

Working scientifically

Ask questions and recognise they can be answered in different ways

Observing closely using equipment

Perform tests

Identifying and **classifying**

Use **observations** and ideas to suggest answers to **questions**

Gathering and **recording data** to help in answering questions

What I should already know:

- ◆ We have four seasons (autumn, winter, spring and summer).
- ◆ The Sun is a source of light but the Moon is not.
- ◆ Know that a **shadow** is caused when an object blocks light from passing through it.
- ◆ To know the history of space travel.
- ◆ The properties of a **sphere**.

What I will know by the end of the unit

The Moon The Moon orbits the Earth in an oval-shaped path, while spinning on its axis. At various times in a month, the Moon appears to be different shapes. This is because as the Moon rotates round the Earth, the Sun lights up different parts of it.



Day and night; Year length and the seasons

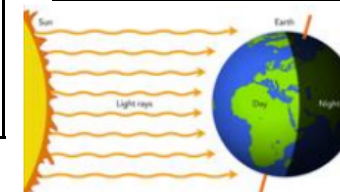
Earth rotates (spins) on its axis. It does a full rotation once in every 24 hours. At the same time that Earth is rotating, it is also orbiting around the Sun. It takes a little more than 365 days to orbit the Sun. Daytime occurs when the side of the Earth is facing towards the Sun. Night occurs when the side of the Earth is facing away from the Sun.

Investigate

Compare the time of day at different places on Earth.

Construct shadow clocks and sundials.

Keep a Moon diary over the course of a month - what do you notice?



| Sequence of planets from the Sun | |
|----------------------------------|--|
| Mercury | The smallest planet (rock) |
| Venus | The brightest planet (rock) |
| Earth | The only planet on which life is known to exist (rock) |
| Mars | Known as the red planet (rock) |
| Jupiter | The largest planet (gas) |
| Saturn | Known for its rings (gas) |
| Uranus | The coldest planet (gas) |
| Neptune | The furthest planet from the Sun (gas) |

Key vocabulary

| | |
|--------------|--|
| Solar System | The Sun and all the planets orbit within the |
| Planet | A large, spherical object in space that or- |
| Axis | An imaginary line that a body rotates around |
| Orbit | To move in a regular, repeating curved path around another object. |
| Sphere | A 3D shape in the shape of a ball. |



- * The Sun, Earth and Moon are approximately spherical.
- * The Earth **orbits** the sun.
- * The Moon **orbits** the Earth.

Mnemonic to help remember the planets:

My Very Easy Method Just Speeds Up Naming (Planets) (Up until 2006, the P for Planets stood for Pluto but this is now classified as a dwarf planet.)

