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| **TOPIC OVERVIEW:** This project teaches children about the features and characteristics of Earth's layers, including a detailed exploration of volcanic, tectonic and seismic activity. | | | | |
| **Introduction to topic:**  **WALT:** To understand the structure of the Earth  Examine the structure of the earth. Create and label diagrams of its structure. Roll different coloured pieces of plasticine into balls and sheets to represent the layers and create a model of the Earth which will then be cut in half to show the structure and layers, include this with their drawing and writing to form a display.  The Structure of the Earth PowerPoint | Geography | Parents (twinkl.co.uk)  KS2 Earth Layers Interactive QR Visual Aid (teacher made) (twinkl.co.uk) | | | | |
| **GEOGRAPHY** | | | | |
| **LEARNING OBJECTIVES:**  **Locational knowledge:**   * Locate worlds countries, use maps to focus on Europe   **Place Knowledge:**   * Understand similarities and differences between the UK and a region of Europe | | | **Human geography:**   * Use maps, atlases and globes to locate countries and described features   **Physical geography:**   * Describe and understand key aspects of volcanoes and earthquakes | |
| **Lesson objectives:** | **WALT and Activity** | | | **Possible resource** |
| **GEOGRAPHY Session 1:**  Objective   * Describe and understand key aspects of volcanoes and earthquakes | **WALT:** Investigate and describe the cause of geographical processes | | | Tectonic Plates PowerPoint Presentation (teacher made) (twinkl.co.uk)  Tectonic Plates Cut and Stick Worksheet | Beyond (twinkl.co.uk)  Plate Tectonics Interactive Lesson Pack - Primary Resource (twinkl.co.uk) Contains plate jigsaw |
| **ACTIVITY:** Tectonic plates and boundaries  Introduce the idea of tectonic plates and plate boundaries. Provide a map of the world cut into jigsaw pieces based on the location of the 20 plates and their boundaries. Children will piece together the jigsaw and use this to record the boundary locations on a world map.  Discuss how the tectonic plates move and the potential impact on the Earth’s surface. Children then record the different types of plates. | | |
| **GEOGRAPHY Session 2:**  Objective   * Understand similarities and differences between the UK and a region of Europe | **WALT:** Investigate the geographical processes of different world regions | | | Earthquakes PowerPoint (teacher made) (twinkl.co.uk)  Earthquakes KS2 - Labelling Worksheet for Primary Education (twinkl.co.uk) |
| **ACTIVITY:** Earthquakes - cause  Recap plate tectonics and introduce earthquakes, share presentation. After watching the video, talk through the causes and consequences of an earthquake. Children label a diagram of an earthquake, before conducting a short experiment to show what happens when one occurs. Children finish by describing what an earthquake is, what causes them and what damage they can cause. | | |
| **GEOGRAPHY Session 3:**  Objective   * Describe and understand key aspects of volcanoes and earthquakes * Use maps, atlases and globes to locate countries and described features | **WALT:** Describe the impact of natural geographical processes | | | Earthquake Damage Images, Stock Photos & Vectors | Shutterstock |
| **ACTIVITY:** Earthquakes - affect  Study and discuss a range of images of earthquake damage. Children will sort and describe what happens before, during and after an earthquake. How do earthquakes affect people, the environment, and the landscape? Discuss the problems encountered by humans in the short term, such as fear, injury from falling debris and loss of personal items, and in the long term, such as loss of homes, lack of water and sanitation, damaged roads and transport networks and loss of jobs and services. Children complete sheet with similar questions related to earthquake in Amatrice, Italy in 2016. | | |
| **GEOGRAPHY Session 4:**  Objective   * Describe and understand key aspects of volcanoes and earthquakes | **WALT:** Describe and understand natural geographical processes | | | All About Volcanoes Information PowerPoint (teacher made) (twinkl.co.uk)  Volcanoes Differentiated Labelling Diagram (teacher made) (twinkl.co.uk)  KS2 Parts of a Volcano Labelling Activity | Twinkl Originals  KS2 Volcanoes Vocabulary Word Cards | Twinkl Originals |
