

# Knowledge Organiser: Extreme Earth

## English

Weather Reports

Class Reader: Escape from Pompei

Reading Comprehension Packs: EFP

Writing: Acrostic Extreme Earth poetry, personification

## Computing

Blogging and video editing (weather reports and live streaming of events e.g., ground rumbling, buildings shaking)

## Maths

Measurement of temperature

Percentages / Fractions of populations

## Science

Animals Including Humans

Adaptation to their environments

Earth and Space

Volcanic activity in Mars, The Moon and

Venus and hurricanes of Jupiter and Mars.

## Geography

Extreme Locations and Climates

Locations of Volcanoes and Earthquakes

Locations of Tectonic plates

## Art / DT

Build a volcano

Design a model building / bridge to withstand earthquakes

Seascapes

## Extreme Earth

Floods

Droughts

Volcanoes

Tsunami

Earthquake.

Tectonic plates

## RE

What did Jesus do to save human beings and philosophical questioning around natural disasters

## History

Extreme events in History – Pompeii.

Extreme events in modern history – earthquake / Tsunami of 2004.

**RSHE: My relationships / My beliefs**

**MFL: Numbers, food, at the restaurant roleplays**

**PE:**

**Music: Music from around the world**

## The skills you will develop in this topic:

### Geographical skills:

- Use digital and paper maps and atlases (including aerial maps) to find locations specific to topic area.
- Begin to use atlases to find out other information (e.g. temperature)
- Find and recognise places on maps of different scales
- Use 8 figure compasses, begin to use 6 figure grid references.
- Locate the world's countries, Identify the position and significance of lines of longitude & latitude.
- Use atlases to find out data about other places, describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

### History:

- Record knowledge and understanding in a variety of ways, using dates and key terms appropriately
- Devise, ask and answer more complex questions about the past,
- Considering key concepts in history
- Analyse a range of source material to promote evidence about the past
- Understand that the past is represented and interpreted in different ways and give reasons for this
- Begin to offer explanations about why people in the past acted as they did
- Show understanding of some of the similarities and differences between different periods, e.g. social, belief, local, individual
- Give reasons why some events, people or developments are seen as more significant than others

### Maths:

- Solve problems including addition and subtraction, use of measurement (temperatures).
- Using fractions and percentages to interpret data around the impact of natural disasters on local communities.

### Art:

- 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 different artists from around the world
- Create sketch books to record their observations and use them to review and revisit ideas.

**Design technology:**

- Select from and use a wider range of materials and components, including construction materials, according to their functional properties
- Select tools and equipment suitable for the task
- Critically evaluate their work

**Science:**

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- identify scientific evidence that has been used to support or refute ideas or arguments
- report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- use test results to make predictions to set up further comparative and fair tests
- recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
- observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. (They might analyse the advantages and disadvantages of specific adaptations, such as being on 2 feet rather than 4, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers).
- Using previous knowledge to understand natural phenomena on other planets in our solar system.

**RE**

- Philosophical and theological lines of enquiry, **reflecting** and **reasoning** and **exploring** ideas orally

**Computing:**

- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Presentations: Pupils learn to write and deliver a presentation, incorporating a range of media.
- Sound and video: Pupils record and edit media to create a short sequence - extended by editing the final product in using video editing software.
- Working with data: Pupils learn to search, sort and graph information.

**Home Learning Ideas:**

- Find out about the DOs and DON'Ts in an earthquake or Tsunami. Interview adults at home to find out if they would know what to do in one of those situations!
- Make a quiz about famous natural disasters of the last ten years. Quiz the adults in your household to find out how much they actually know.
- Imagine hundreds of people have lost their homes and belongings due to a natural disaster. How would you help them?
- Create a piece of art depicting a natural disaster.
- Investigate any natural disasters in your local area e.g., flooding of the broads.

**Vocabulary I need to Know:**

Extreme conditions / events and natural disasters, tectonic plates, floods, droughts, volcanoes, Tsunami, earthquake, avalanche, wildfire, eruption, hurricane, cyclone, G-force fault zones / lines, tectonic shift, degrees, climate, natural versus physical features, landscape, Celsius, Fahrenheit, catastrophic, death toll, devastation, impact.

**By the end of the topic the children will be able to:**

- name natural disasters, and talk out their impact on physical and natural habitats
- describe key factors in certain natural disasters such as volcanos, and tsunamis
- use their scientific and geographical knowledge to design structures which may withstand natural disasters
- link their learning to philosophical and theological concepts such as human suffering, and charitable acts
- broaden their understanding of the world, and locations in Asia and Europe
- place natural disasters in key historical contexts such as Pompei, Italy
- understand the impact of weather patterns on events such as cyclones and hurricanes which they will be able to relate to their own experience
- use their Maths skills to interpret data and read general information about weather etc.

# Sample Final Products

Weather reports from the BBC studios

Adaptation – super creatures

Newspaper Reports: Fake News

Art Seascapes

Live Weather Reports

Building Volcanoes

Poems

Designing a model earthquake resistant structure

Blogging

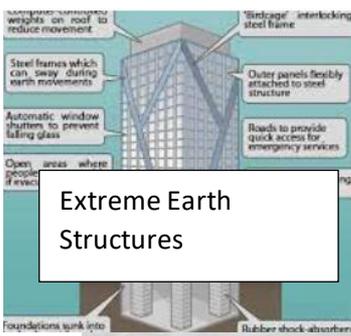


Seascapes Art



Extreme creatures

30 animals thriving in extreme environments



Extreme Earth Structures



Make a Volcano!

Was not the hand of God that brought it here; nor serpent's tail  
while demons cheered. Was not nature bent on revenge,  
for all its suffering by men of ill ends.  
Was not an omen, portent, evil sign;  
not a curse of any kind. Was not  
bad luck, or science run amuck.  
Was not fate; just simply too late.  
The storm was not in the plans;  
city council turned it down  
again. So it came  
in dead of night;  
took the town  
right out of  
sight. Was  
not twister  
that caused  
the fall;  
it was  
money  
that  
killed  
them  
all.

Extreme weather shape poems



Extreme weather Fake News



Class Blogging!



'Live' Weather Reports



Weatherman / Weatherwoman studio reports