

# Our Place in Space

## Science Knowledge Organiser Year 5 Terms 3 & 4

### Key people

**Tim Peake**- British army officer and astronaut for ESP (European Space Agency).

**Neil Armstrong**- American astronaut, also first man to walk on the moon.

**Buzz Aldrin**- American astronaut- second man to walk on the moon.

**Yuri Gagarin**- Russian astronaut- first man to go to space.

**Helen Sharman** (First British astronaut)

### Key Questions

- Where is our place in space?
- What is the order of the planets in the solar system?
- Why do we have day and night?
- How are the phases of the moon created?



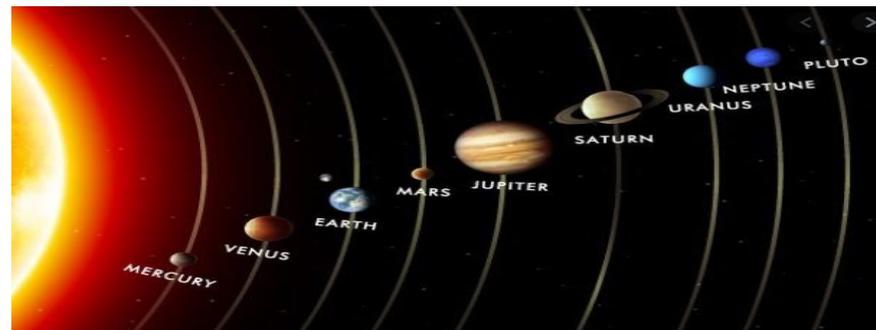
### Key knowledge

#### What you should already know

You should know that there are eight planets in our solar system and be able to name some of these. You should also know that gravity is a force that pulls objects and be able to relate this to gravity in space.

#### What you will know by the end of this unit

- That the Earth takes 365  $\frac{1}{4}$  days to orbit the Sun.
- Day and night are a result of the Earth's rotation on its axis.
- There are 8 planets in our solar system that orbit the sun: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006) and be able to recall some key facts about each of these.
- The moon is a celestial body that orbits a planet.
- The Luna moon orbits earth and the changing appearance represents different phase due to the moon's position as it orbit every 28 day



### Useful web links:

Phases of the Moon [http://www.topmarks.co.uk/Flash.aspx?b=science/earth\\_sun\\_moon](http://www.topmarks.co.uk/Flash.aspx?b=science/earth_sun_moon)

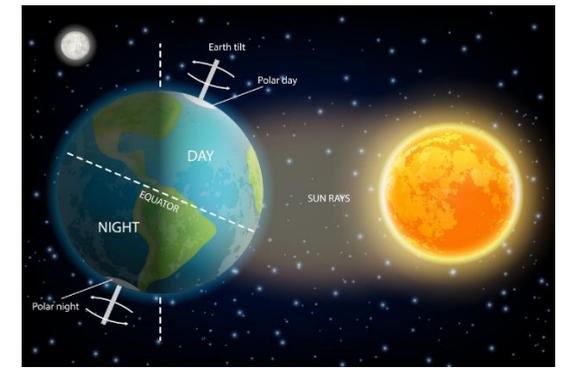
Day and night

<http://www.childrensuniversity.manchester.ac.uk/interactives/science/earthandbeyond/dayandnight/>

Biographies [http://www.bbc.co.uk/science/space/solarsystem/astronauts/neil\\_armstrong](http://www.bbc.co.uk/science/space/solarsystem/astronauts/neil_armstrong)

Planet studies <http://www.bbc.co.uk/science/space/solarsystem/all>

How our solar system was formed <http://video.nationalgeographic.com/video/101-videos/solar->



### Key Vocabulary

**Astronaut** - a person who is trained to travel in a spacecraft

**Daylight hours**- is the combination of all direct and indirect sunlight during the daytime

**Galaxy** - a system of millions or billions of stars, together with gas and dust, held together by gravitational attraction. We are part of the Milky Way.

**Moon phases**- The lunar phase or Moon phase is the shape of the directly sunlit portion of the Moon as viewed from Earth.

**NASA**- The National Aeronautics and Space Administration is an independent agency of the United States Federal Government.

**Orbit**- the curved path of a celestial object or spacecraft round a star, planet, or moon.

**Planets**- are large natural objects that orbit, or travel around, stars

**Rotation**- the action of rotating about an axis or centre.

**Star**- a huge glowing ball of hot gas, mainly hydrogen and helium. The temperature is so high in its core that nuclear fusion occurs, producing energy.

**Solar system**- the collection of eight planets and their moons in orbit round the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets.

**Universe**- all existing matter and space considered as a