| **ACTIVITY:** Volcanoes – structure and formation  Show and discuss the formation of volcanoes and why they erupt. Look at diagrams, animations, models, and geographical source materials to understand the process. Children will label a diagram or a volcano, construct a simple paper model to explain their findings using geographic vocabulary such as lava, vent, magma, force, gas, mantle, crust, and effusive and explosive eruptions. and finally match volcano features to descriptions. | | |
| **GEOGRAPHY Session 5:**  Objective   * Use maps, atlases and globes to locate countries and described features | **WALT:** Use maps and mapping tools to describe features of different countries | | | KS2 The Ring of Fire PowerPoint and Activity Pack (twinkl.co.uk)  Volcanoes True or False Sorting Worksheet / Worksheet (twinkl.co.uk) |
| **ACTIVITY:** Volcanoes – location and ranges  Introduce the Ring of Fire volcano formation. After discussing the information, children will identify the location of key volcanoes along the ring on a map and sort statements into true of false related to the ring and volcanoes. Discuss how they have sorted the cards and summarise, in their own words, why the Ring of Fire is significant with a short description to include with their map. | | |
| **GEOGRAPHY Session 6:**  Objective   * Locate worlds countries, use maps to focus on Europe * Understand similarities and differences between the UK and a region of Europe | **WALT:** Locate countries and compare them to the UK using geographical language | | | Volcano Facts for KS2 | Teacher Resources | Printable (twinkl.co.uk) |
| **ACTIVITY:** Volcanos – similarities and differences  Show the children a map showing the location of the different volcanoes located in the previous lesson. Show and discuss a selection of these volcanoes and examine how they are different from one another. Explain that they will be investigating a volcano of their choosing and creating a fact sheet about it. Encourage them to use books, information sheets and internet search engines to find out information about it, including its location, size, type, status, and date of last eruption. Include the formation around a picture of their chosen volcano. When complete, ask them to share the information they found with the group and compare their findings. | | |
| **HISTORY** | | | | |
| **LEARNING OBJECTIVES:**  **Historical periods and people:**   * Roman Empire and its impact on Britain   **Chronology:**   * Create timelines across and within historical time periods | | | **Historical concepts:**   * Understand the cause and significance of historical events * Compare historical periods (Similarities and differences) * Ask historical questions about characteristics, links and evidence * Use historical sources to support historical knowledge | |
| **Lesson objectives:** | | **WALT and Activity** | | **Possible resource** |
| **HISTORY Session 1:**  Objective   * Understand the cause and significance of historical events * Use historical sources to support historical knowledge | | **WALT:** Use historical sources to understand significant historical events | | Significant Individuals Mary Anning Powerpoint KS2 (twinkl.co.uk)  Google Earth  Mary Anning Significant Individual Writing Frame - writing frame (twinkl.co.uk)  Mary Anning KS1 Cloze Procedure (teacher made) (twinkl.co.uk) |
| **ACTIVITY:** Investigate the palaeontologist Mary Anning.  Use a map of the UK or Google Earth to show the location of Lyme Regis, in Dorset on the south coast. Explain that rocks along the coast there are sedimentary and rich in the fossilised remains of ancient sea creatures, fossils. Discuss information about Mary Anning before children produce a fact sheet about her life and discoveries. Finish with activity in which children match descriptions to the related dinosaur. | |
| **HISTORY Session 2:**  Objective   * Roman Empire and its impact on Britain * Understand the cause and significance of historical events * Create timelines across and within historical time periods | | **WALT:** Investigate and describe historical events and relate to British history | | Mount Vesuvius KS2 Information PowerPoint (teacher made) (twinkl.co.uk) |
| **ACTIVITY:** Investigate the eruption of Mount Vesuvius.  Share videos and descriptions related to Mount Vesuvius with the children. Children will then produce a timeline of the events that happened, using pictures provided and writing their own descriptions. Following this, children will discuss the causes and effects of each stage of the eruption, matching cause to effect cards. | |
