Chestnut's Class
What are we learning in Geography?

Autumn term 2024

2024

Why are mountains so important?

What is a mountain?

Most geographers agree that a mountain is a large mass of earth or rock taller than 304.8 m (1000 ft) that rises up above the surrounding land.

Famous mountains include:

Mount Everest – highest on the planet

Mount Everest

Mauna Kea – is on the Island of Hawaii in the Pacific Ocean – it is the highest mountain in the world from base to summit (10, 203 m although only 4205m is above sea level.

Mauna Kea

Mount Olympus is on the planet Mars. It's the highest mountain that geographers know of anywhere in our solar system.

Mount Olympus, Mars

Key facts

One-fifth (20 per cent) of the surface of Earth is covered by mountain ranges.

A *mountain range* is a large area where many mountains can be found close together. Among the greatest are the Himalaya, Andes, Rockies, Alps, Urals and Atlas.

Tectonic plates

All the major mountain ranges are called 'fold mountains'.
www.youtube.com/watch?v=EorDD_BXaN4

The Earth's crust is divided up into sections called plates that fit together like parts of a huge jigsaw. Along the edges of these plates, where one meets another, earthquakes and volcanoes occur. There is also a connection between the edges of the plates and fold mountain ranges. When two plates move towards each other, all of the layers of rock that lie in between them become crumpled or 'folded' up into the air to form mountain ranges. Today these layers or strata can be easily seen in all of the fold mountains of the world.

Famous explorers: www.youtube.com/watch?v=kIs7JzoJpmw

Mallory and Irvine, Hillary and Norgay

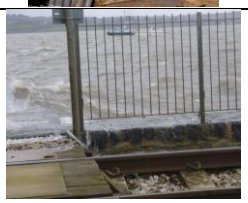
How are the Cambrian Mountains different from the Himalaya Mountains?

The mountain ranges of Britain are all very much lower, less rugged and more rounded than the fold mountains studied earlier. This is mainly because they are a great deal older. Most of the rocks, for example, that make up the Cambrian Mountains of Wales are around 400 million years old compared with the much younger age of the rocks of the Himalayas, which are around 55 million years old! Because the mountains of Britain are much older than the Himalaya, Andes, Rockies etc. the forces of erosion such as the rain, wind and ice have had eight times as long to wear them down and round them off!

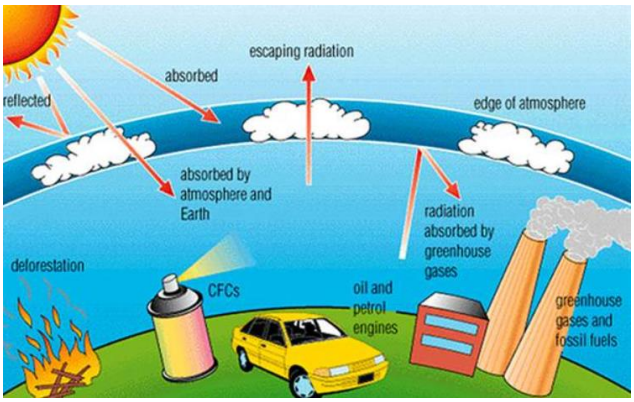
Last term

How is climate change affecting the world?

Case studies

Banjul, The Gambia Elhaji – aged 13, doesn't live with his family in a small village called Njar. Instead he makes a living cleaning shoes in the capital city. This is because of the impact of **climate change**. During the past decade, places such as Njar along the north bank of The Gambia River have suffered from increasing unreliability of rainfall during the wet season. This unreliability causes long **droughts, crop failures** and great poverty and hardship in a country where most people rely on farming for their livelihoods.	
Kinglake, Australia Olivia can't afford to insure her house due to of weather conditions in Victoria becoming warmer and drier. Average summer temperatures in Victoria are now 1 °C higher than they were 100 years ago and autumn and winter rainfall has decreased by between 10 and 20% over most of the state during the same period. From the insurance companies' perspective this means that the risk of damage to property as a result of **bushfires** is becoming much greater.	
Starcross, Devon People are making flood plans because the Environment Agency has told the Parish Council at Starcross that during the rest of this century, sea levels are going to increase by about one metre. Also that the village should expect more **frequent, more severe and longer-lasting winter storms** with wave heights at least 30 cm taller than they are now, which will at times cause **powerful tidal surges and flooding** as the railway embankment is overtopped.	
Greenland Each year since 1979 **the number of days of melt across Greenland have increased as the weather has become warmer**. Lars is an Inuit. His livelihood depends on hunting and fishing. The animals are moving further north across the Arctic ocean. Lars has to travel longer distances, over thinner ice. It is dangerous for him as he is at greater risk of being caught in a blizzard or falling through **thin ice.** Sophie feels the warmer weather is bringing **new opportunities** to Greenland and so making the country wealthier. People can grow their own vegetables, own cattle. They will be able to access oil reserves below the ice and the country is more inviting for tourists.	

