

Teacher's notes Earth Sciences



CUILCAGH
LAKELANDS
GEOPARK



This fun education programme involves 3 different hands-on experiments to teach pupils about Volcanoes, Earthquakes, and Meteorites. Not only will pupils learn the basics of plate tectonics and the Earth's structure, but they will have a chance to predict an earthquake, see the impacts of a meteorite and make our model volcano erupt!

Level: NI: Key stage 2
ROI: 3, 4, and 5th class

Time required: 90 minutes

Curriculum links: This experiment links with the National Curriculums of Northern Ireland (The World Around Us) and Ireland (Geography, History and Science)

| Northern Ireland | Ireland |
|--|--|
| <p>Change Over Time: Ways in which change occurs over both short and long periods of time in the physical and natural world (KS2): How the world has changed over time; How change is a feature of the human and natural world and may have consequences for our lives and the world around us</p> <p>How change is a feature of the human and natural world and may have consequences for our lives and the world around us (KS2): comparing an aspect of the community over a long period of time; Some of the characteristics of past societies and distinctive features of life in the past.</p> <p>Place: Features of, and variations in places, including physical, human,</p> | <p>Geography - Natural Environments: The local natural environment; Land, rivers, and seas of my county; Rocks and Soils; Weather, climate and atmosphere</p> <p>History - Local Studies: Buildings, sites or ruins in my locality; My locality through the ages; Continuity and change in the local environment;</p> <p>Science – Environmental Awareness and Care: Environmental awareness</p> <p>Science – Living Things: Human life; Plant and animal life</p> |



climatic, vegetation and animal life (KS2): Places then and now

Interdependence: The effect of people on the natural and built environment over time (KS2): Ways in which the use of natural resources through time has affected the local and global environment; Local habitats; Ways in which the use of natural resources through time has affected the local environment

Learning Objectives:

Students will understand:

- the Earth is a dynamic planet, the earth's structure and plate tectonics
- earthquakes occur along plate boundaries, earthquakes are difficult to predict, earthquakes have severe consequences for the human population
- what a meteorite is, how we find meteorites, the different types of meteorites, what happens when meteorites fall to Earth
- Ireland's history of volcanoes and how they have created the current landscape, the science behind a volcanic eruption through the build up of pressure and release of gasses, the different types of volcanoes, and the three different states of volcanos

Students will have developed their skills in:

- Investigating and experimenting
- Observing
- Recording and communicating

They will use these resources:

- **Geopark model volcano and volcano experiment materials including vinegar and baking powder**
- **Geopark meteorite samples and Meteorite experiment materials including sand and rocks**
- **Geopark earthquake prediction materials including small weights and party poppers**

Structure of the Day:

Pupils will be split into three groups to take part in the three experiments

| Time | Subject |
|---------|-------------------------|
| 15 mins | Introduction to Geopark |

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|----------------|--|
| 20 mins | Volcano experiment – discussion on what volcanos are, where we find them, how and why they erupt. Pupils will make our model volcano erupt. |
| 20 mins | Earthquake experiment – discussion on the earth’s structure, where earthquakes occur and why, how they are difficult to predict. Pupils will use weights and party poppers to try to demonstrate the difficulty in earthquake prediction |
| 20 mins | Meteorite experiment – discussion on what meteorites are, the different types we find and what happens when they fall to the earth. Pupils will use rocks and sand to create meteorite impact craters |
| 15 mins | Pupils will be asked to reflect on what they have learnt and given booklets to take home/back to school for additional learning |