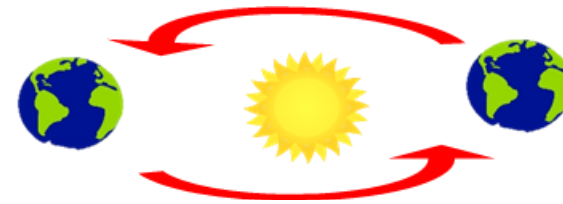


Key Vocabulary

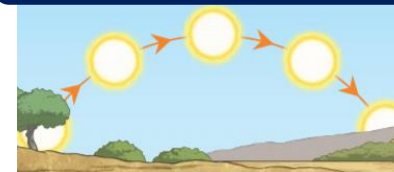
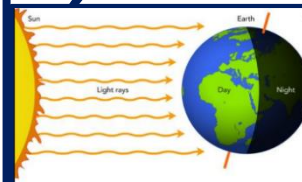
Axis	An axis is an imaginary line an object turns around. This imaginary line runs directly through the object's centre, from the north to the south poles.
Daytime	Daytime is when you can see the sun from where you are, and its light and heat can reach you.
Orbit	An orbit is the path that an object takes in space when it goes around a star, a planet, or a moon.
Rotation	Rotation is the movement of an object in a circular motion.
Night time	Night time is when the sun is on the other side of the Earth from you.
Season	One of the four parts of the year; spring, summer, fall, and winter.
Solar System	The solar system consists of the Sun and everything that orbits, or travels around, the Sun.
Sun	The solar system consists of the Sun and everything that orbits, or travels around, the Sun.
Moon	A natural satellite which orbits Earth and other planets.
Star	A giant ball of gas held together by its own gravity

Why do we have seasons?



The Earth rotates is tilted on its axis (look at the globe in the classroom to see the angle). During the winter, the North Pole is tilted away from the Sun's rays. This makes the days cooler. As Earth travels around the Sun, the tilt of Earth changes. In the Northern hemisphere, by June, the North Pole is titled towards the Sun and the days become very long and the weather is warmer. This is why we have our seasons Summer (June-August), Autumn (September–November), Winter (December–February), Spring (March–May).

Night and Day



The Earth rotates one complete turn every 24 hours to give us day and night. As the Earth rotates towards the sun it becomes lighter (morning). As we rotate away, it becomes darker (night).

When Britain faces the Sun it is daytime in Britain but the other side of the world is in darkness. So, when it is midday in Britain, it is the middle of the night in Australia.

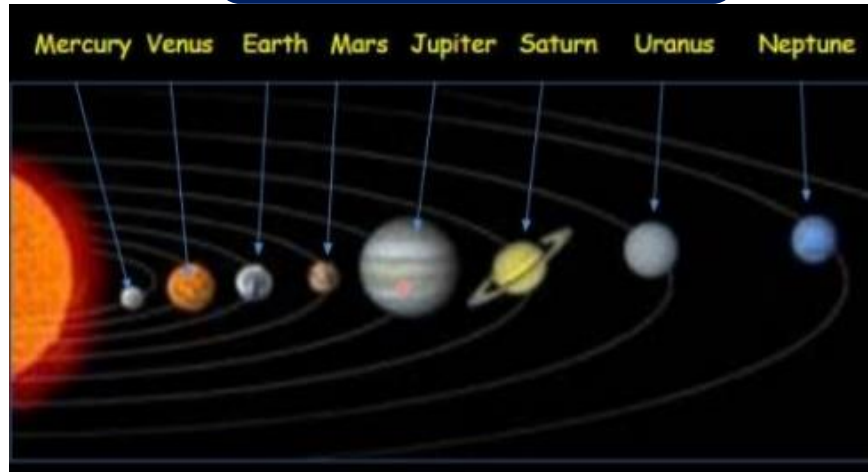


Knowledge Organiser – Earth and Space Year 5



Our Solar System

(not to scale)



Mercury, Venus, Earth and Mars are rocky planets. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of metal and rock.

