

## Year 5 Science- Space

### Prior Knowledge

You may know about The sun and how it is a source of light. The sun is important when creating shadows and when allowing things to grow..

You will know about the four seasons of Winter, Spring, Summer and Autumn. You will have learnt about what happens in each season and which months of the year make that season.



### 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 that orbits the Earth.

**Planet:** A large object sphere like that orbits the sun.

**Sphere:** A round 3D shape.

**Orbit:** The curved path of an object around a star.

**Rotation:** To turn or spin

**Axis:** A real or imaginary line on which something rotates.

**Solar System:** A series of planets that orbit a star.

**Day:** A 24 hour period of time from one midnight to the next corresponding with one rotation of the Earth on its own axis.

**Night:** The period from sunrise to sunset in each 24 hours.

**Geocentric** - The belief that the Earth is at the centre of the Solar System

**Heliocentric** - The belief that the Sun is at the centre of the Solar System (the modern view of the Solar System)

**Astronomer:** someone who studies or is an expert on astronomy( Space science)

### Knowledge and Understanding

#### What is the sun?

- The sun is a star at the centre of our 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 1 year to orbit the Sun
- The Earth is held in its orbit round the Sun by the Sun's gravitational pull

#### 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

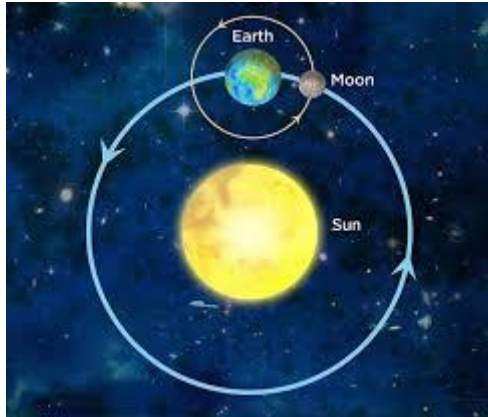
##### What causes day and night?

- 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 night time

##### 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

## Key Diagram



Ideas to try at home. Have a look at bbc bitesize. <https://www.bbc.co.uk/bitesize/topics/zkbbkqt>

1. Create a solar system model.
2. Make a moon diary. You need to draw/ photograph, describe the moon shape each night for a month. Can you explain what is happening?
3. Find out who Galileo, Copernicus and Kepler are. What have they got to do with space?
4. Create your own space report. Can you explain how the solar system is organised? How we have day and night?

## The Moon and the Earth

### What is the Moon?

- A moon is the celestial body that orbits a planet
- The Earth has one moon; Jupiter has four 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'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

