

KS1 & 2 Curriculum Mapping 2014-15 – identifying science & foundation subject objectives

Year Group: **YEAR 4**

Term: 1 2 **3 4** 5 6

Thematic Unit Name: **'ENVIRONMENTAL CHANGE'**

Texts: 'The Window' by Jeannie Baker (fiction) & Can We Save the Tiger (Non-Fiction)

Possible Trips: The Living Rainforest

NC STATUTORY SUBJECT Programmes of Study (POS):

ENGLISH (see SR overviews)

- **Stories set in imaginary worlds** (4wks)

I can identify features authors use in fantasy and science fiction stories

I can express an opinion about an author's intended impact

I can tell a story based on role-play

I can write interesting sentences with fronted adverbials

I can write a narrative using paragraphs

- **Stories with a moral dilemma** – (2wks)

I can find features of a story that raise an issue or a dilemma

I can orally summarise the key points in each paragraph to outline the story structure

I can re-enact a scene from a story using drama

I can write compound and complex sentences with careful use of pronouns

I can write a short story that raises an issue or a dilemma

- **Persuasive texts** – voiceover scripts (3 wks)

I can identify the features of persuasive texts

I can make a persuasive speech

I can write persuasive statements

I can prepare a persuasive written voiceover script

- **Recounts-** based on the Easter story (2 wks)

Scene setting opening events in the right order, tell the story of what happened

Summary or conclusion with my comments

Details to bring it alive

Names of people or places

Adverbs, conjunctions or prepositions to show the passing of time

Varied but consistent use of past tense

Focus on participants

Using fronted adverbials and adverbials

Degree of formality adopted

MATHEMATICS (see SR overviews)

Geometry (5 wks)

- identify acute and obtuse angles and compare and order angles up to two right angles by size
- compare and classify geometric shapes, including quadrilaterals and triangles, **based on their properties and sizes**
- identify lines of symmetry in **2-D shapes presented in different orientations**
- complete a simple symmetric figure with respect to a specific line of symmetry.
- describe positions on a **2-D grid as coordinates in the first quadrant**
- describe movements between positions as translations of a given unit to the left/right and up/down
- plot specified points and draw sides to complete a given polygon.
 - **Measure (capacity, weight, length, time, area and perimeter) (5 wks)**
- Convert between different units of measure [for example, kilometre to metre; hour to minute]
- measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- find the area of rectilinear shapes by counting **squares**
- estimate, compare and calculate different measures, including money in pounds and pence
- read, write and convert time between analogue and digital **12- and 24-hour clocks**
- solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.

SCIENCE

Electricity

Statutory requirements

Pupils should be taught to:

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors.

Notes and guidance (non-statutory)

Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; these will be introduced in year 6.

Note: Pupils might use the terms current and voltage, but these should not be introduced or defined formally at this stage. Pupils should be taught about precautions for working safely with electricity.

Pupils might work scientifically by: observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.

Living things and their habitats

Statutory requirements

Pupils should be taught to:

- recognise that living things can be grouped in a variety of ways
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- recognise that environments can change and that this can sometimes pose dangers to living things.

Notes and guidance (non-statutory)

Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. They should identify how the habitat changes throughout the year. Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants. Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.

Note: Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses.

Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks, or garden ponds, and the negative effects of population and development, litter or deforestation.

Pupils might work scientifically by: using and making simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched.

Art & Design

1. Collaging imaginary world and characters (Surrealism – Dali & Magritte)

2. Stained Glass Windows – Marc Chagall (linked to Easter)

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

- to create sketch books to record their observations and use them to review and revisit ideas
- to improve their mastery of art and design techniques,
- about great artists, architects and designers in history.

Computing

Photo Story/Windows Movie Maker

- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

Branching databases (linked to habitats and classification in Science)

- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

Design & Technology

Making 'Window View' using a wooden frame (link to work on electricity + switches)

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

Design

- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Languages (KS2)

Catherine Cheater Scheme of Work (Spanish Y4 lessons 11-20)

listen attentively to spoken language and show understanding by joining in and responding

- explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
- engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help*
- speak in sentences, using familiar vocabulary, phrases and basic language structures
- develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases*
- present ideas and information orally to a range of audiences*
- read carefully and show understanding of words, phrases and simple writing
- appreciate stories, songs, poems and rhymes in the language
- broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
- write phrases from memory, and adapt these to create new sentences, to express ideas clearly
- describe people, places, things and actions orally* and in writing
- understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English.

Geography

Eco- Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.

Human and physical geography

- describe and understand key aspects of:
- physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
- human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

History

(None this term)

Music

Environmental Soundscapes

- play and perform in **solo** and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
- **improvise** and compose music for a range of purposes using the inter-related dimensions of music
- listen with attention to detail and recall sounds with increasing aural memory
- use and understand other musical notations
- appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and great composers

Physical Education

REAL PE units 3&4

Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.

develop flexibility, strength, technique, control and balance

compare their performances with previous ones and demonstrate improvement to achieve their personal best.

perform dances using a range of movement patterns

- play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending

RE (Locally Agreed Syllabus) (See Discovery RE Scheme)

- **How important is it for Jews to do what God asks them to do? (Passover)**

We are learning to understand how celebrating Passover and keeping Kashrut (food laws) help Jews show God they value their special relationship with him.

- **Is forgiveness always possible (Easter)**

We are learning to understand how Jesus' life, death and resurrection teaches Christians about forgiveness.

PHSE (non-statutory) (See SEALS scheme)

- Going for Goals

1b) to recognise their worth as individuals, by identifying positive things about themselves and their achievements, seeing their mistakes, making amends and setting personal goals;

1c) to face new challenges positively by collecting information, looking for help, making responsible choices and taking action;

2f) to resolve differences by looking at alternatives, making decisions and explaining choices;

3e) to recognise the different risks in different situations and then decide how to behave responsibly;

4a) to recognise that their actions affect themselves and others, to care about other people's feelings and to try to see things from their points of view.

- It's Good to be Me

1d) to recognise, as they approach puberty, how people's emotions change at that time and how to deal with their feelings towards themselves, their family and others in a positive way;

2c) to realise the consequences of anti-social and aggressive behaviours, such as bullying and racism, on individuals and communities;

2e) to reflect on spiritual, moral, social and cultural issues, using imagination to understand other people's experiences;

3e) to recognise the different risks in different situations and then decide how to behave responsibly, including judging what kind of physical contact is acceptable or unacceptable;

3f) that pressure to behave in an unacceptable or risky way can come from a variety of sources, including people they know, and how to ask for help and use basic techniques for resisting pressure to do wrong;

4a) that their actions affect themselves and others, to care about other people's feelings and to try to see things from their point of view;

4c) to be aware of different types of relationship, including marriage and those between friends and families, and to develop the skills to be effective in relationships;

4d) to realise the nature and consequences of racism, teasing, bullying and aggressive behaviours, and how to respond to them and ask for help.

Notes: