unsford Primary School — Science Topic: Earth & Space Strand: Physics Year 5

Linked Scientists

Nicolaus Copernicus (first developed the theory that the Sun was at the centre of the solar system) Helen Sharman (astronaut and first British citizen in space)

What I will know by the end of the unit

How the planets in our Solar system orbit the sun

The sun is a large star at the centre of our Solar system.

8 planets in our solar system — (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus & Neptune. Pluto is a dwarf planet)

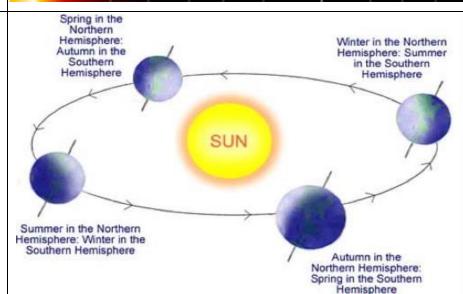
URANUS SATURN EARTH

First four planets closest to the sun are smaller and rocky.

Four outer planets further from the sun are much larger and are made of gas (Jupiter & Saturn) or ice (Uranus & Neptune)

All planets in our Solar system travel round the sun in a fixed path.

How the moon orbits the Earth



The moon orbits the Earth.

It takes approximately 28 days to orbit the Earth.

Whilst orbiting the Earth, the moon completes a cycle of phases. This is called a lunar month.

As the moon orbits Earth, it also rotates on its own axis.

The moon doesn't change shape, it just appears to because of the position of the sun.

The sun,

Earth and moon are

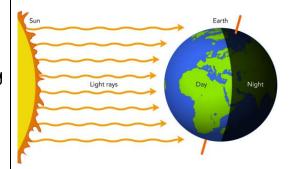
spherical shapes

What causes day and night on Earth

Ancient Greeks discovered that Earth was spherical.

Photographic & video evidence from space shows that Earth, the sun and moon are

Earth takes $365 \square$ days (a year) to complete its orbit of the sun.



Although the sun appears to move across the sky, it is the Earth that rotates on its axis. Because of the rotation, different parts of Earth have daylight at different times. This is why we have time zones.

As Earth rotates, shadows that are formed change in size and orientation.

Key Vocabulary	
asteroid	Rocks that orbit the sun
atmosphere	Layer of gas that surrounds the Earth
axis	An imaginary line through the middle of the Earth
comet	Object that orbits the sun . Usually they are made up of dust or ice
Earth	Planet on which we live
galaxy	Group of stars , planets , clouds of gas and dust particles. Our galaxy is called the Milky Way
gravity	Force that pulls objects towards Earth . On a rollercoaster, pulls the carriage faster on the downhill slopes and slows it down on the uphill parts of the ride
leap year	A year on Earth usually has 365 \(\text{days}\) however, every four years we have a leap year with 366 days. The extra day is 29th February
meteor	Also known as shooting stars. A flash of light we see when space debris burns as it passes through Earth's atmosphere
meteorite	Rock or chunk of metal that falls to Earth from space. Most meteorites burn up passing through Earth's atmosphere
moon	Rock object which orbits the Earth. It is a natural satellite and reflects the light of the sun
orbit	Curved path that a star, moon or planet takes in space. The Earth orbits the sun.
planet	Large natural object that orbits a star . There are eight planets in our solar system which orbit the sun — Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus & Neptune
rotates	To turn on an axis
shadow	A dark shape on a surface when something stands between the light and the surface
Solar system	The sun and all the planets that orbit the sun
space	Area that contains all planets , stars and living things. Outer space goes beyond the universe
spherical	Round object shaped like a ball. The Earth is shaped like a sphere
star	Large glowing balls of burning gas. The star in our solar system and the closest one to Earth is the sun
time zone	An area on Earth with a specific time. Different areas on Earth have different time zones and are ahead of, or behind Greenwich Mean Time (GMT). Time zones exist because the Earth is round.
universe	All of space, planets, stars and living things that exist