| **HISTORY Session 3:**  Objective   * Compare historical periods (Similarities and differences) * Ask historical questions about characteristics, links and evidence * Use historical sources to support historical knowledge | | **WALT:** Ask historical questions to examine evidence related to different time periods | | KS2 Pompeii PowerPoint - Pompeii History Resources (twinkl.co.uk)  Pompeii and the Eruption of Mount Vesuvius Senses Worksheet (twinkl.co.uk)  Pompeii Photo PowerPoint (teacher made) (twinkl.co.uk) |
| **ACTIVITY:** Investigate the city of Pompeii and the work of archaeologist Giuseppe Fiorelli.  Share and discuss pictures and videos of the excavation sites at Pompeii. Show and work to identify artefacts found there.  Introduce how archaeologists use grids to excavate sites. Children will be provided with objects hidden to trays of sand/dirt and construct a grid over them. Children then excavate the objects, record the grid reference, draw the object, and write a description of what they believe the item might be and its use. | |
| **ART** | | | | |
| **LEARNING OBJECTIVES:**  **ART**   * create sketch books to record their observations and use them to review and revisit ideas * Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] | | | **DT**   * Make: Use a wide range of materials according to their function | |
| **Lesson objectives:** | **WALT and Activity** | | | **Possible resource** |
| **ART Session 1:**  Objective   * Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] | **WALT:** Select from available materials and develop an initial plan to make a product | | |  |
| **ACTIVITY:** Produce a model of a volcano.  Use a range of modelling materials and tools to construct a 3-D model volcano. Add effects that allow the volcano to erupt and include labels. | | |
| **ART Session 2:**  Objective   * Create sketch books to record their observations and use them to review and revisit ideas * Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] | **WALT:** Produce an historical image with a range of materials and tools | | |  |
| **ACTIVITY:** Sketches and images of Pompeii.  View images of the city of Pompeii and the inhabitants entombed there. Create sketches will charcoal and models to represent the images. Use sketches to form figures made of clay. When dry, dust or wash the figures with white paint to create a ‘Bodies of Pompeii’ display. | | |
| **DT Session 1:**  Objective   * Make: Use a wide range of materials according to their function | **WALT:** Design and produce a structure based on identified criteria | | | Design an Earthquake-Proof Building (teacher made) (twinkl.co.uk) |
| **ACTIVITY:** Design a structure to withstand an earthquake.  Take part in a ‘Structure challenge’ to see who can build the best earthquake-proof tower or shelter. Children begin by looking at and finding out about earthquake-proof buildings such as the Burj Khalifa, in Dubai; the US Bank Tower, in Los Angeles; the Yokohama Landmark Tower, in Yokohama; the Transamerica Pyramid, in San Francisco; and the Torre Mayor, in Mexico City. Label a diagram to explain how structures are reinforced to withstand an earthquake. Children will work in pairs to produce a structure that can be tested to withstand an earthquake. Children place their structures in trays of set jelly to simulate an earthquake and determine the success of their design. Consider materials used and how they will make the testing process fair. | | |
| **DT Session 2:**  Objective   * Make: Use a wide range of materials according to their function | **WALT:** Discuss and replicate a known design with materials identified for their function. | | |  |
| **ACTIVITY:** Produce a working model of a seismograph.  Introduce how earthquakes are detected, before children make their own seismograph to record the magnitude of a ‘mini earthquake’. Place their seismograph on a table and shake it to imitate earthquakes of different strengths. Assess the effectiveness of their designs and suggest how their designs could be improved.  Use a cardboard box with no front. Cut a slit either side, feed a strip of card through with paper on top. Use string to suspend a plastic cup inside the box above the strip, place a felt pen through the cup that contacts the paper. | | |