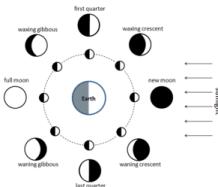


What is known about the Earth, the Sun and the Moon?



What I already know:

- General knowledge about forces.
- That we live on planet Earth.
- There are different seasons and climates.
- That we have day and night.
- The shape of the Earth is a sphere.
- N and S pole, equator, magnetic poles knowledge from geography learning



New knowledge:

The Sun, Earth and Moon are approximately spherical bodies. The Sun is the star at the centre of our solar system. Earth is a planet in the solar system and orbits the sun. The Earth rotates once every 24 hours. The Earth orbits the Sun once a year. Gravity keeps planets in orbit around the sun.



The moon is a satellite of Earth and orbits the Earth, taking about one month. Gravity keeps the moon in orbit around Earth. The light from the sun reflects off the Moon in different ways and at different times making it appear different shapes. The Moon is not a source of light, but it reflects light from the Sun. We get day and night because the Earth rotates on its axis. The part facing the sun is in daytime. The world has different time-zones because of this. The sun appears to move in the sky because Earth rotates on its axis. Shadows change through the day.

The Sun is a star. The Earth is a planet. The Moon is a satellite of Earth. Earth only has one moon. It affects our tides and stops us wobbling on our axis.

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Neptune, (Pluto) are all planets in the Solar System.

Space exploration has taken off since the mid 20th Century. Many countries and international organisations continue to explore SPACE.

NASA employed women in the 1960s - the space race engineers - including Katherine Johnson, Dorothy Vaughan, and Mary Jackson

Enquiry questions:

What are the relative sizes of the Earth, Sun and Moon, and what are the distances between them?
How do the Earth, and other planets move relative to the Sun in the solar system?
How does the moon move in relation to the Earth?/What is the importance of the Moon?
Why does the Moon appear to change shape?
How do we get day and night?
Why does the sun appear to move across the sky?



Scientific skills:

Plan enquiries, control variables where necessary
Take measurements with increasing accuracy and precision
Record data and results
Use scientific diagrams and labels, tables, bar and line graphs, and models
Report findings
Present findings
Use test results to make predictions to set up further tests.
Identify/discuss the scientific evidence that we have for the ideas/concepts in this topic
Use research to find out facts about the topic.
Ask questions of our own.



Vocabulary

axis	Imaginary line through the Earth from N to S
planet	An object in space with its own gravity, and that orbits a star.
sphere	Ball shaped
tilt	A lean (not upright)
star	A self-luminous body of gas in space (Sun)
orbit	The movement around another object
galaxy	A system of billions of stars
planetarium	a building where lights are shone on the ceiling to represent the planets and the stars and to show how they appear to move.
Earth	The planet we live on.
Sun	Our nearest star.
solar system	All the planets and other bodies held by the gravity of our Sun.
atmosphere	The layer of gases around a planet.
Moon	A body that orbits a planet.
seasons	The different parts of the year with their own weather/light levels etc. (Spring, Summer, Autumn, Winter)
phases	The different shapes that we see the moon from Earth, based on the light from the sun.
Gas giant	a large planet mostly composed of helium and/or hydrogen. These planets, like Jupiter and Saturn in our solar system, don't have hard surfaces and instead have swirling gases above a solid core
gravity	an invisible force that pulls objects toward each other



Asking questions



Making predictions



Observing and measuring



Recording data



Interpreting and communicating results



Setting up tests



Evaluating

