

# Year Five Knowledge Organiser: Earth & Space. How do movements within the solar system affect us?

## National Curriculum Specification

Pupils should be taught to:

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

## Key Vocabulary

<b>Star</b>	A burning mass of gas that makes heat and light energy.
<b>Planet</b>	A large object that orbits (moves around) a star. It does not give out its own light.
<b>Gravity</b>	The force that attracts an object towards a larger object.
<b>Orbit</b>	The curved path of an object (eg a planet or spacecraft) around a star, planet, or moon. The Earth orbits the Sun. The Moon orbits the Earth.
<b>Solar system</b>	A star with planets orbiting around it.
<b>Galaxy</b>	A large group of solar systems. Our Solar System is part of the Milky Way Galaxy.
<b>Satellite</b>	An object orbiting a planet. <b>Moons</b> are satellites (several planets have moons).
<b>Asteroid</b>	Rocks that orbits the sun.
<b>Meteor</b>	A rock that burns when it enters into the Earth's atmosphere.
<b>Comet</b>	An object made of ice and dust with a tail of gas.
<b>NASA</b>	The National Aeronautics and Space Administration – a company in America responsible for exploring Space.

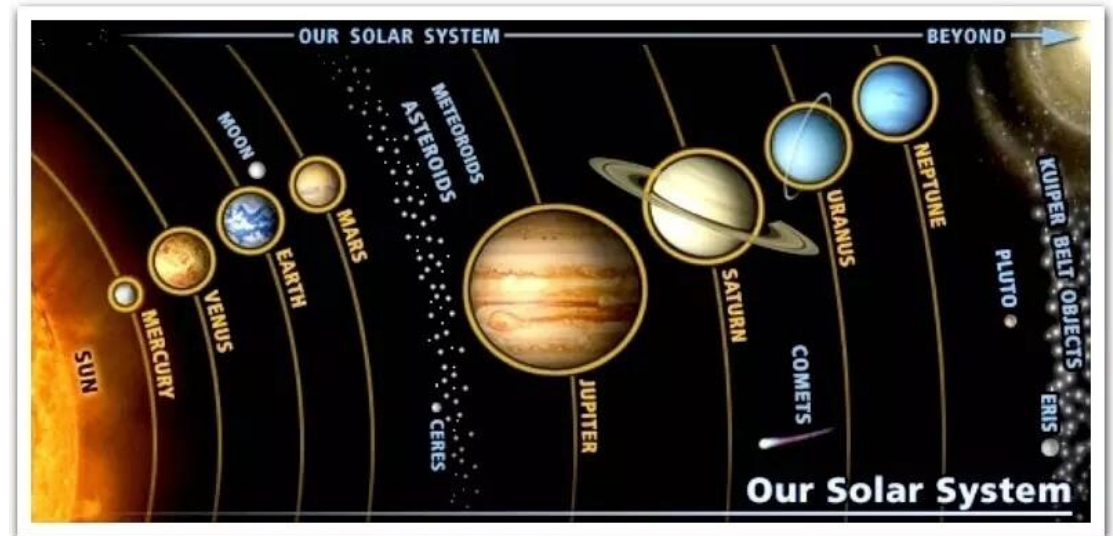
### Statistics:

Earth does a full rotation every 24 hours. It takes 365 days to orbit the sun.

The moon takes just over 27 days to orbit the Earth once.

Did you know that you could closely line up all 8 planets of our solar system between Earth and the moon?

Did you know that about 1 million Earths could fit inside the sun?



## Key Facts

### Why do we have night and day?

The Earth rotates (spins) while it orbits the sun. One side of the Earth faces the sun, while the other side faces away into space. The side facing the sun is bathed in light and heat (daytime). The side facing away is cooler and darker (night).

### Why do we see different phases of the moon?

This is caused by the position of the moon in relation to the Earth and sun. When a portion of the moon looks invisible, it is not because of the Earth's shadow, but because the dark portion of the moon is the half that is turned away from the sun. Half of the moon is always in shadow and half is always illuminated, but we see different amounts of the 'lit' part based on the moon's position in relation to us on Earth.

### Talking points for home!

Should we spend money on space exploration?

Should animals be sent into space?

Who was the first person to explore space and survive? Who was the first person on the moon?

