

Hook:

Questions for books

Go to the park and collect rocks, group them how they think and take photos for book



Tremors

Focus: Science / Geography



Knowledge:

- What are the three kinds of rocks?
- How is each kind of rock formed?
- What is a fossil?
- How is a fossil formed?
- What are the layers of the Earth?
- Why do volcanoes erupt?
- How are volcanoes formed?
- What happens when a volcano erupts?
- What causes natural disasters?

Learning Journey:

After collecting rocks, learn the three different types of rocks and how they are made.

Watch videos about how they are made.

Actions for the 3 types to help to remember

Learning Journey:

Sort the rocks—children to choose their method e.g. size, colour etc

Fair test.

Science investigation—permeability, durability, can you change shape by adding pressure, float or sink etc. Draw conclusions about the different types of rock.

Learning Journey:

Fossils—how are they made? Step by step report about how they layers are built up and how the pressure is built up for their books

Make own fossils—understand that the fossil is the imprint not the bones. Take photos for books

Learning Journey:

Volcanoes

What are the layers of the Earth and the layers of a volcano?

Make a labelled report for their book

Different types of volcanoes, Locate volcanoes on map (use key building on Y2)

Vocabulary:

Sedimentary	Igneous
Metamorphic	Fair test
Permeable	Dense
Durable	Crust
Mantel	Inner Core
Outer Core	Active
Dormant	Extinct
Magma	Lava
Mountains	Volcanoes
Earthquakes	

Characteristic foci:

Creativity / Independence

Skills:

- Compare and group
- Complete a fair scientific experiment considering variables
- Use of maps. Atlases, globes and digital computer mapping
- Safely use internet to research
- Use ipads to take photos
- Describe and understand mountains, volcanoes and earthquakes

Curriculum Coverage:

- recognise that soils are made from rocks and organic matter
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- physical geography, including: , mountains, volcanoes and earthquakes

Learning Journey:

Natural disasters

What other natural disasters are there?

How are they related?

How do they occur?

Trip / Visitor:

Visit to the park to collect rocks

Display Plan:

Reports of volcanoes / layers of earth reports

Outcome:

Individual books about their learning, includes flaps / photos / pictures etc including a glossary to define scientific vocab



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What do they already know?

Year 1

- Use a map and globe
- What are the 7 different continents? (link to whole world exploration of tectonic plates)
- What different materials are there?
- Can you describe...?
- Which materials are waterproof?
- What materials can be found around the classroom/ school/ outside?

Year 2

- What is a human feature?
- What is a physical feature?
- What is a map?
- Why do we use a map?
- What is a key? (linked to keys on volcano maps—active, dormant, extinct)
- What are the 5 oceans called?
- Where is each ocean located? (linked to oceans over tectonic plates leading to numerous natural disasters)
- What is a material?
- How many different materials can you name?

How will they remember it?

Recap prior learning from year 2 at the start of the topic

Recap that learning and learning from each lesson at the start of the next lesson

Mini quizzes / recap learning learnt so far on group posters or as a book exercise 'present how you want' choices

Actions for different types of rock formation'

Use of learning line on display

Which resources will I need?

Permission for park trip

Zip lock bags for rock collecting

Access to internet - use of volcano website

Tough spot for volcano explosions (homework)

Equipment for experiment—pipets, bowls, paperclips, rock kit, results table

Plastic cups

Clay

Fossil imprints (e.g. dinosaur toy)

What do I need to know to be able to teach this?

3 different types of rock—sedimentary, metamorphic, igneous (plus actions for how they are formed)

Effects of tectonic plates on natural disasters

Results of test

Answer: Earth's layers and their names

EARTH'S LAYERS

Core:
Innermost layer, made of iron and nickel. It is the hottest part of the Earth. It is divided into the inner core and outer core.

Mantle:
The layer between the core and the crust. It is made of hot, molten rock. It is divided into the upper mantle and lower mantle.

Crust:
The thin outer layer of the Earth. It is made of solid rock. It is the layer we live on.

Atmosphere:
The layer of gases surrounding the Earth. It is the layer we breathe. It is made of oxygen, nitrogen, and other gases.

Inner Core:
The innermost part of the core, made of solid iron and nickel.

Outer Core:
The outer part of the core, made of molten iron and nickel.

Upper Mantle:
The upper part of the mantle, made of solid rock.

Lower Mantle:
The lower part of the mantle, made of molten rock.

Inner Core:
The innermost part of the core, made of solid iron and nickel.

Outer Core:
The outer part of the core, made of molten iron and nickel.

Upper Mantle:
The upper part of the mantle, made of solid rock.

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