

# Extreme Earth: Cross-Curricular Topic : Year 5/6

Geography		Extreme Earth		Art	
1	Explore the Earth's extreme climates by investigating what climates there are on our planet and finding out about the hottest, wettest, coldest and driest places on Earth.	A KS2 cross-curricular topic for Year 5/6		1	Explore Hokusai's artwork <i>The Great Wave</i> by investigating how woodblock prints are made.
2	Find out about the water cycle and how it works to result in different levels of rainfall in different parts of the world.			2	Explore the movement of tornadoes and use line, shape and shading to create colourful tornado pictures.
3	Investigate a variety of extreme weather phenomena, such as tropical storms, floods, lightning, hurricanes and tornadoes, and the effects these can have on people and the landscape.	DT		3	Investigate the animals which live in extreme climates and create a clay sculpture of one of these animals.
4	Explore how the Earth's surface is split up into tectonic plates and the resulting earthquakes that occur when they move.	1	Design, make and evaluate a waterproof container which can be used to protect precious items during a natural disaster.	PSHE	
5	Find out how tsunamis are caused by earthquakes under the sea floor, focusing on the effects that tsunamis can have on an environment.	2	Design, make and evaluate an information box which provides interactive information on natural disasters.		
6	Identify the differences between a volcano and a mountain. Discover how volcanoes are formed and what happens when one erupts.	Music			
		1	Use percussion to create a storm composition.	2	Consider the effects of famine and drought around the world and how we can help.
		2	Rehearsing and performing a composition using instruments to portray a natural disaster.	3	Consider the effects we as humans have on climate change and what personal actions can be taken to reduce our carbon footprints.

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GEOGRAPHY				
	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To find out about the Earth's climate and areas of extreme temperatures.	In this first lesson the children will be introduced to the hottest, driest, coldest and wettest places on the planet. They will need to think about the location of these places on the planet and use their knowledge to reason why these places may have these extreme climates.	<ul style="list-style-type: none"> <li>Do children know that places in the world near the equator are generally hot?</li> <li>Do children know that the coldest places in the world are by the poles?</li> <li>Can children describe how climates and weather conditions vary around the world?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C/1D</li> <li>Fact Cards</li> <li>Atlases/access to internet</li> <li>Information Cards (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To find out about the water cycle and the distribution of water across the world.	Children will investigate the water cycle and how this continuous process creates precipitation and rivers. They will also reflect on what happens to environments when there is drought and who this can affect.	<ul style="list-style-type: none"> <li>Do children know that all the water in the world moves in a continuous cycle?</li> <li>Can children describe the different stages of the water cycle?</li> <li>Can children describe what a drought is and how they are caused?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C/2D</li> <li>Information Sheet (FSD? activity only)</li> <li>Books/access to internet (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To find out about extreme weather conditions across the world.	This lesson explores the different types of extreme weather that can occur around the world and what causes them. The children have the opportunity to reflect on any extreme weathers they have witnessed themselves and research and investigate instances of extreme weather from around the world.	<ul style="list-style-type: none"> <li>Can children identify and name examples of extreme weather?</li> <li>Can children explain why some of these examples of extreme weather occur?</li> <li>Can children communicate their knowledge of extreme weather in a variety of ways?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C</li> <li>Information Sheet (FSD? activity only)</li> <li>Picture Cards (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To find out about earthquakes and what causes them.	Children will learn about earthquakes and how the movement of the tectonic plates cause them. They will explore and discuss the effects that earthquakes can have on a community and how earthquakes can be measured using the Richter scale.	<ul style="list-style-type: none"> <li>Do children know what causes earthquakes?</li> <li>Do children know that some places in the world are more prone to earthquakes than others?</li> <li>Can children use maps to identify areas that are prone to earthquakes?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C</li> <li>Earthquake Cards A/B</li> <li>Earthquake Zone Map</li> <li>Plate Tectonics Map</li> <li>Challenge Cards (FSD? activity only)</li> <li>Extreme Earthquakes sheet (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To find out about tsunamis and how they are caused.	Following on from the previous lesson the children will use their understanding of earthquakes to describe how a tsunami is created. They will look in detail at the effects of the 2004 Boxing Day tsunami and the lasting effects it had on the environment and the people living there.	<ul style="list-style-type: none"> <li>Do children know that a tsunami is caused by movement of tectonic plates?</li> <li>Can children describe the effects of a tsunami?</li> <li>Can children identify areas of high risk on a world map?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B</li> <li>Sentence Cards</li> </ul>
<b>Lesson 6</b>	To find out what volcanoes are and how they are formed.	Consolidating their knowledge of the Earth's tectonic plates, the children learn about volcanoes around the world. They will learn to distinguish between active, dormant and extinct volcanoes as well as exploring the connection between the tectonic plates and the locations of volcanic activity.	<ul style="list-style-type: none"> <li>Do children know why volcanoes erupt?</li> <li>Can children convey their knowledge of volcanoes in a variety of ways?</li> <li>Can children describe volcanoes using geographical and descriptive language?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 6A/6B/6C</li> <li>Picture Cards</li> <li>Volcano Acrostic sheet</li> <li>Help Sheet (FSD? activity only)</li> <li>Materials as listed on Help Sheet (FSD? activity only)</li> <li>End of Unit Quiz</li> </ul>

