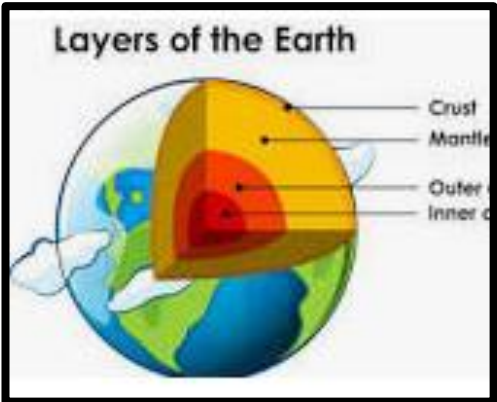# Ferocious Earth
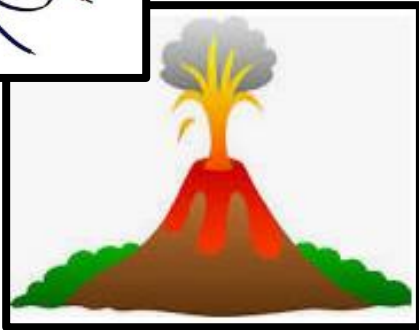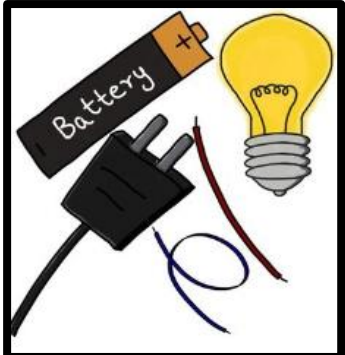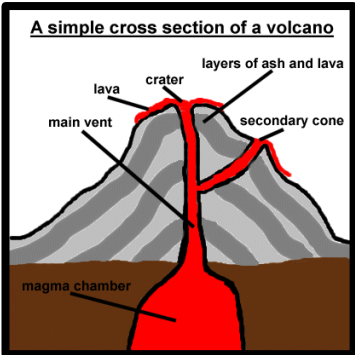

A simple cross section of a volcano

Layers of the Earth

Areas of Learning

As Geographers we will be practising our map skills by locating some of the worlds' best-known volcanoes and by naming the countries and continents where they can be found. We will be describing the physical features of environments and looking at the effects volcanoes and earthquakes have on settlements. We will consider the human activity in these areas and why although at risk of volcanic explosions and earthquakes communities have chosen to live in these areas.

As Scientists we will identify common appliances that use electrical power. We will create simple series circuits and make systematic observations to evaluate whether a bulb will work and how brightly it shines. Using labelled diagrams and correct symbols associated with electrical circuits, we will document our findings. We will introduce switches to our circuits to develop our understanding of open and closed circuits. Finally, we will plan and carry out a scientific investigation to find out which materials are conductors and which are insulators.

As Designers we will research simple circuits. We will develop design criteria for a torch that is created from a simple circuit. We will develop and communicate our ideas through annotated sketches and prototypes. We will then make our final designs using appropriate materials and tools to ensure practically for purpose. We will then evaluate our finished product.

As Users of Technology we will be focussing on Coding this half term before moving onto spreadsheets in the second half of the term. Using the PRIMM approach – Predict, Run, Investigate, Modify & Make – once we are confident we will finish by making our own program from scratch. When we move onto spreadsheets we will learn to use 2Calculate – a simple to use spreadsheet for beginners. There is a strong link to Mathematics when using spreadsheets so we will have a great opportunity to apply our number skills in this unit!

As Speakers of other languages, we will learn the vocabulary to talk and write about the seasons, weather and clothing in French. In the second half term we will focus on homes and gardens.

As Musicians, we will describe, transcribe, compose and perform music. Using appropriate terminology, we will describe various pieces of music and evaluate this to identify our likes and dislikes. We will develop our skills of transcribing musical notations.

Challenge

To become resilient, confident and independent individuals who persevere to solve problems and communicate effectively we will:

Develop design criteria for a torch that is created from a simple circuit. We will develop and communicate our ideas through annotated sketches and prototypes. We will then make our final designs using appropriate materials and tools to ensure practically for purpose. We will then evaluate our finished product.

