

Big Question: What happens when there is an earthquake?

Year: 6		Term: Spring 2
<p>Introduction to the topic: During the pre-learning challenge, show the children some pictures and quotes to demonstrate the concept of 'Mother Nature' and then ask the children if they can think of a time when Mother Nature has 'gone wrong' or acted in a destructive way. Show the children pictures of a flood, hurricane, avalanche, tsunami, tornado, and drought. Ask the children to think about what the consequences are of these events during and after the incident. Explain to the children that during this topic, we will be focusing on earthquakes. Ask them to complete their pre-learning challenge.</p>		
English	Maths	Geography
<p>Writing own narratives that involve an adventure. This is child interest led and will culminate in children being authors of their own individual stories.</p>	<p>Maths No Problem Negative Numbers/Graphs Pupils will learn to present and interpret information by recapping bar graphs, pictograms and tables and exploring pie charts.</p> <p>Position and Movement Using their knowledge of graphs and negative numbers, children will understand the difference between translation and reflection.</p>	<p>Look at weather and climate around the world and how people have learnt to cope with earthquakes.</p>
Art and Design	Design and Technology	PSHE and Citizenship
<p>Painting and Mixed Media Artist Study</p>	<p>Mechanical systems Automata toys</p>	<p>Jigsaw Scheme of Work Healthy Me</p>
Science	RE	Computing
<p>Animals including Human Circulatory System Pupils will explore the human circulatory system and understand the importance of how to keep their own bodies healthy.</p>	<p>2022 Newham Agreed Syllabus Plans <i>How important are the similarities and differences between and within religions?</i> What are the sources of the story about what happened on the first Easter Sunday?</p>	<p>NCCE Scheme of Work Data and Information Introduction to spreadsheets</p>
PE	Music	Spanish
<p>Handball Basketball</p>	<p>Music Inspired by Nature Exploring the music of Ralph Vaughan Williams and Felix Mendelssohn.</p>	<p>Daily routines Children will learn some reflexive verbs to be able to talk about their daily routine. They will also learn how to tell the time and some adverbs of time.</p>
<p>Links to the National Curriculum (what must be covered) and assessment descriptors:</p>		
<p>English Pupils should be taught to:</p> <ul style="list-style-type: none"> • Plan their writing by: <ul style="list-style-type: none"> ○ identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own; ○ writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed and 		

- noting and developing initial ideas, drawing on reading and research where necessary.
- Draft and write by:
 - selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning;
 - in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action and
 - using a wide range of devices to build cohesion within and across paragraphs.
- Evaluate and edit by: proposing changes to grammar, vocabulary and punctuation to enhance effects and clarify meaning.

Maths

Pupils should be taught to:

- use negative numbers in context, and calculate intervals across zero
- describe positions on the full coordinate grid (all four quadrants)
- draw and translate simple shapes on the coordinate plane, and reflect them in the axes
- interpret and construct pie charts and line graphs and use these to solve problems
- calculate and interpret the mean as an average.

Geography

Pupils should be taught to describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

Working Towards

I can **describe** what happens during an earthquake and use a map to **locate** where they are most likely to occur.

Expected

I can **explain** why earthquakes occur using **technical vocabulary** such as tectonic plates and seismic wave and **label a map** to demonstrate where they occur.

Greater Depth

I can **describe** and **understand** how an earthquake takes place and **explain** how they are recorded and measured.
I can **recall** real-life examples of earthquakes and their impact.

Art and Design

Make

- Manipulate paint and painting techniques to suit a purpose, making choices based on their experiences.
- Work in a sustained way over several sessions to complete a piece.
- Analyse and describe how colour is used in other artists' work.
- Consider materials, scale and techniques when creating collage and other mixed media pieces.
- Create collage in response to a stimulus and work collaboratively on a larger scale.

Knowledge of artists

- Describe, interpret and evaluate the work, ideas and processes used by artists across a variety of disciplines, being able to describe how the cultural and historical context may have influenced their creative work.

Evaluate

- Give reasoned evaluations of their own and others work which takes account of context and intention.
- Independently use their knowledge of tools, materials and processes to try alternative solutions and make improvements to their work.

Pupils who are secure will be able to:

- Understand a narrative and use descriptive language to tell a story.
- Suggest ideas for the meaning behind a picture.
- Identify different features within a painting and use the formal elements to describe it.
- Be creative and imaginative in finding their own meaning in a painting.
- Use their own art or personal experiences to justify their ideas.
- Read a picture well and see beyond the first glance, analysing and evaluating it successfully.
- Reflect on personal experiences to convey through their own piece of abstract art.
- Contribute to discussions to either the class, group or talk partner.