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ART				
	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To explore and recreate Hokusai's 'The Great Wave'.	The children will analyse <i>The Great Wave</i> by Hokusai, looking at the colours, features and materials used to create the famous picture. They will use their analysis to inspire their own 3D recreation of <i>The Great Wave</i> using paper and layering colours.	<ul style="list-style-type: none"> <li>Do children know who Hokusai was and how he created 'The Great Wave'?</li> <li>Can children analyse 'The Great Wave' and express how they feel about it?</li> <li>Can children use a variety of skills to recreate 'The Great Wave'?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Picture Card</li> <li>Worksheet 1A/1B</li> <li>Card</li> <li>Sticky Foam Pads</li> <li>Watercolours</li> <li>Variety of art materials, e.g. pastels, paints, tissue paper, etc. (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To use colour, line and shading to create artistic tornadoes.	This lesson will help the children focus on lines and shading to create a 3D effect when colouring their tornado-inspired artwork. Using curved lines and changing between concave and convex lines the children can create a rounded effect in their drawings.	<ul style="list-style-type: none"> <li>Can children make decisions about colours to use in their work?</li> <li>Can children use tone and shade in their work to produce effects?</li> <li>Can children evaluate their finished work and say what they think and feel about it?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B</li> <li>Tornado Template</li> <li>Help Sheets</li> <li>Coloured card (FSD? activity only)</li> <li>Sculpture wire (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to create a clay sculpture of an animal that lives in extreme conditions.	Children are challenged to think about how animals have adapted to living in extreme conditions and recreate an animal using clay. They will need to think carefully about the unique features of each and use various tools to create a likeness of their chosen animal.	<ul style="list-style-type: none"> <li>Can children work with an image, exploring line and shape, to gather ideas?</li> <li>Can children work with clay to create a sculpture of a particular animal?</li> <li>Can children assess their finished work and say what they think and feel about it?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C</li> <li>Picture Cards</li> <li>Clay and clay tools</li> <li>Paint and varnish</li> <li>Challenge Cards (FSD? activity only)</li> </ul>



