
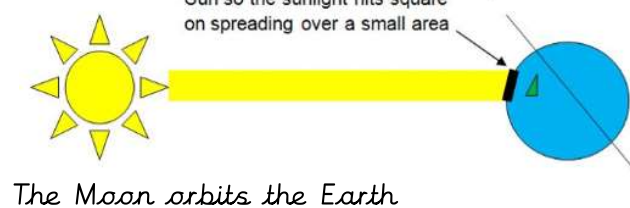



Year 5 Autumn 2

Space - The Final Frontier

KNOWLEDGE MAT

Topic Vocabulary	Key Knowledge	
Energy - another word for power, created when particles called electrons move from one atom to another.	<ul style="list-style-type: none"> The universe contains all matter and space in existence. The Sun is a star. Ptolemy thought that everything orbited the Earth, but scientists like Copernicus and Galileo used telescopes and measurements to show that the Earth orbited the Sun. The Solar System is made up of the Sun and the objects that orbit it. There are eight major planets in our solar system (in order from the closest to the Sun): Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune. Humans have sent man-made satellites into orbit that assist with telecommunication. All the planets in the solar system orbit the Sun. The further away they are from the Sun, the longer their orbit. The Earth spins around an imaginary line through its centre called an axis. This axis is tilted. 	<ul style="list-style-type: none"> Night and day are the result of the Earth rotating on its axis. Dawn happens at different times across the planet so we divide Earth into time zones.
Orbit - the curved path of a celestial object or spacecraft around a star, planet, or moon.		
Reflection - when light, heat or sound bounces off an object without absorbing it.		<ul style="list-style-type: none"> The tilt of the Earth towards and away from the Sun's light as the Earth orbits the Sun leads to the seasons, as during winter the light is spread over a wider area (see diagram below).
Celestial body - a large object in the universe (e.g. galaxy, star, planet, comet).		
Planet - A planet (e.g. Earth) is defined as a spherical celestial body that orbits a star.		
Satellite - A satellite orbits a planet. Moons are natural satellites. Also a machine that is sent into space to collect information or for communication.		
Eclipse - A solar eclipse happens when the Moon is between the Sun and the Earth, casting a shadow on the Earth; a lunar eclipse happens when the Earth is between the Sun and the Moon, casting a shadow on the Moon.		
Star - an exceptionally hot ball of gas, originally made from hydrogen and helium		<ul style="list-style-type: none"> The Moon orbits the Earth roughly every 28 days. As the Moon orbits the Sun, different parts of it are lit up by the Sun, which is why we see a different shape lit up on the Moon as the lunar cycle progresses; these are called phases of the Moon. 
Solar system - the collection of eight planets and their moons in orbit round the sun.		
Solar - related to the Sun (Sol means Sun).		
Universe - all of space and time and their contents (including planets, stars, galaxies, and all other forms of matter/energy).		
Constellation - a group of stars forming a recognisable pattern.		

