



Thematic Planning for the Spring Term
Active Earth – ‘Shake, Rattle & Roll’
Year 6

Additional Requirements Prior to the Unit:

- Display to contain a ‘Wonder Wall’ section for Lesson 1
- Week 4 – Mars Bars for demonstration
- Week 6 – Resources for STEAM Day
- Week 8 & 9 – Cardboard etc. for model volcanoes

Week 1 – Hook

Focus Subject(s):	Geography	RE
Skills	<ul style="list-style-type: none">• Use Geographical Sources to develop Key Lines of Enquiry	
Knowledge:	<ul style="list-style-type: none">• Recall types of Natural Disasters• Recognise our calling to assist those who are suffering throughout the world	

Sticky Knowledge:	n/a – Introductory Lesson
Vocabulary Starter:	Natural Disaster

Teacher guidance	
Session outcome: Overview of Class Key Lines of Enquiry	
Lesson exploration	<p>Catholicity in Curriculum Link: Marvel at God’s Creation (Awe and Wonder of the World)</p> <ul style="list-style-type: none">• Discuss the concept of creation with the children. Who is responsible for creating what in our world?• Awe and Wonder – share clips of earthquakes, volcanoes, tsunamis and landslides. Children to analyse/ponder the process of these, as well as the destruction and devastation they cause. What fascinated them about these natural disasters?• Children to reflect and create a ‘wonder wall’ of questions they have after reflecting on each clip. E.g. why don’t they happen here? Where are they most likely to happen? Why do they happen?• Debate as a class which questions should be included or further researched as part of the topic?<ul style="list-style-type: none">- Why are these questions important to us?- How is this linked to our Catholic faith? (Helping those who are suffering/in need)• Teacher create a print out for books documenting lines of enquiry / children create a finalised wonder wall in their books



Week 2

Focus Subject(s):	Geography
Skills	<ul style="list-style-type: none"> Identify and describe the geographical significance of latitude, longitude, equator, northern and southern hemisphere and time zones
Knowledge:	<ul style="list-style-type: none"> To be able to convert times from different time zones into GMT

Sticky Knowledge:	Types of Natural Disasters – odd one out game?
Vocabulary Starter:	Longitude, Latitude, time zone

Teacher guidance	
Session outcome: Children to label the lines of longitude and latitude on a World Map and understand the different time zones of the World	
Lesson exploration	<ul style="list-style-type: none"> Introduce children to a map of the world displaying longitude and latitude and time zones. Teacher to model how this map would be used. Provide children with the grid map system of the world (showing longitude and latitude) Using or an atlas or their prior knowledge (from previous years study) locate the following on the map: London, Egypt, Italy, France, Spain, Poland, Greece, Brazil, South Africa, Japan, Germany Children to generate co-ordinates of where these countries lay on the map Discuss: what happens the same grid location is for a large area Provide the children with question cards – ‘Breaking news – if an earthquake occurred at _____ time in _____ what time would it be in _____?’ etc.



Week 3

Focus Subject(s):	Geography
Skills	<ul style="list-style-type: none"> Identify places in which earthquakes occur using a variety of sources (including accounts and recounts) Collect and analyse statistics and other information in order to draw clear conclusions about locations
Knowledge:	<ul style="list-style-type: none"> Know where the ring of fire is and locate it on a map

Sticky Knowledge:	Map recap – line significance. Annotate a blank map with as much information as they can remember including lines, countries, continents etc.
Vocabulary Starter:	N/A

Teacher guidance	
Session outcome:	Children will create a map with commentary locating earthquake hot spots.
Lesson exploration	<ul style="list-style-type: none"> Recap: Explore earthquakes (video clip) Identify locations of earthquakes around the world using a variety of sources (newspaper report, map, first hand account, encyclopedia, books, graphs). Possible carousel activity. Children to use the variety of sources to identify the locations of earthquakes then plot them on a World map. Commentary to link back to maps/given locations and identify patterns. (Ring of fire – teacher input to explain and children to then locate the ‘ring of fire’ on their map). Challenge – children to evaluate the effectiveness of the sources.



Week 4 (split lesson into 2 x 1 hour lessons)

Focus Subject(s):	Geography
Skills	<ul style="list-style-type: none"> Devise maps of locations identify patterns (tectonic plates and earthquake zones –tracing paper) Identify and describe the geographical significance of tectonic plates in relation to earthquakes.
Knowledge:	<ul style="list-style-type: none"> Know about the tectonic plates and the effect they have on the planet

Sticky Knowledge:	Ring of Fire Focus – Definition, recall of where it appears on a map
Vocabulary Starter:	Explore the Layers of the Earth: core, crust, mantle