At the centre of our solar system is the Sun. The gases that make up the sun are Hydrogen and Helium. It is an orangey red because of the extreme heat. The temperature of the sun is nearly 10,000 °F. It is so huge that over one million Earths could fit inside it!

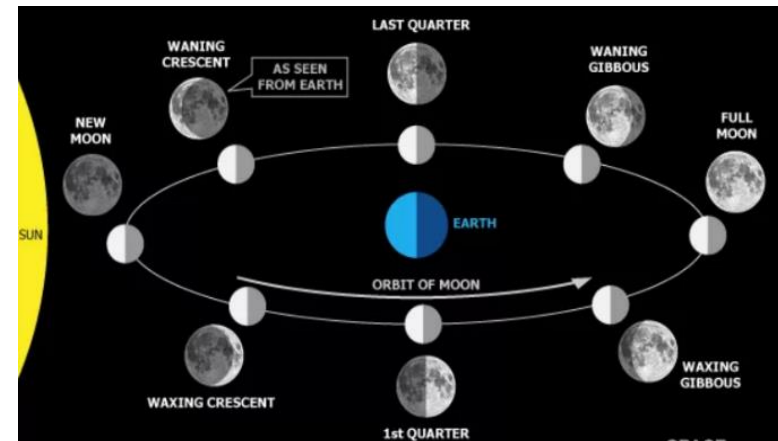


The Phases of the Moon

The Moon orbits 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 the Moon rotates around Earth, the Sun lights up different parts of it.

It takes about 28 days for the Moon to orbit the Earth.

The Moon is held in its orbit round the Earth's gravitational pull.



From Earth, we can only see one side of the moon.



Pluto was once classed as a planet. But in 2006 it was reclassified as a dwarf planet.

In 2021 NASA sent a Rover to Mars to search for signs of life.



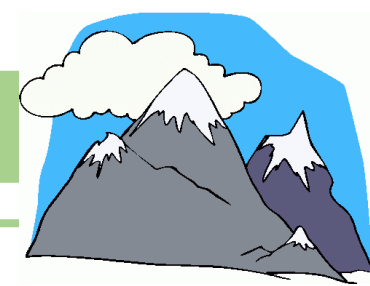
Astronauts

Yuri Gagarin First man in space in 1951
Valentina Tereshkova First woman in space in 1963
Neil Armstrong First man on the Moon in 1969
Mae Carol Jemison First African American woman to travel in space in 1992
Tim Peake Most recent Briton to go into Space in 2015





Knowledge Organiser – North America and Mountains (Year 5)



Key Vocabulary

Climate	A climate zone is the general weather conditions which are typical of a place.
Continent	A continent is a large area of land that is separated from others by water or other natural features.
Contour	Contour lines show high and low areas of land.
Fault Block	A type of mountain where cracks in the earth's crust force materials or blocks of rock up or down.
Fold	The most common type of mountain where two plates collide head on.
Summit	An estuary is a drowned river valley, where the river flows into the sea.
Tectonic Plates	These are pieces of land that connect together on the Earth's outer shell. <i>These</i>
Volcanic	A type of mountain formed by volcanoes. Molten rock erupts and piles upon the surface.



What is a continent?

A **continent** is a large, solid area of land. Earth has seven continents. In order from largest to smallest, they are Asia, Africa, North America, South America, Antarctica, Europe, and Australia.

Where is North America?

North America, the third-largest continent, extends from the tiny Aleutian Islands in the northwest to the Isthmus of Panama in the south. The continent includes the enormous island of Greenland in the northeast and the small island countries and territories that dot the Caribbean Sea and western North Atlantic Ocean.

There are
50 states
in the
United
States of
America.
How many
can you
spot?

