Sonar Curriculum

Y4 Who Pays The Price? Learning Sequence

Synopsis: Children investigate the water cycle, rivers and mountains and examine the problem of plastic pollution. They learn about and apply the skills of persuasive writing to write a David Attenborough-style voice-over for their own nature documentary.

In **Science**, children look at classification and changing environments.
In **Geography**, children find out about physical processes and features (water cycle, rivers and mountains).
In **Art**, children develop drawing techniques when designing their product (see D&T).
In **D&T**, children design a product that reuses plastic and/or a water filter for a developing country.
In **Computing**, children use digital literacy skills to create purposeful content for email.

Curriculum areas: English, Science, Geography, Art, D&T and Computing
Length of theme: 6 weeks

English

Write a persuasive voice-over for a nature documentary style video.

English Objectives

Comprehension

- Identify themes and conventions and summarise these accurately and concisely

Grammar & Punctuation

- Use a wider range of subordinating conjunctions (*before, after, while, when, if, because, although*) *Y3*
- Use fronted adverbials and use commas after fronted adverbials

Text Structure & Features

- Write for a range of purposes
- Build cohesion within a paragraph, choosing appropriate pronouns and nouns to avoid repetition
- Link ideas across paragraphs using adverbials of time, place and number or by varying tense
- Identify how language, structure, vocabulary, grammar and

English Learning Sequence

- Watch a video clip showing the devastation caused by the plastic pollution of our oceans. An example could be David Attenborough's *Blue Planet* series. What is your response? Generate ideas.
- Children debate plastic pollution, making a point and then developing it orally
- Watch again and magpie any key words or phrases that children feel are powerful eg destruction, catastrophic. Remind them that this is called emotive language
- Read and share further examples of charity appeals etc. that use emotive language to address the reader/viewer directly
- Expand word bank to include emotive language eg bad becomes devastating/catastrophic. Generate a bank of emotive words and phrases, ensuring children understand the meaning
- Introduce concept of AFOREST (see Resource Pack) as a technique for employing rhetorical devices ie to enhance an

presentation contribute to meaning

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.

argument or persuade audience to take action (where possible, collate these from real examples eg websites about plastic pollution)

- Explore elements of AFOREST, making links to issue of plastic pollution in ocean. Allow children to experiment with these in isolation before applying to writing
- Encourage children to consider cohesive devices to add, explain, contrast eg Due to the fact that … However … As a direct result of …
- Plan orally and then in writing a voiceover for a documentary style video, applying the AFOREST technique learned
- Draft, edit and improve writing to produce final product

English

Write a journalistic piece based on plastic pollution.

English Objectives

Comprehension

- Identify themes and conventions and summarise these accurately and concisely
- Read books/texts that are structured in different ways and read for a range of purposes

Grammar & Punctuation

- Punctuate direct speech with inverted commas and other punctuation (for example, a comma after the reporting clause)
- Use fronted adverbials
- Use commas after fronted adverbials

Language & Vocabulary

- Broaden range of figurative language to include metaphors, personification and repetition

Text Structure & Feature

English Learning Sequence

- Collate examples of newspapers and newspaper articles about plastic pollution with children and discuss features. Explore the tone of language (formal) and examine type of language, looking for commonality
- Summarise the conventions of newspaper writing – are they found in all newspapers or do some follow different conventions?
- Discuss the issue of plastic pollution and why it is 'newsworthy' – global issue etc
- Chop up articles into key parts and allow children to rearrange, label and annotate: headline, by-line, introduction, main article, quotes, pictures and captions. What is the function of each part?
- Based on geographical work around plastic pollution, decide on their 'angle' – is the overall tone of article going to be positive or negative? What kind of language can we use to reflect tone? Who is the newspaper aimed at? Consider audience

- Identify how language, structure, vocabulary, grammar and presentation contribute to meaning

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.

- Practise each newspaper feature in turn, writing headline, by-line, introduction (using the 5 W's of when, who, what, where and why) and main article. Focus on tone, language and level of formality
- Ensure children are using wider range of conjunctions to write more detailed sentences
- Use inverted commas to indicate direct quotes and develop understanding of the conventions of speech eg "This is a global emergency," reported Sir David Attenborough.
- Draft, edit and improve to produce final newspaper report

Science

Look at classification and changing environments.

