocabulary	Sticky Knowledge	Can I…?
Spherical Bodies The Planets Geocentric Versus Heliocentric Night and Day Night and Day International Movement of the Moon	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	Our Solar System (not to scale)   Nicolaus Copernicus The work and ideas of many astronomers (such as Copernicus and Kepler) combined over many years before the idea of the heliocentric model was developed. Galileo's work on gravity allowed astronomers to understand how planets stayed in orbit.  	• I can explain why we know the Sun, Earth and Moon are spherical. • I can identify scientific evidence which does or does not provide evidence for an idea or argument. • I can name and describe features of the planets in our solar system. I can order the planets in our solar system. • I can explain how planets move in our solar system. • I can identify scientific evidence which does or does not provide evidence for an idea or argument. • I can explain day and night and the apparent



path around another object.

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

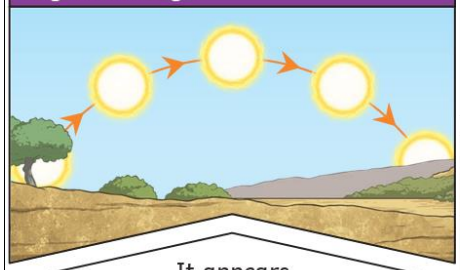
Axis- An imaginary line that a body rotates around. E.g. Earth's axis (imaginary line) runs from the North Pole to the South Pole.

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.

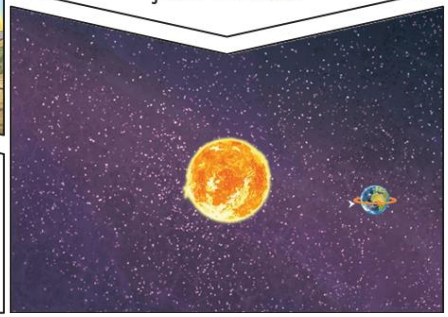
Astronomer- Someone who studies or is an expert in astronomy (space science).

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.

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 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.

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

Geocentric model
Years ago people believed that planets moved around the Earth.

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.

movement of the Sun across the sky.

- I can identify scientific evidence which does or does not provide evidence for an idea or argument.
- I can investigate night and day in different parts of the Earth. I can report and present findings from enquiries.
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- I can explain the movement of the Moon.