- Understand and choose a meaningful message to convey through imagery, creating some different composition ideas.
- Select an appropriate artist.
- Collect a range of information that is presented in an interesting and pleasing way in sketchbooks.
- Generate an idea for a final piece, demonstrating some inspiration from their chosen artist.
- Produce a final piece of work, selecting appropriate tools and materials to create an intended effect.
- Experiment and revisit ideas, drawing on creative experiences.
- Work in a sustained way to complete a piece, making evaluations at each stage.

Working Towards	Expected	Greater Depth
I understand that art can sometimes tell a story and this is a narrative. I am developing the skills to interpret a piece of artwork.	I can name artists who have used narratives in their artwork and give my interpretation of their narrative. I can describe how choices about colour and media used can aid interpretation.	I can demonstrate an understanding of painting techniques to make personal choices about a piece of artwork I can create to tell a story.

Design and Technology

Pupils who are secure will be able to:

- Mark, saw and cut out the components and supports of their toy with a varying degree of accuracy to the intended measurements.
- Follow health and safety rules, taking care with the equipment.
- Attempt a partial assembly of their toys using an exploded-diagram, following a teacher's demonstration.
- Develop a design idea with some descriptive notes.
- Explore different cam profiles and choose three for their follower toppers with an explanation of their choices.
- Create neat, decorated follower toppers with some accuracy.
- Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata.
- Decorate and finish the automata to meet the design criteria and brief.
- Evaluate their finished product, making descriptive and reflective points on function and form.

Working Towards	Expected	Greater Depth
I can explain what a design brief is and explain why it is needed. I know that automata are hand-powered mechanical toys that use cams, followers and axles to create motion.	As before and I can name different tools that can be used in creating an automata and I can explain how the different parts are put together to make the toy work.	As before and I can create an diagram of my automata design and evaluate whether my product fits the design brief.

PSHE and Citizenship and Emotional Literacy/Social Skills

- I know the impact of food on the body, e.g. creating energy, giving comfort and altering mood.
- I am motivated to give my body the best combination of food for my physical and emotional health.
- I know about different types of drugs and their uses and their effects on the body particularly the liver and heart.
- I am motivated to find ways to be happy and cope with life's situations without using drugs.
- I can evaluate when alcohol is being used responsibly, anti-socially or being misused.
- I can tell you how I feel about using alcohol when I am older and my reasons for this.
- I know and can put into practice basic emergency aid procedures (e.g. the recovery position) and know how to get help in emergency situations.
- I know how to keep myself safe to avoid emergencies and also how to deal with emergencies if they happen.
- I understand what it means to be emotionally well and can explore people's attitudes towards mental health/illness.
- I know how to help myself feel emotionally healthy and can recognise when I need help with this.
- I can recognise when I feel stressed and the triggers that cause this and I understand how stress can cause alcohol misuse.

- I can use different strategies to manage stress and pressure.

Working towards	Expected	Greater depth
I can give examples of safe and unsafe ways in which people can use alcohol and I can tell you how I feel about using alcohol when I am older.	I can evaluate when alcohol is being used responsibly, anti-socially or being misused and I can tell you how I feel about using alcohol when I am older and my reasons for this.	I can give an account of the different ways in which people in our society use alcohol as part of their lifestyle and distinguish between responsible use, anti-social use and misuse and I can reflect on my own feelings about alcohol use and consider what my attitude may be when I am older.

Science

Pupils should be taught to:

- identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood;
- recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function and
- describe the ways in which nutrients and water are transported within animals, including humans.

Working towards	Expected	Greater depth
I know that the human circulatory system is made up of the heart, blood and blood vessels. I understand the need to exercise regularly to be healthy and explain the effect of exercise on parts of the circulatory system such as the heart.	I can label a diagram of the human circulatory system and explain the role of the main parts. I can explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body. I understand that lack of certain nutrients can lead to diseases.	I can confidently explain how the human circulatory system works and compare it to the circulatory systems of other animals. I can explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body and understand that diet can affect how parts of our body function and can affect how likely we are to suffer from conditions such as diabetes.

RE

Pupils should be taught about the different accounts of the resurrection stories found in the gospels in the New Testament, about Jesus' ascension and the sending of the Holy Spirit and the beginnings of the early church.

Working Towards	Expected	Greater Depth
I can use technical vocabulary to describe and compare what practices and experiences may be involved in belonging to different Christian churches at Easter.	I can explain the Easter story's impact on a Christian and why it is an integral part of a Christian's beliefs. I can describe the similarities and differences in how Easter is celebrated by different Christians.	I can explain how and why different Christians mark Easter as an important festival, expressing insight into the difference Easter makes to the lives of modern-day Christians.

Computing

This unit introduces the learners to spreadsheets. They will be supported in organising data into columns and rows to create their own data set. Learners will be taught the importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Learners will be taught how to apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them. Learners will use spreadsheets to plan an event and answer questions. Finally, learners will create charts, and evaluate their results in comparison to questions asked.