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PSHE				
	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To explore how people around the world respond to natural disasters.	Children will learn about the effects of a natural disaster and the challenges that people might face afterwards. They can explore the work of aid agencies and what they do to support the victims of natural disasters around the world. The lesson looks at the immediate help needed by the affected people and gives the children the chance to reflect on what help might be needed months, years or decades after a natural disaster happens.	<ul style="list-style-type: none"> <li>Do children understand the scale and range of devastation that can occur following a natural disaster?</li> <li>Do children know some of the ways in which aid agencies help after a natural disaster?</li> <li>Can children empathise with those affected by a natural disaster and share their feelings?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C</li> <li>Sentence Cards</li> <li>Video cameras (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To explore how famine, drought and poverty affect people around the world.	In this lesson the children will investigate and explore the effects of drought on a community and how this can lead to many more complications such as disease, malnourishment and poverty. They will also discuss and find out about the differences between long-term and short-term aid and how this can help the suffering communities.	<ul style="list-style-type: none"> <li>Do children know how drought and famine affect people around the world?</li> <li>Do children know how aid agencies respond to the challenges of drought and famine?</li> <li>Can children express their feelings and thoughts about this topical issue?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Picture Cards</li> <li>Word Cards</li> <li>Blank Word Cards</li> <li>Worksheet 2A</li> <li>Access to computers (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To explore how human activity can affect climate change.	The children will learn about climate change and how greenhouse gases are changing the climate of the planet. They will investigate the effects that a warmer climate will have on our planet and what human activities are causing an increase in greenhouse gases in our atmosphere. The children will then go on to discuss ways in which they can reduce their carbon footprint in their own lives, reflecting on which ones they can start doing themselves.	<ul style="list-style-type: none"> <li>Do children know what climate change is?</li> <li>Can children describe some of the effects climate change has on the Earth?</li> <li>Can children describe ways of reducing their carbon footprint?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C/3D</li> <li>Footprint Templates (FSD? activity only)</li> <li>Access to internet (FSD? activity only)</li> <li>Large sheets of paper (FSD? activity only)</li> </ul>



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MUSIC				
	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to use percussion to create a storm composition.	Children will listen to the composition <i>Boom</i> to inspire their own composition to reflect the story of a storm. After listening to the different percussion instruments and how they are used in <i>Boom</i> the children will plan, rehearse and perform their own piece in small groups.	<ul style="list-style-type: none"> <li>• Can children listen and respond to a composition?</li> <li>• Can children work in an ensemble to compose a percussive piece of music?</li> <li>• Can children perform a composition with accuracy and control?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• 'Boom' full track and background track (mp3)</li> <li>• Worksheet 1A/1B</li> <li>• Variety of percussion instruments</li> </ul>
<b>Lesson 2</b>	To be able to compose a piece of music to portray a natural disaster.	Following on from the previous lesson the children will investigate how they can use music and percussion instruments to tell the story of a natural disaster. They are encouraged to think of the tempo, dynamics and pitch in their piece to create a mood for each section of their story.	<ul style="list-style-type: none"> <li>• Can children use a variety of instruments with accuracy and control?</li> <li>• Can children compose a piece of music to portray a particular event, considering volume, pitch, tone, tempo and rhythm?</li> <li>• Can children perform a piece of music with confidence and control?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 2A/2B/2C</li> <li>• Variety of musical instruments</li> </ul>

DT				
	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to design, make and evaluate a waterproof container.	This lesson challenges the children to use their knowledge of different materials to design and make a waterproof container to be used during a natural disaster. They will need to think about making the joins of their container watertight and think about how it will open and close quickly in the event of a disaster.	<ul style="list-style-type: none"> <li>• Can children investigate how waterproof various materials are?</li> <li>• Can children design and make a waterproof container using a variety of materials and techniques?</li> <li>• Can children evaluate their finished products effectively?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 1A/1B/1C/1D/1E/1F</li> <li>• Variety of materials to test (both waterproof and not waterproof), e.g. plastic bags, bubble wrap, fabric, oil cloth, card, etc.</li> <li>• Tools, e.g. scissors, craft knives, staplers, needles and thread, masking tape, sticky tape, etc.</li> <li>• Ready-made containers (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to design, make and evaluate interactive info-boxes.	Children consolidate their knowledge of natural disasters by creating an information box which presents information in an interactive and aesthetically pleasing way. They have the opportunity to use electrical circuits to have their box light up in a certain way or use spinners, shapes and springs to present the information in different ways.	<ul style="list-style-type: none"> <li>• Can children design a variety of interactive features to present information?</li> <li>• Can children follow a design to create an interactive info-box?</li> <li>• Can children evaluate their finished work and identify areas of strength and weakness in their designs?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 2A/2B/2C/2D</li> <li>• Help Sheet</li> <li>• Challenge Cards (FSD? activity only)</li> <li>• Components for circuits</li> <li>• Variety of materials, e.g. dowelling, card, art straws, tubes, etc.</li> <li>• Variety of tools, e.g. scissors, glue, tape, rulers, saws, craft knives, etc.</li> </ul>