Durham Lane Primary School: Topic Planning

Topic: Natural Disaster **Term: Summer** **Class: 5/6**

Subjects	Objectives	Key Knowledge/key concepts/key elements	Key Vocabulary (Tier 2 and 3)	Skills	Activities/ Tasks
English	To be able to: Plan, draft and write in a variety of genres using relevant skills (see writing progression sheets).			**See writing progression sheets**	• Research and write non- chron reports about the different types of natural disasters and how they occur • Report about volcanoes and most famous ones • Narrative- the day an earthquake hit school • Narrative looking at Vesuvius in Pompeii and imagining being there • Volcano/earthquake poetry including performance • Describe the process of fossilisation.
Geography	3a. Physical geography, including: rivers, mountains, volcanoes and earthquakes – natural disasters, flooding, earthquakes, tsunami	**Location** **To be able to locate and name places which are the main areas to experience earthquakes, volcanoes and tsunamis.** To understand why these disasters occur in these places. **Physical Features** **To know about earthquakes, volcanoes and tsunamis and where they usually occur in the world.** To know about tectonic plates and fault lines and how these can cause earthquakes and tsunamis. To know what causes a volcanic eruption. **Mapping** **To know how to use longitude and latitude to locate places on maps.** **To know how to use 4 figure grid references on a map to locate places.** **To know how to use 6 figure grid references on a map to locate places.** To know how relief maps show heights of mountains and depths of seas when investigating the types of places that suffer natural disasters.	**Tier 2 words** Symbols Natural Disaster Locate **Tier 3 words** Tectonic plates Fault lines Ring of fire Tsumani Regions Grid references Coordinates Latitude Longitude Equator Relief maps Contour lines	**Geographical enquiry** 1. Suggest questions for investigating e.g. why do some places suffer from earthquakes more than others? 4. Analyse evidence from primary and secondary sources and draw conclusions e.g. investigate where earthquakes and volcanoes have occurred by looking at a world map and analysing fault lines. 5. Analyse evidence and draw conclusions, identifying patterns and explain reasons behind them. **Direction/ Location** 1.Use 4 figure co-ordinates confidently to locate features on a map. 3. Begin to use 6 figure grid refs; use latitude and longitude on atlas maps. **Representation** 3. Use atlas symbols. **Using maps** 2. Select a map for a specific purpose. (E.g. Pick atlas to find countries where natural disasters occur, smaller map to locate particular cities) 4. Locate places on a world map. 5. Use atlases to find out about other features of places. (e.g. mountain regions, weather patterns) **Scale / Distance** 2. Find/recognise places on maps of different scales. (E.g. Pompeii) 4. Use maps at a range of scales. **Map knowledge** **1.**Confidently identify significant places and environments **Style of map** 1. Use index and contents page within atlases. 2. Recognise world map as a flattened globe.	• Discuss the 3 main types of natural disasters which we will be concentrating on: volcanoes, earthquakes and tsunamis. Give them general information on each of the 3 and how they are created (Twinkl PPT). • Show the chd a world map and give them a list of 15 volcanoes/regions where earthquakes have occurred. Use BBC Bitesize to investigate where and why earthquakes happen. In pairs, use Ipads and atlases to locate these places and stick them on a world map. Can they see any patterns in location? Refer to lines of longitude and latitude on the maps and give chd coordinates to find countries where volcanoes and earthquakes have occurred. • Remind chd about 4 figure grid references. Look at Twinkl PPT and do activity where chd have to find OS map symbols using 4 fig grid refs. Then go on to begin to use 6 fig grid references and show chd how to do this. • Look at atlases and find the different places where volcanoes have occurred. Look at the contour lines and explore the different colours on relief maps to explain the height of mountains etc. • Show chd fault line/tectonic plate maps and explain how volcanoes/earthquakes occur. This will allow chd to draw conclusions about why volcanoes and earthquakes occur where they do and may answer some of their earlier questions. Show Twinkl powerpoints and BBC Bitesize to show where the tectonic plates are and to show The Ring of Fire. • Research different types of natural disaster individually. Look at the different places of the world where natural disasters have occurred. Use atlases to locate different places and focus on atlas symbols. Use index pages to help with this. • Look at how and when the eruption of Vesuvius happened and look at photographs of the destruction it caused. Use Twinkl PPT to put the events of the eruption on a timeline.