The Greenhouse Effect



Each year the amount of carbon dioxide in the atmosphere is increasing and this is contributing to causing global warming. Carbon dioxide is referred to as a greenhouse gas because, along with other gases such as methane, it stops heat bouncing back into space from the Earth's surface**.**
www.youtube.com/watch?v=pvH-h7TzSsE

Paris Agreement (2015)

Representatives from 200 countries agreed to ensure that the surface temperature of the earth would not increase by more than 2.5oC by 2100 and this would be achieved by decreasing **carbon emissions**. Much more effort and money would be spent on developing **renewable and non-polluting** sources such as **solar, wind, geothermal, tidal and wave energy** to replace the energy now produced by burning fossil fuels

Last year

Exploring the coast

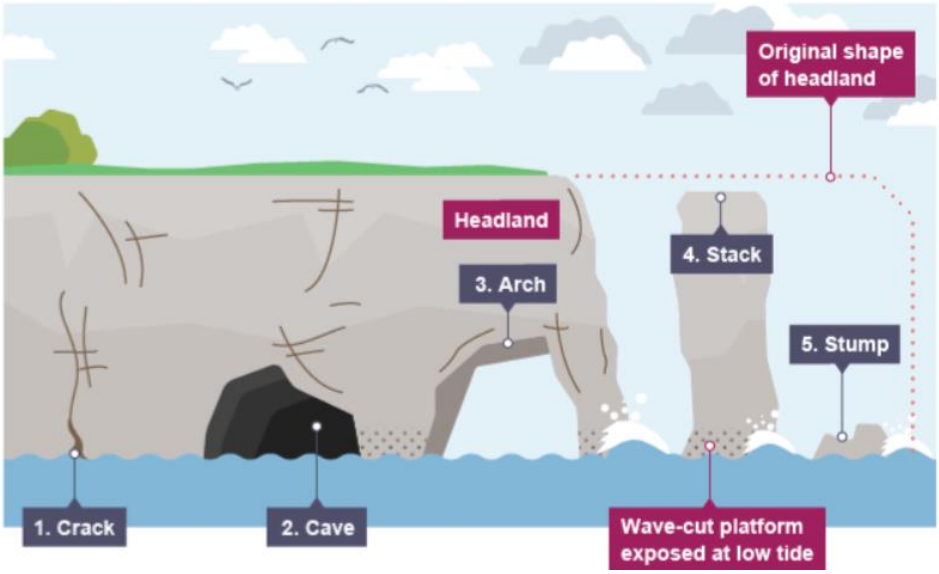
What is a coast?

A coast is a strip of land that meets the sea or ocean. This land could be made of things such as rock, sand, mud or gravel. The UK has around 31,368 km of coastline.

Coasts around the UK

Coasts are always changing. These changes are caused both by nature and humans.
This means that coasts have lots of different features, such as beaches, cliffs, islands, caves and mudflats.
The UK is surrounded by the North Atlantic Ocean, the North Sea, Irish Sea, and the English Channel.
It is a maritime nation, which means that the lives of people living here are connected with the sea.

Coastal features - erosion



Cracks are widened in the headland through the erosional processes of hydraulic action and abrasion.
As the waves continue to grind away at the crack, it begins to open up to form a cave.
The cave becomes larger and eventually breaks through the headland to form an arch.
The base of the arch continually becomes wider through further erosion, until its roof becomes too heavy and collapses into the sea. This leaves a stack (an isolated column of rock).
The stack is undercut at the base until it collapses to form a stump.

Coastal features – deposition

Pieces of rock that have fallen off are then tossed around by the waves and broken down into rounded stones and sand.
These pieces are carried by the water to more sheltered parts of the coastline, where the calmer, slower waves deposit the stones and sand.
These deposits can form long beaches, spits and sand dunes.

https://www.bbc.co.uk/bitesize/articles/z7yc4xs
https://www.youtube.com/watch?v=aR3fQKTZukM
https://www.youtube.com/watch?v=0a7ak3jthy4