

**Key Knowledge:**

**Overview**

**The solar system**

- A **solar system** is a **star** that has objects (such as **planets**) **orbiting** around it.
- Our **solar system** has 1 star, the **sun** with 8 **planets orbiting** around it.

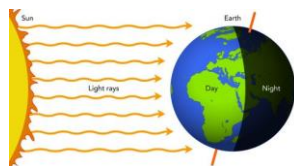
**The Earth**

**The Earth and the Sun.**

- The **Sun** is the **star** at the centre of our **solar system**.
- The **Sun** gives the **Earth** its light, heat and influences the seasons.
- The **Earth orbits** the **Sun**.
- It takes the Earth 1 year to **orbit** the **Sun**.

**What causes day and night?**

- As well as **orbiting** the **Sun**, the **Earth** also spins on its own **axis**.
- The **Earth** takes 24 hours (1 day) to completely **rotate** on its **axis**.
- The side of the **Earth** facing the **Sun** is in daytime.
- The side of the **Earth** facing away from the **Sun** is in night time.
- Because the **Earth** is turning, the **Sun** appears to move across the sky, but the **Sun** does not move it is us that is moving.



**Why is the sky blue?**

- Our **Sun** gives out white light, within the white light there are the 7 colours of the rainbow (**red, orange, yellow, green, blue, indigo** and **violet**).
- The colours within the light travel in waves, red light has the longest wavelength and violet has the smallest wavelength.
- When the white light reaches the **Earth's atmosphere**, the blue wave hits dust, dirt and pollen particles within the **atmosphere**.
- This causes the blue light to **refract**, scatter and spread out within the **atmosphere** making the sky blue.



**The Planets**

- A **planet** is an object that orbits a **star**, that does not give out its own light.
- **Planets** can be made mostly of rock or mostly of gases.
- Our **solar system** has 8 planets and 1 dwarf planet.
- The **planets** are: Mercury, Venus, **Earth**, Mars, Jupiter, Saturn, Uranus and Neptune.
- The dwarf **planet** is called Pluto.
- Mercury, Venus, **Earth** and Mars are rocky planets.
- Jupiter, Saturn, Uranus and Neptune are gas planets.



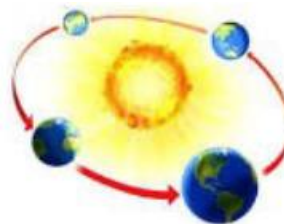
**Possible Experiments:**

- Create a model of the solar system.
- Make a shadow clock or sundial to see how the Earth moves during the day.
- Keep a diary of the moon and notice how it changes during the month.

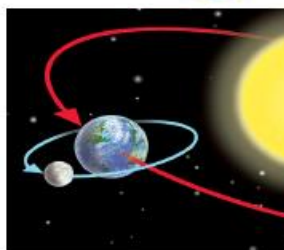
**Key Vocabulary:**

<b>Solar system</b>	a <b>solar system</b> is a <b>star</b> that has objects (such as <b>planets</b> ) <b>orbiting</b> around it.
<b>Sun</b>	a huge <b>star</b> that the Earth and the other <b>planets</b> in our <b>solar system</b> <b>orbit</b> around.
<b>star</b>	a giant ball of hot gas and plasma.
<b>Earth</b>	the planet on which we live. Also called the world.
<b>orbit</b>	to repeatedly move around something in a curved path.
<b>planet</b>	a large object, round or nearly round that <b>orbits</b> a <b>star</b> .
<b>moon</b>	a natural <b>satellite</b> which <b>orbits</b> Earth and other <b>planets</b> .
<b>satellite</b>	any object or body in space that <b>orbits</b> something else, for example the <b>moon</b> is a <b>satellite</b> of the Earth.
<b>rotate</b>	To spin around.
<b>axis</b>	An imaginary line that something <b>rotates</b> around. The Earth's <b>axis</b> runs from the North pole to the South pole.
<b>atmosphere</b>	the layer of gases that surround a <b>planet</b> .
<b>refract</b>	when a ray of light changes direction.

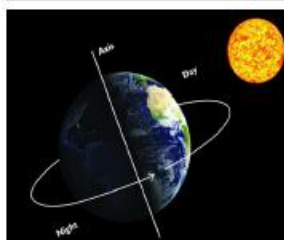
**Diagrams and Symbols:**



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.