Enrichment

To enrich our learning, we will:

Visit Grantham Museum where we will learn about the history and people of Grantham through physical and digital exhibitions and experiences.

Take part in a Chinese Day.

Spiritual & Moral

In our spiritual and moral development, we will:

Ask 'why do terrible natural disasters happen to good people?' We will explore how this makes us feel and learn to express our emotions.

Explore stories in the Old Testament to explore what happened to the Israelites when they entered Canaan, how they learnt that God's ways were best. We will also discover that God does amazing things for us that are worth remembering.

Communities

As members of a community we will:

Explore how countries cope with disasters. We will look at things that have happened close to us and will explore some of the values people have that help them to work together especially in times of trouble.

Geography Threshold Concept	Milestone 1	Milestone 2
To investigate places	1. Ask and answer geographical questions (such as: What is this place like? What or who will I see in this place? What do people do in this place?). 2. Identify the key features of a location in order to say whether it is a city, town, village, coastal or rural area. 3. Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied. 5. Use aerial images and plan perspectives to recognise landmarks and basic physical features.	1. Ask and answer geographical questions about the physical and human characteristics of a location. 2. Explain own views about locations, giving reasons. 3. Use maps, atlases, globes and digital/computer mapping to locate countries and describe features. 5. Use a range of resources to identify the key physical and human features of a location.
To investigate patterns		1. Name and locate the Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle and date time zones. Describe some of the characteristics of these geographical areas.
To communicate geographically	1. Use basic geographical vocabulary to refer to: key physical features, including: beach, coast, forest, hill, mountain, ocean, river, soil, valley, vegetation and weather. 2. Use basic geographical vocabulary to refer to: key human features, including: city, town, village, factory, farm, house, office and shop.	1. Describe key aspects of: physical geography, including: ~~rivers, mountains,~~ volcanoes and earthquakes ~~and the water cycle.~~ 2. Describe key aspects of: human geography, including: settlements and land use.
Science Threshold Concepts	**Milestone 1**	**Milestone 2**
To work scientifically	1. Ask simple questions. 2. Observe closely, using simple equipment. 3. Perform simple tests. 4. Identify and classify. 5. Use observations and ideas to suggest answers to questions. 6. Gather and record data to help in answering questions.	1. Ask relevant questions. 2. Set up simple practical enquiries and comparative and fair tests. 3. Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. 4. Gather, record, classify and present data in a variety of ways to help in answering questions. 5. Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. 6. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. 7. Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. 8. Identify differences, similarities or changes related to simple, scientific ideas and processes. 9. Use straightforward, scientific evidence to answer questions or to support their findings.
To understand electrical circuits	1. Identify common appliances that run on electricity. 2. Construct a simple series electrical circuit.	1. Identify common appliances that run on electricity.

		2. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switched and buzzers.
		3. Identify whether or not a lamp will light in a simple series circuit based on whether or n • Control the shade of pens. ot the lamp is part of a complete loop with a battery.
		4. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
		5. Recognise some common conductors and insulators and associate metals with being good conductors.
DT Threshold Concepts	**Milestone 1**	**Milestone 2**
Master practical skills: Electricals and electronics	1. Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	1. Create series and parallel circuits
Design, make, evaluate and improve

This concept involves developing the process of design thinking and seeing design as a process. | • Design products that have a clear purpose and an intended user.

• Make products, refining the design as work progresses.

• Use software to design. | • Design with purpose by identifying opportunities to design.

• Make products by working efficiently (such as by carefully selecting materials).

• Refine work and techniques as work progresses, continually evaluating the product design.

• Use software to design and represent product designs. |
| Take inspiration from design throughout history

This concept involves appreciating the design process that has influenced the products we use in everyday life. | • Explore objects and designs to identify likes and dislikes of the designs.

• Suggest improvements to existing designs.

• Explore how products have been created. | • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs.

• Improve upon existing designs, giving reasons for choices.

