Sonar Curriculum

Y4 On Top Of The World Learning Sequence

Synopsis: Children investigate physical and human features with a focus on mountains and mountain ranges. They consolidate and develop their understanding of different word classes and apply a broader range of figurative language.

In **Science**, children investigate food chains, types of teeth and digestion.
In **Geography**, children focus on human and physical features of mountains.
In **Art**, children use textiles to develop sewing skills.
In **D&T**, children explore how food is grown, reared, caught and processed.
In **Computing**, children use inputs to control sprite/background for story.

English

Write a narrative based on a mountain adventure.

English Objectives

Comprehension
- Ask relevant questions and discuss their understanding, explaining the meaning of words in context
- Make reasoned predictions of what might happen clearly derived from details both stated and implied

Grammar & Punctuation
- Use a wider range of subordinating conjunctions (*before, after, while, when, if, because, although*) (Y3)
- *Express time, place and cause using conjunctions, adverbs and prepositions (Y3)*
- Use fronted adverbials
- Use commas after fronted adverbials

Language & Vocabulary
- Use varied and rich vocabulary including adjective, expanded noun phrases, adverbs, preposition phrases, collective nouns, similes and alliteration (Y3)
- Vary sentence openers for effect (Y3)
- Broaden range of figurative language to include metaphors, personification and repetition

English Learning Sequence

English Learning Sequence

- Choose a text related to mountains/adventure, eg *Everest, My Side of the Mountain*
- Read text to the children/encourage independent reading of the text/s
- Devise questions about the text after an introduction to it – note which questions are answered during the book. Review and discuss those which weren't answered
- Predict events from title and front cover and at various points within the book. Justify predictions with reference to the text
- Discuss characters within the book – how are they portrayed, what do you like/dislike about them?
- Recap word classes taught to date including expanded noun phrases, verbs, adverbs, preposition phrases, collective nouns
- Read extracts as a class and 'magpie' key words and phrases that capture the reader's interest, eg '… shining brightly on the roof of the world'

- Begin to interweave character, setting and plot

Plan, Draft, Edit & Evaluate

- Discuss and record ideas
- Draw on examples of writing when planning own work
- Compose and practise sentences orally using an increasingly wide range of vocabulary and sentence structure
- Suggest changes to grammar and vocabulary
- Organise paragraphs around a theme: use paragraphs/sections to help organise content.
- Proofread work for spelling/punctuation errors
- Assess others' and own writing, suggesting improvements

In addition to the above, teachers should apply general spelling rules and guidance, as listed in English Appendix 1 and ensure concepts and skills outlined in English Appendix 2 are also addressed.

- Check understanding of words and phrases in context
- Build on previously-taught figurative language (alliteration, similes, repetition) and introduce metaphors and personification
- Explore and evaluate examples of metaphors and personification - why does the writer use these techniques? How does figurative language paint a vivid picture in the reader's head?
- Plan writing of the narrative – what are the main events, who are the main characters? Add detail such as figurative language
- Model how to turn ideas into complete sentences. Encourage children to use a range of sentence openers (including fronted adverbials) and sentence types: simple, compound and complex
- Edit and improve writing to produce final piece

English

Write a non-chronological report about mountains or mountaineers.

English Objectives

Comprehension

- Identify main ideas across paragraphs and summarise these
- Independently retrieve and confidently record information from non-fiction

Grammar & Punctuation

- Use a wider range of subordinating conjunctions (*before, after, while, when, if, because, although*)
- Choose nouns and pronouns accurately for clarity and cohesion
- Use apostrophes for plural possession

Text Structure & Features

- Be exposed to books that are structured in different ways
- Reflect understanding of audience and purpose through choice of

English Learning Sequence

- Explain that children are going to research a range of mountains/mountaineers
- Share examples of non-fiction texts, discussing layout, organisation and features
- Model identifying main ideas in a section of a text and summarising them
- Ask children to choose a section of text and do the same
- Generate a list of questions that children would like to find the answers to about different mountains/mountaineers
- Allow children to carry out own research, taking notes from books and/or websites, to summaries key points. Use features of non-fiction books to navigate information

grammar, vocabulary and structure

Plan, Draft, Edit & Evaluate

- Discuss and record ideas
- Draw on examples of writing when planning own work
- Compose and practise sentences orally using an increasingly wide range of vocabulary and sentence structure
- Suggest changes to grammar and vocabulary
- Proofread work for spelling/punctuation errors
- Assess others' and own writing, suggesting improvements

In addition to the above, teachers should apply general spelling rules and guidance, as listed in **English Appendix 1** and ensure concepts and skills outlined in **English Appendix 2** are also addressed.

- Once notes complete, children orally practise turning these into sentences using a wide range of sentence types
- Focus on use of adverbials for different reasons: contrast, explain, add information etc. Discuss how these are used for cohesion between ideas and across paragraphs
- Children organise their information into paragraphs around a theme, considering audience and purpose
- Edit and improve writing to produce final piece

Science

Investigate food chains, types of teeth and digestion.

