



Science Focus:

Earth and Space

Year 5

Autumn 1

What? (Key Knowledge)

The Earth and the Sun

WARNING

IT IS NOT SAFE TO EVER LOOK DIRECTLY AT THE SUN, EVEN WHEN WEARING SUNGLASSES.

What is the Sun?

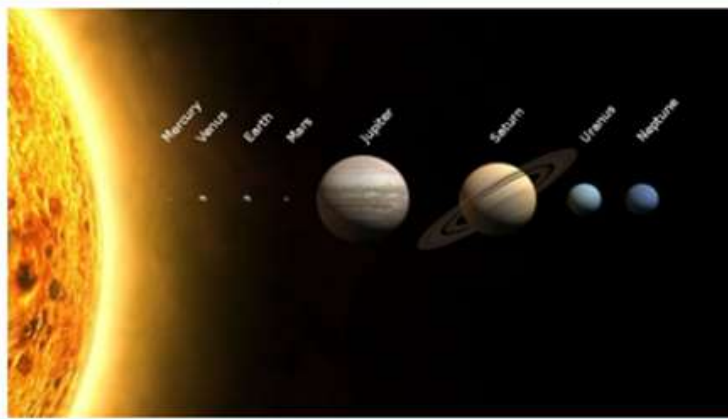
The sun is a star at the centre of us solar system.

What is the solar system?

The solar system has eight planets; Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

How is the Earth related to the Sun?

The Earth orbits (goes around) the Sun.
 The Earth takes one year to orbit the Sun.
 The Earth is held in its orbit round the Sun by the Sun's gravitational pull.



The Moon and the Earth

What is a moon?

A moon is a celestial body that orbits a planet.
 The Earth has one moon; Jupiter has four large moons and numerous small ones.

How is the Moon related to the Earth?

The Moon orbits the Earth.
 It takes about 28 days for the Moon to orbit the Earth.
 The Moon is held in its orbit round the Earth by the Earth's gravitational pull.

Why does the Moon change shape?

IT DOESN'T.
 It appears to change shape because we cannot always see the side of the Moon that's in sunlight or we can only see part of the sunlit side of the Moon as it orbits Earth.

The rotation of the Earth

How else does the Earth move?

The Earth spins on its own axis.
 The Earth takes 24 hours (1 day) to completely rotate on its axis.

What causes day and night?

The Earth spins once in a day.
 The side of the Earth facing the Sun is in daytime.
 The side of the Earth facing away from the Sun is in nighttime.

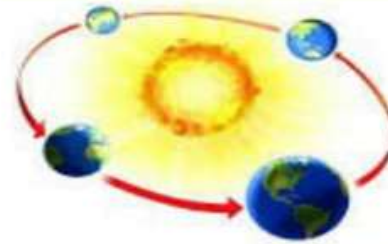
What causes Sunrise and Sunset?

The Sun doesn't move - it is us that moves.
 Because the Earth is rotating, the Sun appears to move across the sky as the day goes on.

What? (Key Vocabulary)

Spelling	Definition/Sentence
Solar	Relating to the Sun
Orbit	The curved path of an object around a star
Axis	An imaginary line round which something rotates
Rotating	Moving in a circle around an axis
Gravitational	Moving towards a centre of gravity

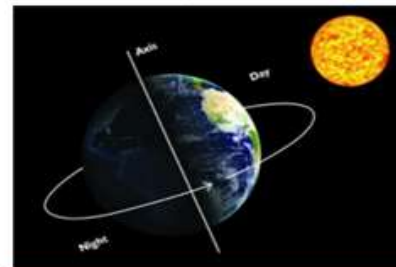
Diagrams and Symbols



The Earth orbiting the Sun, which takes one year.



The Moon orbiting the Earth, which takes about 28 days.



The Earth spinning on its axis, which takes 24 hours.

Possible Experiences

- Use the internet (pen pals) to establish that the time of day is different in different places in the world.
- Creating working models of the above diagrams.
- Making shadow clocks or sundials.

Working scientifically - skills

- I can use relevant scientific language
- I can ask different kinds of questions
- I can plan a scientific enquiry to answers my questions
- I can set up fair tests when necessary (shadow experiment)
- I can decide what observations and measurements to make
- I can decide how to record data and results.
- I can use graphs to record the results of my investigations.