



ROSE WOOD ENQUIRY DRIVEN CURRICULUM



Humans vs Nature: Which is more disastrous?

Year 5 Autumn 2 – Spring 1

Rose Wood Academy: Enquiry Driven Learning Overview

Year Group: 5	Humans vs Nature: Which is more disastrous?	Term: A2 - Sp1
Context: In this enquiry, the children will be introduced to what natural disasters are and the impact of human activity is having on our world. They will build on their knowledge of the 7 continents and 5 oceans to locate area where natural disasters occur and places which are being affected the most by human activity. Children will understand why natural disasters happen, different types and their effect on human life. They will also understand how human process are affecting humans, animals and their habitats. They will be looking at these from a world view building on their knowledge of the UK.		
Prior Learning (Direct Pathway) History: Constructing the past: <ul style="list-style-type: none">• Understand that historians find out about the past by studying artefacts and piecing together the clues that they leave to create a more complete picture. (Y3)		
Prior Learning (Indirect Pathway) Science: <ul style="list-style-type: none">• Animals can be grouped into the following categories; fish, amphibians, reptiles, birds and mammals. (Y1)• Things can be living, dead or never alive. (Y2)• Living things live in habitats to which they are suited and these habitats provide the basic needs of different kinds of animals and plants, and how they depend on each other. (Y2)• Plants can be grouped into flowering and non-flowering plants. (Y4)• Animals can be grouped into vertebrates and invertebrates (Y4)• Living things can be grouped in a variety of ways (vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects. Note: Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses). (Y4)• To distinguish between an object and the material from which it is made (Y1)• To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1)		

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Using a book, called 'Escaping the Giant Wave' by Peg Kehret, children will write diaries in the role of a character taken from the book in Autumn 2. In Spring 1, the children will use 'The Last Bear' by Hannah Gold to write descriptions. We will also read a variety of non-fiction texts to gain a further understanding of natural disasters, such as Earthquakes/Volcanoes/Tsunamis. We will watch a range of videos to look at historical disasters from around the world. Through this, children will be able to verbally describe the impact this has had on our Earth. In the Spring 1, children will be writing persuasive speeches about an aspect of climate change. Through the study of significant leaders of change from the past, children will become inspired to then write a persuasive speech on a topic they feel most passionate about. Children will also have the opportunity to work collaboratively when we do a class debate.

Content on Direct Pathway

Our project this term is Humans Vs Nature: Which is more disastrous? This project will be split into two parts. The first being taught in Autumn 2 and having a focus on Natural Disasters. The second part, in Spring 1, the focus will be directed towards the impact humans have on the world with a particular emphasis on climate change.

This whole topic is mostly Geography driven. There is some comparison to current volcanoes and earthquakes and there will be comparisons with the historic events when natural disasters have occurred. Where possible, we will cover current affairs and discuss any natural disaster that might occur. Children will visit historical factors for climate change as well as comparison to the impact of natural disasters on the world.

As well as this, children will work as Geographers and will gain an understanding of deforestation, The Greenhouse Effect, fossil fuels and the impact of their own carbon footprint. Children will be recapping their previous knowledge on human and physical changes and will study the similarities and differences.

As artists, children will perfect their sketching skills in the style of Hokusai's Great Wave. Children will then create their own art on the theme of Mount Fuji using digital skills and online software.

Through science, children will study 'Living Things and their Habitats'. Children will look at, and compare, the life cycles of mammals, amphibians, birds, insects, fish and reptiles. They will be able to revisit the reproductive system, which was learnt in Year 4. During Spring 1, the children will be learning about properties and changes of materials.

In PSHE, children will be valuing differences and our unit in RE will be looking at the question 'What would Jesus do? Can we live by the values of Jesus in the 21st century? During Spring 1, the children will be learning about keeping themselves safe in PSHE and in RE exploring why people go to places of worship.

Enquiry Question

**Humans Vs
Nature: Which
is more
disastrous?**

Learning Showcase

Invite parents in for an exhibition of beautiful work and have a ballot box to answer the enquiry question. Children hold a year group debate.




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Knowledge Narrative

Autumn: The earth's surface is like a jigsaw; made up of pieces called tectonic plates. There are 7 main plates and all plates are continually moving. When these plates move and collide, they cause earthquakes. Underneath the plates there is hot, molten rock. A volcano is a landform (usually a mountain) where molten rock erupts through the surface of the earth. These natural disasters can have devastating effects on humans.