Science Objectives

Scientific Knowledge

- Describe the simple functions of the basic parts of the digestive system in humans
- Identify the different types of teeth in humans and their simple functions
- Construct and interpret a variety of food chains identifying producers, predators and prey
- Identify similarities, differences, changes related to a scientific process

Science Learning Sequence

- Link to mountains (habitats in mountains and mountaineer diet)
- Play a game of Who Eats What – matching cards/snap (see Resource Pack)
- Preferably outside, assign each child a role eg grass, rabbit, fox and see if they can create a human food chain by linking arms. Discuss what is meant by food chain eg What is at the start? What is at the end?
- Give children cut up images from a food chain – can they put them in order? Omit some images and generate ideas for what is missing/why
- Add arrows and key words eg producer, consumer, prey, predator. Discuss definitions and add to chain
- Children complete their own food chain applying knowledge
- Point out that different animals in chain have different types of teeth. Children raise questions as to why this might be
- Name and identify functions of types of teeth eg canine, molar, incisor

- Match teeth to animal, explaining reasons using scientific language eg A fox has long, sharp canines to rip flesh from its prey.
- Linking teeth to digestive system, children investigate where our food goes after being in our mouths and label a simple diagram eg stomach, intestine
- Ensure children understand scientific terms eg digest

Geography

Focus on human and physical features of mountains and mountain ranges.

Geography Objectives	Geography Learning Sequence
- Explain geographical similarities and differences (Regions of the UK/European country) and communicate geographically - Locate more countries of Europe and N/S America using maps and identify environmental regions, key human/physical features including cities - Explore how some aspects of physical and human characteristics have changed over time - Describe and understand aspects of physical geography - Securely use world maps, atlases and globes and use digital mapping - Begin to observe, record and present human/physical features of local area using maps, sketches, plans, graphs, digital technology	- Ensure children know names of continents/oceans and can locate Equator - Use maps and atlases to locate mountain ranges of the world - In-depth study of mountains – where they are, how they affect human activity and how they have changed over time - Compare mountainous regions in various parts of the world, looking for similarities and differences eg Andes v Rockies; Pyrenees v Himalayas - Describe the physical features of these locations using geographical language eg looking at biomes, fauna, flora, topography - Make links between mountainous ranges and human activity, eg tourism - Communicate findings geographically using writing, diagrams, photographs, charts and maps

Art

Use textiles to develop sewing skills.

Art Objectives	Art Learning Sequence
- Create sketchbooks to record and revisit observations - In textiles, use basic cross and back stitch - Use a range of artistic vocabulary to discuss and evaluate work	Discuss kinds of clothes that mountaineers may need, i.e. waterproof, insulated etc.

- Apply art and design techniques with creativity, experimentation and increasing awareness
- Draw on work of other artists for inspiration and begin to emulate their style
- Know about great artists, architects and designers and how their art/design reflected and shaped our history and contributed to the culture of our nation

- Handle real examples of clothes, examining the stitching used and how the material fits together
- Investigate simple clothing patterns and how the different elements fit together
- Recap basics of measuring, matching thread and material colour and threading a needle etc.
- Using swatches of off-cut materials, children practise a basic running stitch
- Introduce children to other types of stitch eg cross-stitch, back-stitch, basting stitch and allow children to practise.
- Demonstrate when each stitch is most appropriate
- With link to making clothes, research the work of a famous designer and the process of designing and making clothes

D&T

Explore how food is grown, reared, caught and processed.

D&T Objectives

- Know where and how a variety of ingredients are grown, reared, caught and processed

D&T Learning Sequence

- Consider types of farming/agriculture related to various regions of the world and research these
- Can they spot any patterns eg fishing around coastal areas, crops in large, rural areas?
- Discuss which produce is grown, processed, reared or caught by sorting food types
- Choose one aspect to investigate in more detail eg fisheries
- Using understanding of how ingredients are grown, caught, reared and processed, design a menu for a mountaineer
- Explain why ingredients chosen and which area they reflect
- Identify any obstacles/changes to farming and explain reasons for this eg moves towards local produce, decrease in intense farming, the rise of veganism

Computing

Use inputs to control sprite/background for story.

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Computing Objectives	Computing Learning Sequence
- Use logical reasoning to understand how algorithms work - Detect and correct errors in algorithms and programs - Start to use sequence, selection and repetition in programs - Write and debug programs that accomplish specific goals, including simulating physical systems - Begin to solve problems by decomposing them into smaller parts - Work with variables and various forms of input/output	- Recap on how code is used in everyday life - Explore how code is used to control physical systems (eg drink machines, bar codes) - Investigate outputs using a control box and how the code may turn various outputs on and off eg traffic lights or lighthouse - Design simple game with focus on background and moving sprite - Write a code to make a sprite draw various 2D and 3D shapes, thinking about internal and external angles