

prospectus



Disaster! Year 4, 5 and 6

Essential Knowledge

By the end of this unit children will know...

- Use maps, atlases, globes and digital/computer mapping to locate volcanoes and fault lines and identify countries that are most severely affected by earthquakes and other natural disasters.
- Use their understanding of the structure of the earth and the movement of tectonic plates to describe and understand how a volcano is formed and why it erupts.
- Describe and understand the processes that cause a volcanic eruption, an earthquake and other natural disasters.
- Describe and understand the impact of volcanic eruptions and other natural disasters on human settlements.

Launch

Visits and experiences:

www.sciencediscoverydome.co.uk (Mobile planetarium show 'Down to Earth' based on Volcanoes)

Some explosive science linked to the idea of pressure and volcanoes

Make your own exploding volcano!

<http://www.stormthecastle.com/how-to-make-a/how-to-make-a-volcano-for-school.htm>

Explore

Children to research and watch news clips of natural disasters occurring in recent times – Japan Earthquake, Super Storm Sandy, Hurricane Katrina, Typhoon Haiyan – how can we measure the impact of these natural disasters?

Energise

Keep an eye on the news – react to current events. Create a 'Newsroom' covering the story of a breaking event as it happens – write news reels, create movies, write blogs etc. Contact aid agencies to find out how they respond so quickly to natural disasters.

Celebrate

. Use air-drying clay to create 'Pompeii Figures', Demonstrate the volcano models, show video clips of 'news reports'.

Possible School Performances/Assemblies

<http://www.warwickmusic.com/Main-Catalogue/Sheet-Music/Music-Education/School-Musicals/10-Minute-Assembly-Shows/Pompeii-Assembly-Pack---Escape-from-the-Cloud-VC075>

<http://www.songsforteaching.com/badwolfpress/geologyrocksmusicalplay.htm>

Core Subjects:

Links to theme

English

- Journalistic Writing – Children will write newspaper reports about volcanic eruptions and earthquakes as though they are happening.
- Eye-witness accounts.

Mathematics

Measures:

- Compare temperatures inside and outside of a volcano.

Data Handling:

- Use data about earthquakes and volcanic eruptions to draw graphs and tables.
- Analyse data from statistics.
- Use mean, mode median and range.

Calculating:

- Using all four operations to calculate price margins/sale prices of their Pompeii souvenirs.

Science

Science:

- Study of forces inside a volcano and plate tectonics.
- Changing State: Solids, liquids and gases all within a volcano.

Disaster! Theme Content

Personal Development

Spiritual

- What is 'blind faith'?
- Discuss the concept of 'Charity' as an important factor in many religions.
- What relief charities have religious/spiritual links? What are the pros/cons of this?

Moral

- Why do terrible natural disasters happen to good people?
- How does this make us feel?
- How do we express these emotions?

Social

- Children will work collaboratively.
- They will learn to think and empathise with others when thinking about the impact of natural disasters on communities.

Cultural

- How do we adapt to change in our lives – reflect on experiences of victims of natural disasters?
- What lessons or strategies can we learn from this to support us in changes within our lives? – Link to transition.

Foundation Subjects

History, Geography and Citizenship

History:

- Placing significant volcanic eruptions and earthquakes on a timeline.
- Looking at factual evidence of a past society – Pompeii devastated by the eruption of Vesuvius in 79AD.
- Looking at archaeologists and how they discover lost cities and how tourists visit to find out more.

Geography:

- Map Skills – Locating Volcanoes around the earth and naming the countries and continents where they can be found.
- Looking at the physical features of the Earth: Tectonic Plates geographical patterns etc.
- Study of people and place – why do people live near volcanoes and earthquakes.
- Focussed study of 2011 Earthquake in Japan. Effects of Volcanoes and Earthquakes on settlements.

Art and Design and Design Technology

Art: 'Take One Picture' Photos of people fixed by ash – Modroc models of bodies in poses of everyday life.

Design Technology: 'Moldable Materials' – design and make a volcano.

Music, Languages and Physical Education

Music: Creating own volcano music.

Computing

- Using Spreadsheets to organise and present data.
- Converting information.

Disaster! Links to National Curriculum Framework

Core Subjects:

English

Reading - Read aloud and understand the meaning of new words they meet. E.g. converge, tectonic plates.

Reading – Explain and discuss their understanding of what they have read through debate.

Writing – Identify the audience for and purpose of the writing.

Mathematics

Number – Solve number and practical problems involving ordering numbers and the addition of data.

Geometry – Describe positions on the full co-ordinates grid.

Statistics – Calculate and interpret the mean as an average.

Science

Working Scientifically – Create simple models to describe scientific ideas.

Physics – Concepts of pressure and up thrust with regards to a volcanic eruption.

Physics – Understand observed waves and waves on water as undulations which travel through water with transverse motion when focusing on Tsunamis.

Foundation Subjects

History, Geography and Citizenship

Geography – Identify latitude, longitude, hemispheres and the world's countries being able to identify the key aspects of countries physicality including volcanoes and earthquakes.

History – Explore different disasters throughout a long period of time: continuity and change, causes and consequences; similarities and differences to make connections and analyse trends.

History – Use historical enquiry skills when looking at disasters from the past and look at contrasting views with different types of evidence.

Art and Design and Design Technology

Art - Develop their mastery of art and design techniques including drawing, painting and sculpture with a range of materials– pencil, charcoal, paint and clay.

DT– Generate and discuss their ideas on how to design their model of a volcano. Select a wide range of tools and equipment to perform practical tasks e.g. shaping and joining to create a volcano. Evaluate their ideas for their design.

Music, Languages and Physical Education

Music – Improvise and compose music for a range of purposes using the interrelated dimensions of music.

P.E. - Develop their strength, flexibility, strength and balance through dance. Create patterns and movement to represent a volcano.

Computing

Use search technologies effectively, appreciate how results are selected and ranked in order to choose appropriate pieces of information to develop their understanding of the topic.

Disaster! Assessment Opportunities/Tasks within theme

Core Subjects

English

- Journalistic writing– Assessment of Big Write– focusing on the correct application of features.
- Explanation of a volcanic eruption– Assessment of Big Write-focusing on the correct application of features.
- Debate on positive/negative effects of an eruption- Speaking and Listening assessment.

Mathematics

- Compare data from different volcanic eruptions– Data Handling Assessment.
- Which countries have been most affected by Earthquakes? - Data Handling Assessment looking at how children gather, present and interpret information.

Science

- Using moldable materials to create a model volcano which explodes– Chemical reactions children will need to plan and carry out experiments, developing hypothesis, fair tests and evaluating accordingly.

Foundation Subjects

History, Geography and Citizenship

History:

- Organise significant events into chronological order.
- On-going– Select appropriate primary/secondary sources to develop understanding, support arguments and present findings.

Geography:

- Locations of volcanic eruptions– Plot and recognise lines of latitude and longitude. Recognise patterns of activity.
- Understanding of how the physical features affect the human activity with in a location.

Art and Design and Design Technology

Art:

- Select the correct material and then use a variety of techniques to create the desired effects e.g. use of charcoal to create texture, shading and use of shadow in the Pompeii figures.

DT:

- Assess suitability of material chosen for their model of a volcano and their ability to evaluate their final pieces.

Music, Languages and Physical Education

Drama:

- Express through on-going drama activities their thoughts, feelings and emotions about the consequences of natural disasters.

Computing

Spreadsheet - Construct and manipulate data, presenting it in a professional manner.

On-going - Select appropriate and reliable information to assist in their task and support their argument.