Working Towards	Expected	Greater Depth
With support, I can explain what a spreadsheet is and give examples of when they can be used, explaining the importance of each heading.	As before and... I can demonstrate how data can be calculated using different operations within a spreadsheet and I understand that the symbols used are different to the symbols used in maths. I can show how the date in a spreadsheet can be converted into a chart.	As before and... I can explain why sometimes data in a graph is clearer for a person to understand than data in a spreadsheet.

PE

Music

Use BBC 10 Pieces.

Pupils will listen to and analyse *The Lark Ascending* and *Sinfonia Antartica* by Ralph Vaughan Williams and *Hebrides Overture* by Felix Mendelssohn and compose their own piece of music inspired by nature.

The children continue to learn to play the guitar.

Working Towards I can express an opinion about a piece of music depicting nature and analyse how someone may interpret its message. I can play relevant guitar exercises competently.	Expected I can explain how music from the movies can influence how a viewer is feeling and I can explore the reasons for composers' tempo choices. I can play an identifiable tune on the guitar.	Greater Depth I can compose and record a composition inspired by nature graphically, focusing on texture, timbre, dynamics and mood. I can perform a piece of music on the guitar in front of an audience.
Spanish To present ideas and information orally to a range of audiences. To describe actions orally and in writing. To write sentences from memory, and adapt these to create new sentences, to express ideas clearly.		
Educational Visits and Visitors The Natural History Museum – Earthquake Simulator (could encourage families to visit the museum over the half term).		
Sequence of Key skills/objectives/context (Key teaching points) <ul style="list-style-type: none"> Describe and understand key aspects of earthquakes. Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied. Understand what happens with tectonic plates move. Understand what seismic waves are and what effect they have during an earthquake. Learn how seismic waves are recorded. Make a DIY seismograph in order to gain an understanding of how seismic waves are recorded and measured. Understand how tectonic plates work. Identify the layers of the earth and how earthquakes occur. Consider the effects felt at the surface of the Earth when tectonic plates move. 		
Key Vocabulary aftershock, continent, epicentre, fault line, foreshock, mainshock, magnitude, Mercalli scale, microquake, plate tectonics, Richter scale, seismic wave, seismograph, tremors		
Additional Information https://teachers.thenational.academy/lessons/how-does-an-earthquake-occur-6dk3gt see Oak Academy lesson on earthquakes for CPD. https://www.stem.org.uk/resources/community/collection/284761/earthquakes-and-volcanoes further information for teachers about earthquakes. https://www.bbc.co.uk/bitesize/guides/zp46sg8/revision/1 GCSE level information for teachers		
Evidence in the books and on display: <ul style="list-style-type: none"> Examples of different types of extreme weather and natural disasters will be on display in the classroom. Children will have written in different genres about the impact of extreme weather (e.g. newspaper reports, non-chronological report, letters, diaries, warnings, how to guide etc.). In the children's books, there will be a map of where in the world different types of extreme weather and natural disasters occur. 		
Outcomes: <ul style="list-style-type: none"> The children will know how people's lives are impacted by earthquakes. The children will be able to talk knowledgably about where in the world different examples of earthquakes and their consequences have occurred. The children will have learnt how to make good, healthy choices and have strategies to resist peer pressure. 		
Helpful Websites BBC Teach https://www.bbc.co.uk/teach/class-clips-video/geography-ks1-ks2-earthquakes/zbr2mfr BBC Bitesize – Explore Earthquakes https://www.bbc.co.uk/bitesize/topics/z849q6f/articles/zj89t39		
SMSC		

Spiritual	Moral	Social	Cultural
-What must it feel like to be someone involved in an earthquake?	-Do we have a moral duty to help those affected by extreme weather and natural disaster?	-How do people have an impact on Mother Nature?	-What do different cultures believe about Mother Nature and why extreme weather and natural disasters occur?

FUNDAMENTAL BRITISH VALUES

Democracy	Individual Liberty	Tolerance and Mutual Respect	Rule of Law
-Can we choose a government who will respond when help is needed – in this country and in other places?	-Discuss people's choice to live in a place where extreme weather or a natural disaster can occur.	-How can we show respect for our world?	-What rules do we have to protect us from Mother Nature?

Links to Rights Respecting Schools

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| <ul style="list-style-type: none"> • Article 24 – Clean environment and water • Article 27 – Shelter, food, clothing • Article 19 – Protection from harm |
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Links to Safeguarding

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| <ul style="list-style-type: none"> • PSHE lessons will provide an opportunity for pupils to talk about any concerns they have about peer pressure, body image or worries about alcohol etc. |
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Celebrating Heritage

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| <ul style="list-style-type: none"> • Children celebrating differences and similarities. • Making links to their real-life experiences, culture and religion. • Children to be exposed to a wide range of cultural texts and experiences. |
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