Spring: Human activity has been starting to affect the planet in a negative way. The burning of fossil fuels for things such as oil and coal, release gasses into the atmosphere and this causes the Greenhouse Effect. There are three main types of pollution (land, air and water) which are affecting humans, animals and their habitats. Deforestation is a process where a large area of trees is cleared and replaced with something else, such as cattle farming or industries.

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Unit Title: Humans vs Nature: Which is most disastrous?	
<p>Y5 Autumn 2</p>	<p>End Point - The aim of this unit is for pupils to:</p> <ul style="list-style-type: none"> Know the structure of the Earth and how this contributes to natural disasters such as: volcanoes, earthquakes and tsunamis Understand how volcanos, earthquakes and tsunamis occur and the impact they have Know an overview of other natural disasters <p>End of unit assessment task: Make a documentary (as natural disaster specialists) using Clips</p>
<p>Links Text – Escaping the Giant Wave by Peg Kehret Science – Living things and their habitats and knowing how natural disasters can affect this</p>	
<p>Prior Knowledge</p> <ul style="list-style-type: none"> Know the four countries of the UK and their capital cities and the surrounding seas Know, name and locate the continents and oceans of the world Know the 8 compass points Name and locate Middlesbrough on a map Recognise similarities and difference between where they live and other countries Know the main lines of latitude and longitude and be able to plot these on a map Know and use 4-figure grid references 	
Key Aspects of the Unit:	
	Map and atlas work/Fieldwork and investigation
	Location
	Physical Features: Understand that physical features are natural features in an environment. Understand that physical features can include: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather and volcanoes.

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Human Features: Understand that human features are features in an environment that have been made by people. Understand that human features can include: city, town, village, factory, farm, house, office, port, harbour and shop.



Physical Processes: Impact of nature on the earth e.g. erosion, plate tectonics, water cycle.

Key Knowledge:

- Know will know the structure of the Earth: crust, mantle, outer core and inner core
- Know that there is magma (liquid rock) beneath the crust
- Know that the core is mostly made of iron and that the temperature can reach 5500°C
- Know that the Earth's crust is made up of pieces called tectonic plates and that these are always moving
- Know that, where these plates meet, are called fault lines.
- Know that fault lines rub against each other can this can cause tremors or earthquakes
- Understand that these faults can rub against each other, push towards each other or pull away from each other
- Know that volcanoes are openings in the Earth's crust
- Understand how volcanic eruptions occur
- Know that lava is what we call magma when it is above ground
- Know the structure of a volcano (including; **magma chamber**, **main vent**, **secondary vent**, **secondary cone** and **crater**) and be able to label a diagram
- Know that sometimes, when a volcano erupts under the sea, an island can form (eg. Galapagos Islands)
- Know that volcanoes can be described in terms of activity (**active**, **dormant** and **extinct**) and say what each of these are
- Know what the Ring of Fire is and where it is located and that it is home to 75% of the world's volcanoes and 90% of the world's earthquakes

Geographical Skills:

Mapping:

- Select a map for a specific purpose (E.g choose atlas to find the USA but an OS map to find local village)
- Use thematic maps for specific purposes
- Describe and interpret relief features
- Begin to use 8 compass points;
- Use 6 figure grid references to locate features on a map

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Fieldwork:

- Begin to complete enquiries based on own suggested questions – **environmental traffic study – congestion outside of the school and the impact on the environment**
- Evaluate own observations, compare them with others and begin to draw conclusions
- Use the eight points of a compass and use to follow/describe routes
- Apply age-appropriate Maths knowledge to understanding of geography (e.g. length, distance, mass, capacity/volume, angles, area scales, negative numbers for temperature, equivalences between metric and imperial measures)

