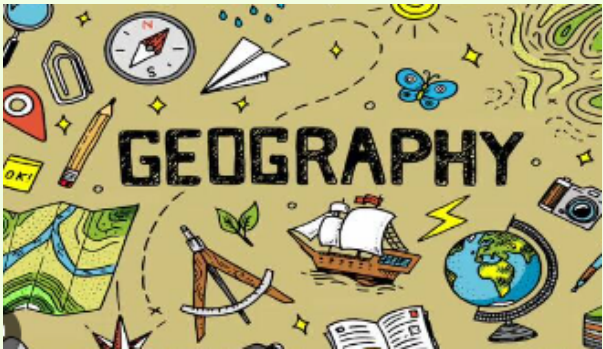




Extreme Weather

Year 4 Spring 2024



Intent: Children will use their locational knowledge of the UK and Europe to explore human and physical geographical features. They will take part in field work and find out about how extreme weather effects the United Kingdom and Europe.

- Skills and Knowledge:
- To identify physical features on a map that include: rivers, lakes and mountains in Europe
 - To identify human features of European Countries such as population, language and currency.
 - I can identify geographical similarities and differences between European Countries
 - I can identify symbols used on a key (map)
 - I can use digital mapping to locate countries and geographical features across Europe.
 - To know that tectonic movement causes earthquakes and volcanoes.
 - I Know what natural disasters are and can explain why they have occurred.

- Sticky Knowledge:
- I can identify rivers, lakes and mountains in other European countries on a Map
 - I know the currency and languages spoken in other European countries.
 - I can list how the UK is different/similar to other European countries
 - I can identify churches, roads, rivers and hills (higher ground) on an OS map
 - I can use digital mapping to locate geographical features across Europe
 - I know what causes a volcanic eruption and an earthquake
 - I can explain what a natural disaster is and give examples of natural disasters that have happened in Europe.

Key Vocabulary: tropical storm, hurricane, typhoon, cyclone, tornado, drought, flood, wildfire, evaporation, condensation, precipitation, physical features, human features, population, currency, ordinance survey, volcanoes, earthquakes

Subject Composite: Children can identify geographical features, create their own maps that include human and physical geographical features.

Impact: Children will be able to identify human and physical geographical features of the UK and Europe. Children will be able to identify and explain extreme weather conditions and the impact they have on the people they effect.



Intent: Children explore sound and how are bodies process sound. They explore pitch and volume and work scientifically to explore these.

- Skills and Knowledge:
- Identify how sounds are made, associating some of them with something vibrating.
 - Recognise that vibrations from sounds travel through a medium to the ear.
 - Find patterns between the volume of a sound and the strength of the vibrations that proceed it.
 - Recognise that sounds get fainter as the distance from the sound increases.
 - Ask relevant questions and use different types of scientific enquiry to answer them.
 - Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
 - Make systematic and careful observation and where appropriate take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.
 - Set up simple practical enquiries, comparative and fair tests. Identify differences, similarities or changes related to simple scientific ideas and processes.

- Sticky knowledge:
- A vibration is a quick back and forth movement.
 - Sounds are made when objects vibrate and vibrations travel from the object to our ears.
 - The louder the sounds the bigger the vibration.
 - The quieter the sound the smaller the vibration.
 - Pitch means how high or low a sound is.
 - The outer ear funnels the vibrations into the ear canal.
 - Vibrations are then passed to the ear canal.
 - The vibrations from the ear drum then are passed along the ear bones and into the cochlea.
 - Signals are then sent to the brain where they are processed. Sound is measured in decibels.

Vocabulary: vibration, ear, sound, volume, pitch, high-pitched, low pitched, back ground noise, outer ear, ear bones, ear canal, ear drum, cochlea, decibel, decibel meter, insulate, independent variable, dependent variable, controlled variables, prediction, conclusion

Subject composite: Children plan and undertake a range of investigations using scientific language.