Science Objectives

Working Scientifically

- Generate and answer scientific questions using evidence
- Select most appropriate types of scientific enquiry
- Gather, classify, record and present data in a wide variety of ways
- Report on findings orally and in writing using scientific language to answer questions
- Make systematic observations
- Use results to draw simple conclusions, make predictions and raise further questions
- Explain similarities, differences, changes related to scientific processes and ideas
- Suggest, set up and carry out simple practical enquiries
- Understand comparative and fair tests
- Confidently use range of equipment to measure accurately

Scientific Knowledge

Science Learning Sequence

- List all of the different living things that inhabit the ocean – how many can they think of? Use internet to create longer list
- Discuss how these could be grouped – generate responses
- Introduce key scientific vocabulary eg mammal, vertebrate, fish
- Sort and classify according to species fish, mammals, invertebrates etc.
- Explore classification keys (a series of questions about an organism's features) - what do they notice? How do classification keys work?
- Create a classification key for marine life
- Investigate which types of animal live in locality/micro-habitats and set up test to gather data on this
- With guidance, decide on how to collect and record data, selecting the most appropriate type of scientific enquiry

• Recognise that living things can be grouped in different ways • Explore and use classification keys to help group, identify and name a variety of living things in the local and wider environment • Recognise that environments can change and that this can sometimes pose dangers to living things • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	• Gather data on living things found in local environment and use this to set up classification keys to group and identify each • Use the results to draw conclusions and raise further questions • Examine threats posed not only to oceans but to local environment eg paving over gardens and the impact on wildlife • Create a campaign to raise awareness of local environmental issues, making reference to scientific understanding

Geography

Find out about physical processes and features (water cycle, rivers and mountains).

Geography Objectives	Geography Learning Sequence
• 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 (water cycle, rivers, mountains) • Describe and understand aspects of human geography (settlement/land use / economic activity and distribution of natural resources) • 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	• Recap world's oceans and seas – can children identify and locate these? • Consider where the water comes from. Generate responses. • Introduce the water cycle. Give children images and key words with definitions. Can they label the diagram? Why is it called a 'cycle'? • Children explain the water cycle using geographical language • Link to rivers. Using range of atlases and maps, carry out an in-depth study of key rivers around the world, looking for similarities and differences • Describe and understand key aspects of the physical geography of regions and their rivers, understanding key geographical vocabulary eg oxbow, meander, tributary • Present findings in a variety of ways • Focus on plastic pollution as an environmental issue that has affected oceans • Explore this issue in detail and communicate findings in a range of ways

Art

Develop drawing techniques when designing their product (see D&T).

Art Objectives	Art Learning Sequence
• Create sketchbooks to record and revisit observations • In drawing, use a range of pencils and techniques to show effect, movement, perspective and reflection • In digital media, use a range of tools to create images, video and sound recordings • Use a range of artistic vocabulary to discuss and evaluate work • 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	• Recap drawing skills to date • Discuss brief of creating packaging/branding for product made in D&T • Look at examples of real products' branding and evaluate using artistic language • Using real examples as inspiration, children work to create branding for product using range of pencils • Translate this work into digital media, using chosen hardware/software to recreate image • Use video and sound to create short ad for product, focusing on aesthetic qualities of branding to support key message

D&T

Design a product that reuses plastic and/or a water filter for a developing country.

D&T Objectives	D&T Learning Sequence
• Take risks to become innovative and resourceful • Communicate, generate and develop ideas using a range of strategies • Use research to inform design and develop design criteria • Select from and use a wider range of tools, equipment, materials and components accurately to make prototypes • Evaluate and own and others' work, suggesting improvements and consider the views of others to improve their work • Investigate a range of existing products in a range of relevant contexts	• Investigate a range of products eg item made from recycled plastic or a water filter • Explain that children are going to design and make a product linked water pollution eg it could be a simple water filter for developing country • Research products to generate design criteria • Communicate design in a range of ways and using a range of strategies • Using chosen materials, tools and components, make, test, evaluate and adapt prototype of product • Create final product (links to Art) • Children could sell these to parents etc. to raise money for charity eg Water Aid

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Computing

Use digital literacy skills to create email content for Water Aid.

Computing Objectives	Computing Learning Sequence
• Select and use a variety of software on digital devices	• Discuss use of emails • Create purposeful content for an email to try and raise awareness of plastic pollution or campaign for Water Aid • Review content