Vocabulary





weather	The atmospheric conditions which relate to a specific time and place.
global	Relating to the whole earth.
natural disaster	An event caused by nature such as floods, volcanic eruptions, tropical storm, tornado, landslides, wildfires and many more. These events cause great financial hardship for the people and communities in the locations where they occur, and they can sometimes even result in loss of life.
earthquake	A sudden violent shaking of the ground, typically causing great destruction, because of movements within the earth's crust or volcanic action.
volcanic eruption	A mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapour, and gas are or have been erupted from the earth's crust.
physical features	Natural features of land.
tectonic plates	Huge slabs of rocks that make up the outer crust of the earth.
Richter Scale	A scale of 1-10 used to measure the magnitude of earthquakes.
seismic wave	caused by an earthquake.
city	A large town.
climate	The general weather conditions that are typical.
coastal	An area of land close to the sea.
map	A drawing of a particular area such as a city, country or continent.
continent	A very large area of land that consists of many countries such as Europe.
country	An area of land that is controlled by its own government.
river	A large, natural stream of fresh water that flows into the sea or a lake.
human features	Features of land that have been impacted by human activity.
population	All the people who live in a country or area.
landscape	Everything you can see when you look across an area of land including hills, trees, buildings, rivers and plants.
atmosphere	The layer of air surrounding the earth that protects us from the sun's harmful rays.

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emissions	Gases or chemicals released into the air, (such as plumes of smoke from coal-fired power stations or car exhaust fumes).
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[Locational Knowledge Map](#)

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Unit Title: Humans vs Nature: Which is most disastrous?	
Y5 Spring 1	<p>End Point - The aim of this unit is for pupils to:</p> <ul style="list-style-type: none"> • Be able to explain what a human disaster is • Know that there are 3 main types of pollution (air, water and land) • Understand the effects of deforestation, climate change and know what the Greenhouse Effect is • Understand Carbon Footprint and that reducing energy can reduce ours • Know about renewable energy <p>End of unit assessment task: To create a podcast (using Garageband) on the ways in which we can help our world</p>
<p>Links Text – The Last Bear by Hannah Gold Science – Properties and Change of Materials (changes in materials over time)</p>	
<p>Prior Knowledge</p> <ul style="list-style-type: none"> • Children will have studied the Amazon Rainforest and looked at deforestation (Y3) • Children will have studied the world’s oceans and the affect humans can have on the planet (plastic pollution Y4) • Children will have looked at climate change (Y3) • 	
Key Aspects of the Unit:	
	Map and atlas work/Fieldwork and investigation
	Location
	Physical Features: Understand that physical features are natural features in an environment. Understand that physical features can include: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather and volcanoes.
	Human Features: Understand that human features are features in an environment that have been made by people. Understand that human features can include: city, town, village, factory, farm, house, office, port, harbour and shop.

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Physical Processes: Impact of nature on the earth e.g. erosion, plate tectonics, water cycle.



Human Processes understand the processes that humans have developed across the globe including travel trade and economics.

Key Knowledge:

- Know the term 'deforestation' as the action of clearing large areas of trees
- Know that trees are cut down so: the wood can be sold as it is a valuable natural resource
the land can be cleared for farming
- Know that every 20 minutes, an area of rainforest the size of 20 football pitches is cut down and that, at this rate, there will be no forests in 100 years
- Know the impact of climate change and what the Greenhouse Effect is
- Know that there are 3 main types of pollution: **water**, **air** and **land**. What each one of them are and the worst affected areas in the world
- Know the ways in which we can help our planet
- Know and understand the term Carbon Footprint
- Know ways in which we can reduce our Carbon Footprint
- Know that reducing energy usage can reduce our Carbon Footprint
- Know that we need energy to power electricity
- Know that school's carbon emissions are on the rise and suggest ways to make reductions
- Know that wind, solar and water energy are often called renewable energy because their supply is never ending
- Know that renewable energy is not easy to capture, it is clean, unlike fossil fuels

Geographical Skills:

Mapping:

- Draw a sketch map of an area using symbols and a key
- Use maps at a range of scales
- Begin to use a range of themed maps
- Internet map sites
- Begin to draw thematic maps based on simple data

Fieldwork:

- Use the eight points of a compass and use to follow/describe routes

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<u>Year Group:</u> 5	<u>Term:</u> Autumn 2 – Spring 1
<u>Title:</u> Humans vs Nature: Which is more disastrous?	<u>Key Focus:</u> Art / Geography
Project Enhancements: Trip to Saltholme	
<u>How can you help?</u> At home, please could you: <ul style="list-style-type: none">• continue to listen to your child read a minimum of three times a week,• help your child to learn to spell the Year 5 graphemes,• help your child to learn all their times tables. If you wish to do additional homework with your child, you could: <ul style="list-style-type: none">• Explore a range of natural disasters and locate these around the world's continents/countries.• Create a leaflet/information booklet about natural disasters/climate change.• Recycle plastics at home and show your child(ren) how to look at the packets to check if it is recyable (as not all plastic is!).• Talk about climate change and how it is changing.• Come up with your own solutions and make some changes as a family.	