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Science	6.6 Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	**To know that fossils are formed by bones being pressed into different layers of rocks and sand over time.** **To know that fossils can tell us a lot about the past.** **To know that, by looking at fossils, we can find out if animals were herbivores or carnivores.**	**Tier 2 words** Classify Identify Evidence Refute Explain **Tier 3 Words** Fossil Secondary sources Classification keys Herbivore Carnivore Sedimentary rock Trace fossil Mould fossil	**Asking Questions & Planning Enquiries** 1) Talk about how scientific ideas have developed over time 4) Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact **Testing, Measuring & Recording** 2) Use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment **Concluding** 2) Identify scientific evidence that has been used to support or refute ideas or arguments 3) Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results	**Cover a career in STEM - Explorify – Who Is? Eunice Newton Foote (climate change)** Find out what they remember about the work of Mary Anning in Y3/4. What did she discover? Look at how fossils are made and remind them of previous work done in Y3 and 4. Use How are fossils made? - BBC Bitesize and discuss what information fossils give us. Use Twinkl PPT to show how fossils are made and look at pictures of dinosaurs and bones to see what information the remains tell us. Identify whether animals were carnivores or herbivores. **Focus Skill:** Asking questions Use DKFind out to research what fossils tell us and where they can be found. Use the market place to share research and present a fact sheet presenting what they have learnt.
Art	1) To create sketchbooks to record their observations and use them to review and revisit ideas. 2) To improve their mastery of art and design techniques, including drawing and painting with a range of materials 3) Learn about great artists in history	**Exploring/ Evaluating and developing ideas** To know how to use different styles and techniques to create a piece of volcano art. **Drawing** To know how to create a landscape using different art materials. To know about foreground, midground and background and how to use this to create depth in their work. **Painting** To know how to use different textures in paint to create different effects when painting landscapes. **Texture (collage)** To know the best materials to use to create texture in a volcanic piece of art. **Artists** To know who the artist Deyanira Harris is and to appraise her work (Volcano Madness).	**Tier 2 words** Bold Vibrant Subtle Coarse Dramatic Tone **Tier 3 Words** Perspective Texture Foreground Background Mixed media Scale Proportion Tonal contrast	**Exploring/ Evaluating and developing ideas** -Develop sketch book - Select and record from observation, experience and imagination and develop ideas confidently, using suitable materials confidently - Question and make thoughtful observations about starting points and select ideas for use in their work, recording and annotating in sketchbooks - Improve quality of sketchbook with mixed media work and annotations - Develop artistic/ visual vocabulary when talking about own work and that of others - Begin to explore possibilities, using and combining different styles and techniques - Think critically about their art and design work **Drawing** - Begin to develop an awareness of perspective, composition, scale and proportion - Use a variety of techniques to interpret the texture of a surface e.g. mark making, different textured paint **Painting** - Explore the use of texture in colour (link to texture unit) with sawdust, glue, shavings, sand and on different surfaces - Explore the texture of paint – very wet and thin or thick and heavy – add PVA to the paint - Develop painting techniques using different types of paint e.g. acrylic, water colour - Considering colour for purpose	Pupils will be shown various landscape pictures of volcanoes and will use a variety of art medium to emulate these. They will annotate their ideas in sketch books and will create imagined landscapes also. This will also involve children in thinking about perspective. Children will create chalk/pastel/paint pictures of volcanoes based on work by Deyanira Harris (Volcano Madness) Volcano madness Painting by Deyanira Harris (pixels.com) Children will use different materials in paint e.g. sawdust, sugar, salt, glue to create textures and will experiment with these textures before completing a finished painting based on work of Harris. They will also use a variety of paints e.g. thick, thin, powder, poster, acrylic, aqua pencils etc. Watch YouTube video How to draw a landscape- art lesson for kids by Ashley Krieger. Children will do a simplistic landscape using aqua pencils or crayons or felt tips, experimenting with different media. If chd are still struggling, there is another YouTube video from Toy Toons called How to Draw a landscape for kids/drawing for beginners/mountain scenery. Show children YouTube video from circle line arts called How to Draw a Landscape Using Atmospheric Pressure. This discusses foreground, midground and background and will show them how