• Disassemble products to understand how they work. |
| **Computing Threshold Concepts** | **Milestone 1** | **Milestone 2** |
| To develop an understanding of instructions, logic and sequences | • Control motion by specifying the number of steps to travel, direction and turn.
• Add text strings, show and hide objects and change the features of an object.
• Select sounds and control when they are heard, their duration and volume.
• Control when drawings appear and set the pen colour, size and shape
• Specify user inputs (such as clicks) to control events.
• Specify the nature of events (such as a single event or a loop). | • Use specified screen coordinates to control movement.
• Set the appearance of objects and create sequences of changes.
• Create and edit sounds. Control when they are heard, their volume, duration and rests.
• Control the shade of pens.
• Specify conditions to trigger events.
• Use IF THEN conditions to control events or objects. |

	• Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?).	• Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions) • Use variables to store a value. • Use the functions define, set, change, show and hide to control the variables. • Use the Reporter operators () + () () - () () * () () / () to perform calculations.
PE Threshold Concepts	**Milestone 1**	**Milestone 2**
To develop practical skills in order to participate, compete and lead a healthy lifestyle. (Invasion games - Hockey)	2. Use ~~rolling,~~ hitting, running, ~~jumping, catching and kicking~~ skills in combination. 3. Develop tactics. 1. Use the terms 'opponent' and 'team-mate'. 4. Lead others when appropriate.	2. Strike a ball and field with control. 3. Choose appropriate tactics to cause problems for the opposition. 4.Follow the rules of the game and play fairly. 5. Maintain possession of a ball (with, e.g. a hockey stick ~~or hands~~). 6.Pass to team mates at appropriate times. 7.Lead others and act as a respectful team member.
To develop practical skills in order to participate, compete and lead a healthy lifestyle. (Gymnastics)	1. Copy and remember actions. 2. Move with some control and awareness of space. 3. Link two or more actions to make a sequence. 4. Show contrasts (such as small/tall, straight/curved and wide/narrow). 5. Travel by rolling forwards, backwards and sideways. 6. Hold a position whilst balancing on different points of the body. 7. Climb safely on equipment. 8. Stretch and curl to develop flexibility. 9. Jump in a variety of ways and land with increasing control and balance.	1. Plan, perform and repeat sequences. 2. Move in a clear, fluent and expressive manner. 3. Refine movements into sequences. 4. Show changes of direction, speed and level during a performance. 5. Travel in a variety of ways, including flight, by transferring weight to generate power in movements. 6. Show a kinaesthetic sense in order to improve the placement & alignment of body parts (e.g. in balances experiment to find out how to get the centre of gravity successfully over base & organise body parts to create an interesting body shape). 7. Swing and hang from equipment safely (using hands).
To develop practical skills in order to participate, compete and lead a healthy lifestyle. (Dance)	1. Copy and remember moves and positions. 2. Move with careful control and coordination. 3. Link two or more actions to perform a sequence. 4. Choose movements to communicate a mood, feeling or idea.	1. Plan, perform and repeat sequences. 2. Move in a clear, fluent and expressive manner. 3. Refine movements into sequences. 4. Create dances and movements that convey a definite idea. 5. Change speed and levels within a performance. 6. Develop physical strength and suppleness by practising moves and stretching.
Develop practical skills in order to participate, compete and lead a healthy lifestyle: **Swimming**	1. Swim unaided up to 25 metres. 2. Use one basic stroke, breathing correctly. 3. Control leg movements**.**	1. Swim between 25 and 50 metres unaided. 2. Use more than one stroke and coordinate breathing as appropriate for the stroke being used. 3. Coordinate leg and arm movements. 4. Swim at the surface and below the water.