Teacher guidance	
Session outcome:	Multi-layered map with analysis & Animation of Tectonic Plate Demo
Lesson exploration	<p>Big question lesson: Is there a relationship between tectonic boundaries and disaster locations? And why?</p> <ul style="list-style-type: none"> Provide Children with a simple explanation as to what a tectonic plate is Children to create a tracing paper map of tectonic plate layout in the World using atlases (children trace this). Children to place tracing paper over completed earthquake hotspot map from last lesson Explore and explain correlation between location of tectonic plates and earthquakes What can they conclude from this correlation? Define a tectonic plate and their links to earthquakes Teaching point – how do earthquakes occur? Watch the video on BBC Bitesize: https://www.bbc.co.uk/teach/class-clips-video/geography-ks1--ks2-earthquakes/zbr2mfr Model this process using the mars bar experiment Children to film this process and narrate it creating an animation



Week 5

Focus Subject(s):	Geography
Skills	<ul style="list-style-type: none"> • Collect and analyse statistics and other information in order to draw clear conclusions
Knowledge:	<ul style="list-style-type: none"> • Know how people across the world are affected by global disasters

Sticky Knowledge:	Comic strip or mind map as to how earthquakes occur
Vocabulary Starter:	Amplitude (earthquake), seismic wave

Teacher guidance	
Session outcome: Spider Charts	
Lesson exploration	<p>Big Question Lesson: Does the measured severity of an earthquake have an impact on the amount of destruction caused?</p> <p>Starter: (Earthquakes close to home)</p> <ul style="list-style-type: none"> • Show a picture of the after effects of the earthquake in Folkestone, Kent, on 28th April 2007. The earthquake had a magnitude of 4.3 on the Richter scale. Do not contextualise the information. Pupils should identify enquiry questions: who, what where, why? What is the evidence? <p>Pupils may assume that the damage on the photograph is a product of stormy weather, the collapse of a badly built structure or vandalism. Discuss that earthquakes in the UK are infrequent, but can happen. In fact, between 200 and 300 earthquakes are detected in the UK, by the British Geological Survey every year. The risk from these earthquakes is not insignificant.</p> <p>Explore latest earthquake occurrence in the UK visit the British Geological Survey site: http://www.earthquakes.bgs.ac.uk/earthquakes/recent_uk_events.html You will be surprised how many earthquakes there are.</p> <ul style="list-style-type: none"> • Give the children a variety of pictures of destruction of the aftermath of earthquakes. Children are to rank these in order of devastation/severity just from looking at the pictures. <p>Explain that there is actually a scale that does this for us: Richter scale. Children to then research the level of the earthquake on the Richter scale. Were their judgements correct?</p> <p>Children to complete a spider chart documenting the Richter scale, deaths, cost of destruction (Hand draw or using Excel)</p> <ul style="list-style-type: none"> • Can children spot any patterns between the Richter scale ranking, cost of destruction and deaths? Are there any anomalies?



Week 6 – STEAM Day

Focus Subject(s):	Geography	Design Technology
Skills	<ul style="list-style-type: none"> Investigate how societies have adapted to living in disaster-prone areas. Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Plan the order of their work, choosing appropriate materials, tools and techniques. Identify the strengths and areas for development in their ideas and products Know how to reinforce and strengthen a 3D framework. Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. 	
Knowledge:	<ul style="list-style-type: none"> Know how people across the world are affected by global disasters 	

Sticky Knowledge:	Richter Scale and its purpose. Impact and effects of earthquakes
Vocabulary Starter:	Structure, stability, aftershock

Teacher guidance	
Session outcome: Children to build and investigate earthquake secure structures	
Lesson exploration	<p>STEAM Focus – designing an earthquake structure</p> <ul style="list-style-type: none"> Investigate pictures of destruction and the aftermath of earthquakes. Can they identify the key factors attributed to destruction? - Buildings Initially show the children a square structure model building (how most buildings would be structured across the world) and ask the children to replicate with materials available (straw, plasticine, spaghetti, marshmallows, Kennex) <p>Whilst constructing children are to investigate the following: does the length of the straw impact the movement of the building? Is this a sound structure? Does the total height of the structure impact the movement?</p> <ul style="list-style-type: none"> Children to reflect on the stability of this structure during an earthquake? - Children to draw conclusions that Square structures are not the most stable. Look at adaptions made by countries in which earthquakes are frequent to help the stability of buildings – Japan, San Francisco Look at the X structure Children to create a building that will withstand an earthquake based on this new knowledge. Whose structure can withstand the strongest ‘earthquake’? <p>Plan It – plan their design using the existing structures as inspiration with commentary</p> <p>Build It – Children to use same materials as they used to build their ‘square’ structure so that they have direct comparison</p> <ul style="list-style-type: none"> Children test their structures on a vibration plate increasing vibrations – create a class record (graph/table) of which structures withstood the strongest vibrations Review It – which structures work best?