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				- Carry out preliminary studies, test media and materials and mix appropriate colours - Show an awareness of how paintings are created - consider artists use of colour and application of it - Choose appropriate paint, paper and implements to adapt and extend their work **Texture (collage)** - Develops experience in embellishing, pooling together experiences in texture to complete a piece –drawing, painting, collaging on top of textual work, sticking, cutting, paint.	to introduce depth to their pictures as well as shading which they have already done this year. Children will just use pencil for this. Children will be shown landscapes with volcanoes on and will use techniques taught to try to copy one of the landscapes before creating one of their own. Use of collage using different types of paper/paint/materials to create volcanic pictures.
DT	1) To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. 2) Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer-aided designs. 3) To select from and use a wider range of tools and equipment to perform practical tasks accurately. 4) To select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities. 5) Investigate and analyse a range of existing products. 6) Evaluate their ideas and products against their own design criteria and consider the vies of others to improve their work. 7) Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Design, Make and Evaluate: **To know how to use tools correctly and accurately.** **To know how to cut, shape, join and finish a product.** **To know how important it is to evaluate products in order to improve them.** Structures: **To know about freestanding structures and to know how to strengthen them.** **To know how to create bends in a marble run and maintain the balance/strength of the structure.**	**Tier 2 words** functional product purpose evaluate improve strength stability reinforcement accurate spirals aesthetics **Tier 3 words** free-standing structure foundations vertical support technical components prototype quality finish	**Design** • use research of user's individual needs, wants, requirements for design to ensure product is fit for purpose • create own design criteria and specification • come up with innovative design ideas • produce a logical, realistic plan and explain it to others; be willing to refine. • use annotated sketches, cross-sectional planning and exploded diagrams • make design decisions, considering, resources • clearly explain how parts of design will work, and how they are fit for purpose • model and refine design ideas by making prototypes and using pattern pieces, with increasing independence **Make** • use tools/equipment with good level of precision • produce suitable lists of tools, eqpt/materials needed • select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics • create, follow, and adapt detailed step-by-step plans • explain how product will appeal to an audience • accurately measure, mark out, cut and shape components • accurately assemble, join and combine components • apply a range of finishing techniques, with increasing accuracy • use techniques that involve a number of steps **Evaluate** • evaluate quality of design while designing and making • keep checking design is best it can be. • evaluate ideas and finished product against specification, considering purpose and appearance stating if fit for purpose • test and evaluate final product; explain what would improve it and the effect different resources may have had • evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. **Technical knowledge- materials and Structures** • select materials/textiles carefully, considering intended use of the product, the aesthetics and functionality. • explain how product meets design criteria • measure accurately enough to ensure precision	Design • Discuss how different free standing products are designed to be strong and stable? Highlight the fact that some products are made stronger and more stable and by having a wide base. • Build the tallest free standing tower from cardboard tubes. (Some examples of towers can be found by typing 'toilet roll tube towers' or 'cardboard tube towers' into Google images.) • Children to work in groups to create a bridge using a variety of joins. • Get children to look at some examples of bends made from commercially bought marble runs. Recreate these types of bends using the materials that are available. • Children to work in pairs to find two different methods of increasing the marble run time. Making • Children to explore and discuss the wide range of materials and components and think about the following: What materials will be most functional? How will the components be joined together to create a stable structure? What methods of strengthening and reinforcement will be used? What finishing techniques will be used? • Children will work in groups to make their marble runs. Children should use a wide range of materials and components that are functional but also show that they have considered the aesthetic qualities. • Regularly evaluate their work against the design criteria at different stages. Evaluation • Groups will rotate around each marble run and write down one positive point and one area for improvement. The children must evaluate the marble runs against the design criteria. • Children work on the improvements suggested by their peers and should clearly show how they have acted upon these ideas. • Testing the marble runs using the activity sheet to record results for the different marble runs. Invite an independent judging panel in to allocate marks based on the design criteria. The team with the most marks at the end will be the winning team.

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				• ensure product is strong and fit for purpose • reinforce and strengthen a 3D frame • think of and use a range of ways to join things	