

Y5 Globetrotters Learning Sequence

Synopsis: Children develop their understanding of the world and other planets in the solar system. In addition they understand how location in the world dictates time zones. They apply their understanding to an explanation text.

In **Science**, children investigate the solar system and the movement of the planets/moon.

In **Geography**, children understand how location in the world dictates time zones.

In **Art**, children develop personal style in drawing and collage.

In **D&T**, children research and design products that solve the problems of long-distance travel.

In **Computing**, children use coding to plot an astronaut's journey around the world (sprites, background, scoring).

Curriculum areas: English, Science, Geography, Art, D&T and Computing

Length of theme: 6 weeks

English

Write an explanation of how the solar system works (movement of Earth and Moon).

English Objectives

Grammar & Punctuation

- Build cohesion within a paragraph
- Link ideas across paragraphs using adverbials of time, place and number or by varying tense
- Use relative clauses with relative pronouns

Text Structure & Features

- Use further organisational and presentational devices to structure text

Plan, Draft, Edit & Evaluate

- Use dictionaries to check the spelling and meaning of words
- Identify audience and purpose of writing
- Note and develop initial ideas drawing from reading
- Select appropriate grammar and punctuation and understand how these can change/enhance meaning

English Learning Sequence

- Watch videos and explore diagrams of planetary movements
- Describe orally what is happening
- Share key facts/bullet points about movement of planets eg Sun does not move; Earth rotates on its axis
- Ensure children familiar with all new scientific vocabulary eg axis, orbit
- Grammar session on relative clauses to help add clarity to new terms eg The solar system, which is....
- Re-enact the movement of Earth and Moon, assigning each child a role. Children narrate what is happening applying new scientific language
- Encourage children to use conjunctions and adverbials to add information and explain processes eg As Earth rotates, ... When the North Pole faces away from the Sun, ... In addition, ...Therefore, ...
- Explain that they are going to write an explanation relating to solar system eg day and night, seasons

- Assess effectiveness of own and others' writing
- Propose changes to grammar, punctuation and vocabulary to enhance meaning/effectiveness
- Ensure correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register

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.

- Use science knowledge to write a clear, concise, scientific explanation which incorporates relative clauses and wide range of conjunctions and adverbials for cohesion

English

Write a recount of a journey around the world.

English Objectives

Comprehension

- Read/discuss an increasingly wide range of challenging stories, poems, plays, non-fiction and reference books, myths, legends and fairy stories Make comparisons within and across books, commenting on similarities and differences between texts
- Infer characters' feelings, thoughts and motives and justify using evidence

Grammar & Punctuation

- Build cohesion within a paragraph
- Link ideas across paragraphs using adverbials of time, place and number or by varying tense

Language & Vocabulary

- Become familiar with the language of writing eg figurative language, style and effect
- Select appropriate language and vocabulary to reflect their understanding of audience and purpose

English Learning Sequence

- Share real and fictional accounts of journeys into space or around the world, eg *Around The World In 80 Days*, *The Boy Who Biked The World*, an account of the voyage of Magellan or another explorer
- Read and discuss extracts from the texts – what do we discover about the places the traveller went to, their thoughts and feelings as they travelled, the challenges they encountered? What does the text explicitly tell us and what do we infer from what has been written?
- Compare the fiction and non-fiction accounts – what is the same and what is different about them?
- Encourage children to read more from the books during independent reading times
- Choose one of the journeys and use a map with pins/string to plot the route around the world. Discuss how the traveller reached each location. What would they have seen from this perspective? Eg hot air balloon
- 'Zoom in' on each location and explain that children are going to 'become' the traveller, recounting their trip

Plan, Draft, Edit & Evaluate

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- Emphasise the need to describe each destination in detail – how could we do this?
- Use images, photographs and videos to understand what each location was like
- Gather and mind map key words and phrases, using expanded noun phrases etc
- Use dictionaries and thesauruses to upskill language for best effect
- Teacher to model effective recount, using wide range of conjunctions and adverbials to reflect sequence and time eg *As soon as we had set sail, ...No sooner had we disembarked in Calcutta then ...*
- Plan their own recount, perhaps selecting one of two destinations or assigning a specific destination to each group
- Draft, edit and improve writing and present in imaginative ways eg huge class timeline with extracts pinned along in order

Science

Investigate the solar system and the movement of the Sun / Moon.

Science Objectives
Scientific Knowledge

- Describe the movement of the Earth and other planets relative to the Sun in the solar system
- Describe the movement of the Moon relative to the Earth
- Describe the Sun, Earth and Moon as approximately spherical bodies
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky

Science Learning Sequence

- Watch videos and explore diagrams of planetary movements and solar system
- Label diagram of solar system and learn names of planets by rote
- Describe orally what is happening and identify most appropriate type of scientific enquiry (see Resource Pack)
- Devise questions that children want to find the answers to eg *How does the rotation of Earth affect day and night?*
- Using range of sources (books, websites etc) to note key facts / bullet points about movement of planets eg *Sun does not move; Earth rotates on its axis*
- Ensure children familiar with all new scientific vocabulary, eg *axis*, and create science glossary of terms
- Act out the movement of the planets, assigning roles to children

- As children act out, orally explain what is happening
- Write explanations for range of processes and phenomenon using clearly labelled diagrams to support writing

Geography

Understand about time zones and how these are dictated by location in world.