Week 7 – Round up of Earthquake Learning

Focus Subject(s):	Geography
Skills	<ul style="list-style-type: none"> Hypothesise the likelihood of a disaster in a given location using extrapolation of created sources (own maps) and additional geographical features (longitude, etc) Collect and analyse statistics and other information in order to draw clear conclusions
Knowledge:	<ul style="list-style-type: none"> Use prior knowledge to support analysis

Sticky Knowledge:	Knowledge Quiz – Learning so far
Vocabulary Starter:	Adaption, plate boundary

Teacher guidance	
Session outcome: Case File for given country	
Lesson exploration	<ul style="list-style-type: none"> Knowledge Quiz on learning so far Children are given two locations of where an earthquake could occur Children conduct an independent enquiry into the likelihood of an earthquake in these locations (Use the map and tectonic plate boundary information, have earthquakes happened there in the past? Have the country made any adaptations?) Use evidence from prior learning to create mini-case files



Week 8 – Make Volcano

Focus Subject(s):	Geography	Art	Design Technology
Skills	<ul style="list-style-type: none"> Purposely control the types of marks made and experiment with different effects and textures inc. blocking in colour, washes, thickened paint creating textural effects. Mix colour, shades and tones with confidence building on previous knowledge 		
Knowledge:	<ul style="list-style-type: none"> Know how volcanoes are formed Know how volcanoes occur 		

Sticky Knowledge:	Recall names of famous volcanoes
Vocabulary Starter:	Volcanoes, magma, lava, viscosity

Teacher guidance	
Session outcome: Model Volcano / Pic Collage	
Lesson exploration	<ul style="list-style-type: none"> Explore with children how volcanoes are formed. Can children recall any famous volcanoes/volcanic disasters from prior learning? Look at types/features of a volcano – explore vocab and terminology Look at where they are found within the world and their surrounding areas (some are located near settlements, some are located near forest areas etc.) Children are then to create a 3d model of their own volcanoes labelling each feature, ensure their model contains some aspects of the surrounding areas. Pic Collage to be created during the making process and recorded in children's books.



Week 9

Focus Subject(s):	Geography	Art	Design Technology
Skills	<ul style="list-style-type: none"> Collect and analyse statistics and other information in order to draw clear conclusions 		
Knowledge:	<ul style="list-style-type: none"> Know how volcanoes are formed Know how volcanoes occur Know how people across the world are affected by global disasters 		

Sticky Knowledge:	Children to use their volcano model to explain their understanding of the features of volcanoes
Vocabulary Starter:	Volcanoes, magma, lava, viscosity

Teacher guidance	
Session outcome: Evaluation	
Lesson exploration	<ul style="list-style-type: none"> During this lesson, children will use their models to replicate a volcanic eruption. Teachers to model the significance of each component of the volcanic eruption and how this relates/equates to real life volcanic eruptions Children are then to take part in using the materials provided to create their own volcanic eruption – they are to consider the effects of the volcanic eruption in real life circumstances and using their model as a basis, look at how the surrounding areas of the volcanic site are affected Children to write an evaluation to summarise their learning from this task



Week 10 – Volcano Study

Focus Subject(s):	Geography	English
Skills	<ul style="list-style-type: none"> Identify places in which Volcanoes occur using a variety of sources (including accounts and recounts) Collect and analyse statistics and other information in order to draw clear conclusions about locations Conduct an independent geographical enquiry into volcanoes. 	
Knowledge:	<ul style="list-style-type: none"> Know how volcanoes are formed Know how volcanoes occur Recall significant natural disasters across the world Know how people across the World are affected by global disasters. 	

Sticky Knowledge:	How Volcanic eruptions occur and the impact of their eruptions
Vocabulary Starter:	Dormant, Active, Extinct

Teacher guidance	
Session outcome: Newspaper Report	
Lesson exploration	<ul style="list-style-type: none"> Teacher to provide children with a selection of famous volcanic eruptions from across the world Children are to become reporters for a newspaper article breaking the news of this eruption to the world. They must report on the location, how it occurred, the destruction caused(statistics needed) and the problems faced moving forward Children to research these elements using a variety of sources (planning scaffold may be provided) Children to write a newspaper article detailing the event



Week 11 – How we can help? Link to values question

Focus Subject(s):	Geography	RE
Skills	<ul style="list-style-type: none"> Identify places in which Global Disasters occur using a variety of sources (including accounts and recounts) Collect and analyse statistics and other information in order to draw clear conclusions about locations 	
Knowledge:	<ul style="list-style-type: none"> Understand how we as Catholics can help those in need Know how people across the World are affected by global disasters. 	

Sticky Knowledge:	Mind Map to showcase their accumulation of Knowledge across the topic
Vocabulary Starter:	Vocab from across the topic recap (Kahoot Quiz?)

Teacher guidance	
Outcome:	
Exploration over time	<p>Big Question: How can we help those who are suffering in the wake of a natural disaster?</p> <ul style="list-style-type: none"> Children to reflect on the impact of Natural Disasters on those around the world. Are there charities affiliated with helping those in need? What could we do to assist in helping those who are suffering due to natural disasters? Children to write a persuasive letter to their principal to explain why we need to help and to ask if we can plan a fundraiser in which all proceeds go to those in need of assistance due to the effects of natural disasters