PSHE Threshold Concepts	Milestone 1	Milestone 2
Belonging to a community - *What makes a community; shared responsibilities.*	L2. how people and other living things have different needs; about the responsibilities of caring for them L4. about the different groups they belong to L5. about the different roles and responsibilities people have in their community	L4. the importance of having compassion towards others; shared responsibilities we all have for caring for other people and living things; how to show care and concern for others L6. about the different groups that make up their community; what living in a community means L7. to value the different contributions that people and groups make to the community
Media literacy and digital resilience - *How data is shared and used*	L7. about how the internet and digital devices can be used safely to find things out and to communicate with others L8. about the role of the internet in everyday life L9. that not all information seen online is true	L13. about some of the different ways information and data is shared and used online, including for commercial purposes L14. about how information on the internet is ranked, selected and targeted at specific individuals and groups; that connected devices can share information
French/MFL Threshold Concept	Milestone 1	Milestone 2
Read fluently This concept involves recognising key vocabulary and phrases.	• Read and understand short written phrases. • Read out loud familiar words and phrases. • Use books or glossaries to find out the meanings of new words.	• Read and understand the main points in short written texts. • Read short texts independently. • Use a translation dictionary or glossary to look up new words.
Write imaginatively This concept involves using key vocabulary and phrases to write ideas.	• Write or copy everyday words correctly. • Label items and choose appropriate words to complete short sentences. • Write one or two short sentences.	• Write a few short sentences using familiar expressions. • Express personal experiences and responses. • Write short phrases from memory with spelling that is readily understandable.
Speak confidently This concept involves using key vocabulary and phrases to verbally communicate ideas.	• Understand a range of spoken phrases. • Understand standard language (sometimes asking for words or phrases to be repeated). • Answer simple questions and give basic information. • Give responses to questions about everyday events. • Pronounce words showing a knowledge of sound (or pitch in Mandarin) patterns.	• Understand the main points from spoken passages. • Ask others to repeat words or phrases if necessary. • Ask and answer simple questions and talk about interests. • Take part in discussions and tasks. • Demonstrate a growing vocabulary.

English	Mathematics
F – Writing and Performing a play *2 weeks* Write and perform a play, based on a familiar story **F – Story Settings** *2 weeks* Write a section of a narrative (or several narratives) focusing on setting **F – Take one book** *2 weeks* **NF: Persuasion** *3 weeks* Assemble and sequence points in order to plan the presentation of a point of view, using graphs, images, visual aids to make the view more convincing **NF: Instructions** *1 week* Link to science/ DT – write a set of instructions of how to do or make something e.g. a lamp light up, a pop up page. **Poetry vocabulary building** 1 *week* Building vocabulary through reading, writing and performing free verse. **Narrative Poetry** 2 *weeks* Recite some narrative poetry by heart. Read and respond	**Year 2** 2LS 13 Measures – Estimation and Measure Using Different Scales 2LS14 Statistics – Totalling and Comparing Amounts in Block Graphs, Pictograms, Tables and Tally Charts 2LS15 Written Addition Method 2LS16 Commutativity in Addition but not in Subtraction 2LS17 Written subtraction method 2LS18 Problem Solving with Addition and Subtraction in a Range of Contexts 2LS19 Time – Telling the Time: O'clock, Half Past, Quarter Past and Quarter To 2LS20 Time – Estimating, Ordering and Comparing Time 2LS21 Double and Halve One and Two-digit Numbers and Amounts of Money 2LS22 Times Tables – 2s, 5s and 10s. Patterns and Strategy (counting in 3s) 2LS23 Multiplication – Multiples and Repeated Addition 2LS24 Multiplication – Number of Groups, Group Size and Product 2LS25 Multiplication Problem Solving 2LS26 Division – Sharing and Grouping2LS27 Division – Sharing and GroupingProblems including remainders **Year 3 & 4** LS5 Proportional Reasoning 1 – Scaling, Comparison and Fractions LS7 Proportional Reasoning 2 – Adding and Subtracting fractions LS8 Geometric reasoning 2 – Properties of 2-D shape LS9 Additive Reasoning 3 – Formal Written Addition and Subtraction LS10 Spatial Reasoning 1 – Perimeter LS11 Statistical Reasoning 1 – Scaling LS12 Multiplicative Reasoning 2 – Multiplicative Laws and Area LS13 Multiplicative Reasoning 3 – Formal Written Multiplication and Division