

SPRING TERM Y3/4 Fragile Earth



Knowledge:

Volcanoes are made when pressure builds up inside the earth. This affects the earth's crust causing magma to sometimes erupt through it.	
Active volcanoes have erupted in the last 10000 years. Dormant volcanoes haven't erupted in the last 10,000 years but may erupt again. Extinct volcanoes aren't expected to erupt again.	
Volcanoes can be formed in three ways: plates moving apart, plates over lapping each other, a thin plate creating a hot spot.	
There are 3 ways a volcano erupts to create shield, strato and cinder cone volcanoes.	
The earth has 3 layers- the crust, the mantle and the core	
The Earth's crust is made up of huge slabs called tectonic plates that fit together like a jigsaw. They slowly move over a period of time.	
EARTHQUAKES: Tectonic plates have edges that get stuck but the plates keep shaking and vibrating. Pressure starts to build and once strong the plates suddenly move causing an earthquake. Earthquakes are measured by the strength of the vibrations known as the Richter scale.	
MOUNTAINS are a natural part of the landscape with steep slopes that rise above 300m. They have a summit of at least summit and can be grouped together called a range. Fold mountains are formed by tectonic plates colliding and rock being pushed up. There are many kinds of mountain -fold, fault-block, volcanic, dome, plateau.	
Rivers: The source of most rivers is on high ground or in the mountains. There are 3 stages of a river- upper course, middle course, lower course. Some rivers join up with other rivers called tributaries. The place where a river begins is called the source and the point where a river joins the sea is called the mouth.	
Water Cycle- clouds form when warm, moist air is cooled. When it is cools it condenses into tiny water droplets which appear as clouds. Heat from the sun evaporates water into water vapour, which rises, condenses in the cool air and then falls back down to earth.	
Climate Change: Pollution- chemicals can poison animals. Litter can be ingested by animals or trap them. Fertilisers can cause a lack of oxygen and kill them. Marine Protection and Conservation- just under 25% of UK waters are protected. 71% of our Earth is covered by ocean. Tiny marine plants produce over half of the world's oxygen, the ocean absorbs carbon dioxide gases that make our planet warmer and billions of people depend on marine life to sustain their own. If our oceans don't thrive, neither will we. Reducing Pollution- be careful what you throw down the sink or toilet. Don't throw litter into lakes, rivers or oceans. Use environmentally friendly cleaning products and be careful what you throw down the sink or toilet. Don't throw litter into lakes, rivers or oceans. Use environmentally friendly cleaning products	

Vocabulary and background knowledge:



mantle	A portion of the earth between the crust and the core
magma	Extremely hot, liquid rock
Tectonic plates	The earth's crust is made up of large plates that join together
crust	The outer layer of the earth
active	A volcano that's erupted recently or is about to erupt
mantle	The part of the earth between the crust and the core
dormant	Not active-but is capable of becoming active later on
summit	The highest point of a mountain
avalanche	A large amount of snow that quickly moves down a mountain or slope
estuary	Where a river meets the ocean
tributary	A small river or stream that joins a bigger river
current	The strength and speed of a river
meander	A curve in the river
pollution	Anything introduced to a habitat which has a harmful effect on plants and animals living there
Climate change	Long-term shifts in temperatures and weather patterns
Water cycle	The process by which water om earth evaporates
Global warming	A type of climate change where the earth gest warmer
Greenhouse effect	The process of gases holding warmth around the earth and making it warmer
Polar ice caps	Very large chunks of ice at the North and South poles of the earth
Endangered species	An animal or plant that is in danger of dying out

Recommended Reads:



Skills: understanding an atlas-identifying oceans/rivers/continents

Drawing and labelling diagrams-linked to Geography and Science

Using ICT for research-retrieving key facts.

Practical skills-designing and making using recyclable materials-joining/cutting,measuring

Making Links:

Mathematical- statistics linked to plastic pollution/percentages/understanding charts and graphs

Measuring liquids-link science/geography

Understanding measures linked to heights of mountains/depths of the earth's core etc

ICT- research/word processing/making power points

British Values

Democracy- rules against plastic pollution/climate change/write our own manifesto/climate protest/write to an MP

Tolerance- listening to views about how to make changes to our lives to protect our planet/Greta Thunberg

Rule of law- rules to help protect living creatures

Mutual Respect- respecting all living things/ways to respect our environment/make changes to our planet



Values & attitudes we can always show in this project:



The World beyond our doorstep...



Quality Outcomes & Experiences:

- Making our own volcano explode
- Climate change debates/action groups
- Writing a letter to an MP/Head Teacher
- Re-using materials-designing and making-DT project
- Organise a whole school Plastic free day.
- The Water Cycle in a plastic bag!
- Exploring the inspirational speeches of eco heroes- Attenborough/Greta Thunberg

Local

- exploring our own local environment. Pollution in the Brayford etc/Recycling plants in Lincoln. What happens in our local area to help our planet? Explore local councils.

National

- UK river pollution/know and identify main rivers in UK

International

- Blue Planet- what's happening to our world? Extreme weather because of climate change. What can we do to make a difference? Locating the ring of fire on a world map.