Geography Objectives

- Locate majority of world's countries and cities using maps and identify environmental regions, key physical/human features
- Identify position of latitude/longitude and N/S hemispheres
- Identify positions of tropics of Cancer/Capricorn, Arctic and Antarctic
- Identify position of Prime / Greenwich Meridian time zones
- Securely use world maps, atlases and globes and digital mapping to build knowledge of the wider world
- Observe, record and present physical features of local area, using maps, sketches, plans, graphs and digital technology
- Use 8-point compass, grid references and Ordnance survey maps
- Examine geographical similarities and differences (regions of UK, European country and N/S America) and communicate geographically
- Explain key aspects of physical geography (climate zones, vegetation belts, mountains, earthquakes, volcanoes, biomes)

Geography Learning Sequence

- Link to text about travelling around the world
- Teacher to provide map of pre-determined route that takes in a journey across different continents and oceans
- Using atlases and globes, confidently identify which continents/countries and oceans are crossed during the journey with links to compass directions eg Travel north east to get to ...
- Use map scale to estimate approximately how far is travelled
- Imagine the journey were to be by plane, share aerial photos of various locations on this route – can children use geographical understanding and language to identify which is which eg This photo shows a land-locked area so it can't be ... This area shows long mountain ranges so it must be ...
- Attach these images to map of route, examining similarities and differences
- Discuss time zones with children and discuss new terminology eg Prime Meridian
- Set range of challenges eg *Passenger leaves NYC at 8pm on a Sunday and flies to Calcutta. The journey takes 9.5 hours so what time do they arrive in local time?*

Art

Develop personal style in drawing and collage.

Art Objectives

- Capture artistic process in sketchbook
- In drawing, use a range of pencils to begin to develop a personal style, drawing on work of other artists

Art Learning Sequence

- Share different depictions of the solar system
- Comment on this using artistic language to discuss subject matter, colours, style, media etc

- In collage, with increasing confidence, combine visual and tactile qualities
- Use a range of artistic vocabulary to communicate ideas, discuss and evaluate work / other art works
- Improve mastery of art and design techniques with a wide range of materials
- Communicate ideas and comment on artworks using artistic language

- Select an image to emulate in sketchbooks using pencils
- Consider how image could be made into a collage – what materials do you need? What skills would you need to use?
- Plan their collage in sketchbooks
- Create collage using a variety of materials to consider visual and tactile qualities
- Develop mastery of techniques including cutting, tearing, ripping, assembly, creating perspective

D&T

Research and design products that solve the problems of long-distance travel.

D&T Objectives

- Communicate, generate, develop and model ideas using a range of strategies
- Use research to inform design and generate own design criteria
- Communicate, generate and develop ideas drawing on other disciplines
- Confidently take calculated risks to become innovative, resourceful and enterprising
- Making connections to real / relevant problems by applying understanding of mechanical systems
- Drawing on disciplines & making connections to wider subject areas, apply understanding of computing to program, monitor & control products
- According to their functional properties and aesthetic properties, select from and use a wide range of tools, equipment, materials and components accurately to make high quality prototypes
- Generate own design criteria and evaluate ideas and products against these
- Investigate and analyse a range of existing products that address real / relevant problems in a range of contexts
- Understand how key events and individuals in D&T helped to shape the world

D&T Learning Sequence

- Gather children's experiences of travelling and what they needed to take with them. Are they familiar with any travel products eg travel pillows. What are the features and why?
- Discuss travel products and what properties they share eg portable, small/light and space-saving
- Show examples of travel products used eg fold-away travel toothbrush, travel pillows. Discuss the designs and the sorts of problems they solve
- Decide on a product or products for travelers that solve problem, drawing on real-life examples
- Use design criteria to design product, communicating design in a range of ways
- Select appropriate materials to make a prototype of their design, evaluating and adapting throughout
- Encourage children to focus on aesthetics, functionality and branding – what is the key message of your design/product? Who is it aimed at?
- Research key players in field of transport and find out about them and their impact, eg Wright Brothers

Computing

Use coding to track astronaut's journey around the world (sprites, background, scoring etc.).

Computing Objectives

- Write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- Solve problems by decomposing the into smaller parts
- Use sequence, selection and a repetition in programs
- Accurately manipulate variables and various forms of input / output
- Use logical reasoning to understand how algorithm work and detect and correct errors in algorithm and programs

Computing Learning Sequence

- Program an on-screen sprite to draw nested squares using procedures and sub-procedures
- Task children to create a game that depicts journey around the world
- Provide design criteria (eg inputs, outputs, sub-procedures, sensors, values and variables)
- Refine procedures to improve desired outcomes through the use of loops or repeats
- Evaluate in groups the efficiency of the game and explain the process of creating the game