Impact: Children will have a clear understanding of how sound reaches the ear and how the different parts of the ear allow us to hear sounds. Children will have a clear understanding of pitch and volume and how these link to vibrations. Children will build on the scientific enquiry skills

Linked Texts: Bear Grylls: Blizzard Challenge, The House that Sailed Away by Pat Hutchins, What’s the Weather by Fraser and Judith Rolston, Wild Weather.

Trips and Visits: Plymouth Aquarium- Sleeping with Sharks

Topic Finale Composite:



InIntent: Children will begin to develop their understanding of states of matter and how we can use these terms to describe everyday processes.

- Skills and Knowledge:
- Compare and group materials together, according to whether they are solids, liquids or gases ·
 - Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
 - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
 - Talk about criteria for grouping, sorting and classifying
 - Identify differences, similarities or changes related to simple scientific ideas.
 - Ask relevant questions and using different types of scientific enquiry to answer them.
 - Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

- Sticky Knowledge:
- I know that a solid holds its shape and has a fixed volume.
 - I know that a liquid fills up the shape of the bottom of a container. It forms a pool, not a pile and also has a fixed volume. ·
 - I know that a gas can escape from an unsealed container. It fills up the space it is in, and does not have a fixed container.
 - Water boils at 100 degrees Celsius and freezes at 0 degrees Celsius.
 - Water is in constant movement through a process called the water cycle. As water moves it can be in different states of matter
 - Evaporation is one stage of the water cycle. Evaporation is where a liquid changes state to a gas.

Vocabulary: States of Matter, solids, liquids, gases, water vapour, melt, freeze, evaporate, condense, precipitation.

Subject composite: Children take part in a range of investigations exploring changing states and the water cycle.

Impact: Children will be able to describe and explain the water cycle and explain what happens in each of the processes.



Intent: to explore pattern and develop a range of technical skills and knowledge through drawing and collage.

- Skills and Knowledge:
- I can relax into making a sensory drawing using a pencil, making marks on the page without having a predefined outcome.
 - I have explored the work of an artist who creates artwork inspired by pattern. I have thought about where we use pattern in our life to make our worlds brighter.
 - I can work in my sketchbooks to explore how I can make drawings inspired by “rules.” I can generate lots of different types of patterns.
 - I can make a tessellated design and think about colour and shape, exploring positive and negative shapes.
 - I can explore the work of a surface pattern designer and make my own repeating pattern, exploring colour, shape and composition
 - I can fold paper and use pattern to make an object which other people can respond to.
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- Sticky Knowledge:
- Drawing can be mindful.
 - Line, shape and colour can be used to create patterns
 - We can use folding, cutting and collage to help create pattern.
 - Repeated patterns can be added to design a product.

Key Vocabulary: tessellated, mindful, rhythmic piece, sensory, stencil, rotate, repeated design, ancient civilisation, measuring, symmetry, orientation, structure, reflection, shadows, sound

Subject Composite: Create your own tessellated design.

Impact: Children can create a tessellated design using complimentary colours and understand how many colours they need and how the design changes if they use cold colours or warm.



Intent: Design, make and evaluate a circuit (product) for a headtorch (user) to keep people safe (purpose).

- Skills and Knowledge:
- Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups.
 - Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.
 - Order the main stages of making.
 - Select from and use tools and equipment to cut, shape, join and finish with some accuracy.
 - Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.
 - Investigate and analyse a range of existing designs

- Sticky Knowledge:
- Identify materials that are fit for a specific purpose eg plastic can be strong and flexible
 - Explain why it is important to research a design idea
 - Identify what is needed to make a complete circuit
 - Explain why it is important to plan and evaluate your design

Vocabulary: Series, circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, bulb, wire, insulator, conductor, crocodile clip

Subject Composite: Children to make an emergency light with an electrical circuit that can be used in a natural disaster.

Impact: Children will develop their skills in circuits and will have a deeper understanding of design, make and evaluate cycle.