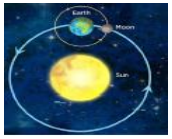
| Castlefield School- Science | | | |
|---|---|---|---|
| Topic: Earth and Space | Year: Five | Theme: The World Around Us | Strand: Physics |

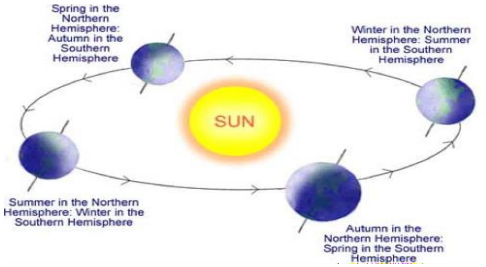
## Key Concepts

- The Earth rotates on its **axis** anti-clockwise and makes a complete rotation over 24 hours (a day). This makes it appear as if the Sun moves through the sky but the Earth's rotation causes day and night.



- Different parts of the Earth experience daylight at different times – this means that it is morning, afternoon and night in different places. This is also reason why we have **time zones**.

- The Earth takes 365 and a quarter days to **orbit** the Sun.
- Because of the extra quarter day it takes to **orbit** the Sun, every four years on Earth is a **leap year**.
- It is the Earth's tilt on it's **axis** that causes the seasons.




- The Moon orbits the Earth anti-clockwise and takes approximately 28 days.
- The Moon has different phases depending on where it is in its orbit.


- There are 8 planets in our Solar System (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). Pluto is a dwarf **planet**.
- The **Solar System** is in a **galaxy** called the Milky Way. The **galaxy** is in the **universe**.


## Key Vocabulary

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| axis | An imaginary line through the middle of something |
| galaxy | An extremely large group of stars and planets. Our galaxy is called the Milky Way. |
| leap year | A year which has 366 days. The extra day is the 29th February. There is a leap year every 4 years. |
| orbit | The curved path in space that is followed by an object going round and round a planet, moon or star. |
| planet | A large round object in space that moves around a star. |
| shadow | A dark shape on a surface that is made when something stands between a light and the surface. |
| Solar System | The Sun and all the planets that go round it. |
| spin | Turning quickly around a central point. |
| star | A large ball of burning gas in space. |
| time zones | One of the areas into which the world is divided where the time is calculated as being a particular number of hours behind or ahead of GMT (Greenwich Mean Time) |
| universe | The whole of space and all the stars, planets and other forms of matter and energy in it. |

## Working Scientifically Skills

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| Using Scientific knowledge to ask questions. | Planning different types of enquiry, controlling variables where necessary. |
| Using scientific language to draw conclusions. | Recording data, taking repeat measurements where necessary and calculating a mean. |
| Recognising when to use other sources to answer questions and separating opinion from fact. | |

## Famous Scientists

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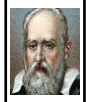
|  | Professor Brian Cox – Contemporary physicist who presents many BBC programmes. |
|  | Galileo Galilei – Discovered four of Jupiter's moons. In 1609, he was the first person to make a study of the skies with a telescope. |
|  | Edwin Hubble – In 1924, Hubble showed that nebulae (fuzzy light patches in the sky) were distant galaxies. |