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SUBJECT: SCIENCE			
Subject Specific Vocabulary		Declarative Knowledge (Autumn 2)	Aspect
Word	Definition		
life cycle	A life cycle is the different stages of life for a living thing.	The life cycles of other animals (other mammals, amphibians, insects and birds) and plants, are different to humans and to one another. Different plants and animals reproduce in different ways.	Biology
gestation	Gestation, in mammals, the time between conception and birth, during which the embryo is developing in the uterus.		
fertilisation	Fertilisation happens when an egg cell meets with a sperm cell and joins with it.		
foetus	Is an unborn animal or human?	Procedural Knowledge	
embryo	Fertilisation happens when an egg cell meets with a sperm cell and joins with it. The fertilised egg divides to form a ball of cells called an embryo.	Observe changes - life cycle of stick insects	Working scientifically
reproduction	It is the way different plants and animals make new plants and animals. The reproduction system differs in plants and animals.	Using research from secondary sources to understand life cycles of mammals, insects, amphibians, fish and birds.	Working scientifically
Chemistry	Learning about matter and the changes that take place within that matter.	Declarative Knowledge (Spring 1)	
solubility	Is a chemical property referring to the ability for a given substance, the solute, to dissolve in a solvent?		
transparency	In general, transparency is the quality of being easily seen through.	Everyday materials can be grouped together on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Some materials will dissolve in liquid to form a solution, and the substance can be recovered from a solution through evaporation.	Chemistry
evaporation	Evaporation is the process of a substance in a liquid state changing to a gaseous state due to an increase in temperature and/or pressure.		
dissolve	To dissolve is defined as to become broken up or absorbed by something or to disappear into something else.		
bicarbonate of soda	a white water-soluble powder, used chiefly as an antacid, a fire extinguisher, and a leavening agent in baking.	Some changes result in the formation of new materials, and this kind of change is not usually reversible, including changes associated with burning and the action of acid (e.g. vinegar) on bicarbonate of soda.	
thermal	Something that is thermal is hot, retains heat, or has a warming effect		
filtering	To filter a substance means to pass it through a device which is designed to remove certain particles contained in it.	Procedural Knowledge	
melting	Melting, is a physical process that results in the phase transition of a substance from a solid to a liquid.	Compare results from fair tests.	Working scientifically
separate	separate, part, and divide mean to break into parts or to keep apart.		

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Autumn 2

Spiritual

We will be exploring how natural disasters occur and how they affect our world. During this topic, we will explore different ways of learning new knowledge. For example, learning through drama. We will also look at the sheer power of nature.

Social

We will use our social skills to take part in group discussions - discussing the level of disaster, effects on physical features and the impact they have on human life. We will look at the different communities that have been affected by natural disasters and explore what could have been done differently.

Be kind and REAP the Rewards

We will show empathy towards communities that have been affected by natural disasters. During discussions, we will show respect and kindness towards each other when explaining our thinking.

Moral

To consider the moral issues of building communities in areas at risk of natural disasters

Cultural

We will be exploring how, despite where people live and how they live their lives, natural disasters can happen to anyone.

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Spring 1

Spiritual

We will be learning about the impact that humans are having on our world. We will continue to explore learning in different ways.

Social

Once again, we will be using our social skills to take part in group discussions and debates. We will be exploring how working together as a community can positively affect climate change.

Be kind and REAP the rewards

During class debates, the children will show respect to their classmates and understand how people can have different opinions.

Moral

The children will be thinking reflectively about the decisions made by world leaders regarding the climate crisis and exploring the moral right to help others in need.

Cultural

We will explore how climate change is affecting communities around the world differently and show understanding and appreciation of this.

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British Values through EDC

Democracy	During class discussions, we will have discussions about how some people vote at election time and that they often vote for a party that they think is best suited to fit their morals. For example, President Bolsonaro has been voted out as the new president of Brazil has promised to protect the Amazon.
The Rule of Law	What happens when law and order go out of the window during a natural disaster?
Individual Liberty	Where do people go when, for example, climates are unliveable – such as places of extreme drought?
Mutual Respect & Tolerance	Understanding that people have different views on what is important to them in relation to the planet.