

INTENT

In this topic the children will investigate the Earth we live on! They will begin by learning the make-up of the Earth, and what is happening under the crust. During the topic, they will about different natural disasters, locating these geographical features on world maps and discussing how they form and why they happen. They will use a range of sources to identify famous volcanoes and natural disasters and retrieve information about these. They will identify the main similarities and differences between natural disasters and judge their impact on their surroundings, both on physical geography and on humans, and make links between these. They will conclude on whether the power of nature is more or less powerful that the power of humans, reasoning their thinking.

Independence



GEOGRAPHY

SCIENCE

ART

ENGLISH

HOOK

Create 3D models of the layers of the Earth (Styrofoam ball, salt dough, paper pop-up) and lava lamps

ESSENTIAL QUESTION/CHALLENGE

'The power and beauty of nature can make fun of humans at any time'- David Attenborough. Can you compare and contrast the impact that different natural disasters have on their surroundings?

OUTCOME

Make mod-roc volcanoes and erupt using vinegar and bicarbonate of soda

**EXPERT INPUT**

- Anjana Khatwa (Sarita's Mum)- archaeologist

LEARNING THROUGH ROLE PLAY

- Natural disaster roleplay- what would happen?
- Earthquake re-enactment
- Conscience alley for living near a volcano/plate boundary
- Hot seating for people who have experienced these events

Year 3

Extreme Earth

Spring 2

<u>Learning in action: Developing an Inquiry Mind-set</u> <u>1. Knowledge</u> (remember) What is the make-up of the Earth? What is a volcano? Earthquake? Tsunami? Can you name examples of volcanoes and natural disasters? <u>2. Comprehension</u> (understand) Can you describe what it would be like to live near a volcano? Can you describe the different types of volcano and how they form? Can you describe why earthquakes happen? How can humans predict and protect themselves from extreme weather or disasters? <u>3. Application</u> Draw a map of plate boundaries Identify the 'ring of fire' on a world map Write an explanation text to detail how features form, happen and effect the surrounding areas <u>4. Analysis</u> (outcome) Which natural disaster would cause the most damage to people? The environment? <u>5. Synthesize</u> (create) Create a model showing the make-up of the Earth Make a mod-roc volcano and erupt Design a poster describing examples of volcanoes Make an earthquake proof house <u>6. Evaluation</u> 'The power of nature can make fun of the power of humans at any time'- David Attenborough. Can you compare and contrast the impact that different natural disasters have on their surroundings? Is the power of nature more powerful than the power of humans? Why?	<u>As geographers we will:</u> - Explore the Earth's extreme climates by investigating what climates there are on our planet and finding out about the hottest, wettest, coldest and driest places on Earth - Find out about the water cycle and how it works to result in different levels of rainfall in different parts of the world - Investigate a variety of extreme weather phenomena, such as tropical storms, floods, lightning, hurricanes and tornadoes, and the effects these can have on people and the landscape - Explore how the Earth's surface is split up into tectonic plates and the resulting earthquakes that occur when they move - Find out how tsunamis are caused by earthquakes under the sea floor, focusing on the effects on an environment - Identify the differences between a volcano and a mountain - Discover how volcanoes are formed and what happens when one erupts - Explore the aftermath of a natural disaster and how aid agencies and charities can help <u>As scientists we will:</u> - Identify naturally occurring rocks and explore their uses, giving examples of where we might find these rocks locally - Group rocks according to their characteristics - Plan, carry out and evaluate experiments to compare rocks - Identify rocks that are used for particular purposes - Explore soil and how it is formed - Explore what fossils are and how they are formed - Identify fossilised remains and discuss where we might find rocks locally - Discuss the life of Mary Anning and her influence on fossils <u>As artists we will:</u> - Explore Hokusai's artwork <i>The Great Wave</i> by investigating how woodblock prints are made - Explore the movement of tornadoes and use line, shape and shading to create colourful tornado pictures - Investigate the animals which live in extreme climates and create a clay sculpture of one of these animals. - Realise the beauty of the natural world and use different mediums to portray this	<u>Curriculum Objectives</u> <u>Geography</u> Locational Knowledge - Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities - Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics Human and Physical Geography - Describe and understand key aspects of: - Physical geography, including: climate zones, biomes, vegetation belts, rivers, volcanoes and earthquakes, and the water cycle - Human geography, including: land use, economic activity including trade links, and the distribution of natural resources including, minerals Geographical Skills and Fieldwork - Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied <u>Science</u> Rocks and Fossils - Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties - Describe in simple terms how fossils are formed when things that have lived are trapped within rock - Recognise that soils are made from rocks and organic matter <u>Art</u> - to create sketch books to record their observations and use them to review and revisit ideas - to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] - learn about great artists, architects and designers in history
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How we evaluate?

*Thinking Hats will be used to reflect upon our overall outcomes at the end of the learning experience, ideas will be captured in their topic journals

*Peer and self-assessment will be used throughout the design process

*Concept mapping will provide formative assessment opportunities as the topic progresses and allow children to learn how to organise their gained knowledge and understanding



What stuck with you?

- Children will be able to identify and name the 4 sections of the Earth
- Children will be able to explain plate boundaries and their impact on earthquakes, volcanoes and tsunamis
- Children will be able to give examples of famous volcanic eruptions, earthquakes and tsunamis and locate these on a map
- Children will be able to discuss different types of rock and investigate similarities and differences within their features



Deeper Thinking

- Children will be able to demonstrate deeper understanding on the main similarities and differences between natural disasters and make links between them
- Children will be able to how humans can predict and protect themselves from extreme weather or disasters
- Children identify ways in which life can be benefitted from natural disasters

Wider and Discrete Learning Opportunities:

DT: Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided, design, select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities, investigate and analyse a range of existing products, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work, understand how key events and individuals in design and technology have helped shape the world- *Making volcanoes, 3D models of Earth, Earthquake proof houses, lava lamps*

Music: Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression, improvise and compose music for a range of purposes using the inter-related dimensions of music- *Making storm and eruption compositions*

PSHE: Impact on people's lives of natural disasters, Living close to these features