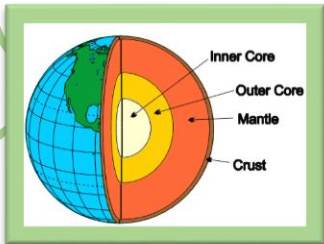


Characteristics of a Mountain

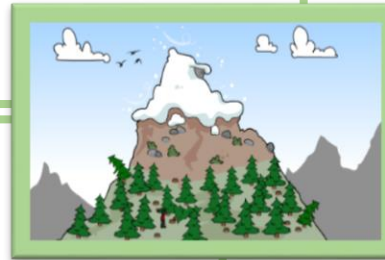
A **mountain** is an elevated portion of the Earth's crust, generally with steep sides.

The top of the mountain is called the **summit/peak**. The higher the altitude, the thinner the air which makes it harder to breathe. Mountains rise 300 metres (or more) above their surroundings. The **slope** is the side of the mountain. A **gorge** is the very steep valley between numerous mountains.

Some of the most famous mountains in North America are the Rocky Mountains, Sierra Nevada and Appalachian Mountains.



Types of Mountains

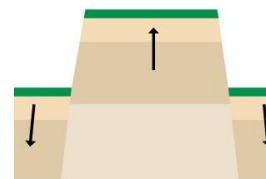
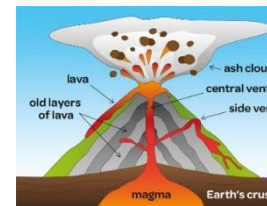
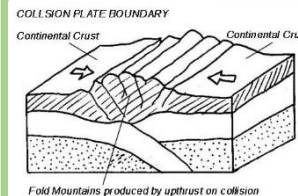


Three examples of types of mountain formation are: **fold**, **volcanic** and **fault-block**.

Fold mountains are formed when two plates run into each other or **collide**. The force of the collision causes the Earth's crust to crumple and fold. Many of the world's famous mountain ranges are formed in this way e.g. the Andes, Himalayas and the Rockies. These are the most common types of mountain.

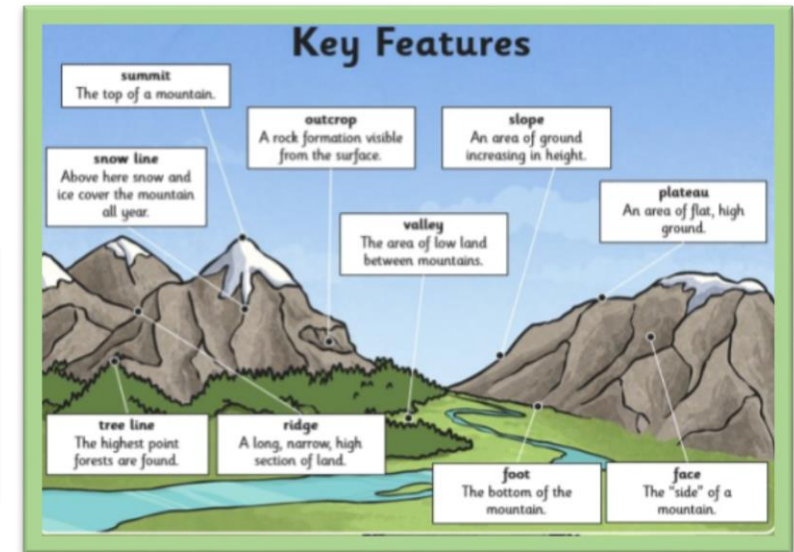
Volcanic mountains are formed when molten rock (magma) deep beneath the Earth's surface erupts and piles upon the surface. Magma is called lava when it

Fault-block mountains are formed along faults where some large blocks of rock are forced upwards while others are forced down.



Did you know?

The highest mountain peak in the world is **Mount Everest** in the Himalayan Range, Nepal. It's 8, 849m tall!



Earthquakes are usually created when underground rock suddenly breaks and there is rapid motion along a **fault**.