Cross Gates Primary School

Science

Curriculum Map 2023-2024

When planning the teaching of the topics, we have considered which topics and statements require coverage throughout the year, how complex the concepts are, what their relationship between topics and their related statements within a year (i.e. does one topic need to be taught before another?), whether a topic can be revisited in different contexts, how long does each topic require or should any be split.

The start and end of topics do not need to coincide within school holidays. If you have covered the National Curriculum statements for the topic and the pupils are secure, you should move on to the next topic. The topics that are spread across year are often taught outside throughout the year. Please see the overviews for each topic for more information on the outdoor learning opportunities.

<table>
<tr><td></td><td colspan="5">Autumn → → → Summer</td></tr>
<tr><td>Year 1</td><td colspan="5">Plants
While learning to name and identify plants, pupils should be drawing on a range of different clues. Many plants change in appearance over the year – losing leaves, buds developing into flowers, flowers developing into seeds and berries. At any particular time, only some parts will be present. To ensure correct identification, all parts should be considered. Pupils should visit the same plants throughout the year gathering additional clues for identification.

Animals, including humans
Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study.

Seasonal changes
Pupils should be gathering data about seasonal change regularly throughout the year. Pupils should make observations about the weather and how it affects living things. If data is gathered regularly, this can be reviewed at the end of the year.</td></tr>
<tr><td></td><td>Animals including humans

It is important to ensure that pupils understand humans are animals.</td><td>Everyday materials</td><td>Plants</td><td>Everyday materials</td><td>Seasonal changes</td></tr>
<tr><td colspan="6"></td></tr>
<tr><td>Year 2</td><td colspan="5">Living things and their habitats
While learning to name and identify plants, pupils should be drawing on a range of different clues. Many plants change in appearance over the year – losing leaves, buds developing into flowers, flowers developing into seeds and berries. At any particular time, only some parts will be present. To ensure correct identification, all parts should be considered. Pupils should visit the same plants throughout the year gathering additional clues for identification.</td></tr>
</table>

	Animals visible in a habitat will change depending on the weather on the day and the season. In order to build up a full picture of the animals in a habitat, the habitat should be visited at different times throughout the year. Plants (growing seeds and bulbs outside) *Seeds and bulbs need to be planted at different times of the year (bulbs in autumn and seeds, generally in Spring). For these to reach full maturity they need to complete their life cycle. This will be determined by the plant, not the time allocated to the topic. Once planted, observations of growth need to be made regularly.*					
	Animals including humans Plants (planning for growing seeds and bulbs outside)	Uses of everyday materials (properties and uses of materials statement)	Animals, including humans (basic needs and keeping healthy statements)	Living things and their habitats (including food chains) Uses of everyday materials (changing shapes of materials statement)	Animals, including humans (offspring statement)	Living things and their habitats Plants (harvesting and cooking)
Year 3	Plants (gathering evidence of life cycles) *Many plants have an annual cycle – having buds, flowers, seeds/berries at certain times in the year. Pupils should therefore visit the same plants throughout the year gathering evidence linked to their life cycle e.g. collecting seeds and taking photographs or making observational drawings for buds, flowers etc. This evidence can then be reviewed at the end of the year to exemplify a range of plants' life cycles.*					
	Animals including humans *This topic can be split into two: nutrition and movement.*	Rocks *Make links to Plants and Light topic.*	Forces and magnets	Plants (parts and their functions of investigating growth statements) *This topic is best taught in the summer term where there is sufficient light in the classroom to grow seedling and plants as part of enquiry work.* *Links can be made between the Plants, Rocks and Light topics. This should be done explicitly by the teacher.*	Light Plants (life cycles statement) *Make links to Plants and Rocks topic.*	

Year 4	Living things and their habitats (naming and identifying things in the local environment) *While learning to name and identify plants, pupils should be drawing on a range of different clues. Many plants change in appearance over the year – losing leaves, buds developing into flowers, flowers developing into seeds and berries. At any particular time, only some parts will be present. To ensure correct identification, all parts should be considered. Pupils should visit the same plants throughout the year gathering additional clues for identification.* *Animals visible in a habitat will change depending on the weather on the day and the season. In order to build up a full picture of the animals in a habitat, the habitat should be visited at different times throughout the year.*				
	Electricity	States of matter *In the States of matter topic, children learn about solids, liquids and gases. This knowledge is required in order for children to understand, in the Sound topic,, that vibrations from sounds travel though a medium to the ear. It is therefore appropriate to teach the States of matter topic before the Sound topic.*	Sound *In the Sound topic, children need to understand that vibrations from sounds travel through a medium to the ear. It is useful if the children know about the three states of matter – solids, liquids and gases. It is therefore appropriate to teach the States of matter topic before the Sound topic.* *This topic is conceptually more challenging and is therefore best taught later in the year.*	Animals including humans *Pupils should be taught to construct and interpret a variety of food chains, identify producers, predators and prey.* *In order to construct food chains based on their first-hand experience, this statement should be taught after they have visited a habitat to name and identify the plants and animals as part of the Living things and their habitats topic.* *Teaching pupils to identify producers, predators and prey represents an opportunity for pupils to apply their knowledge of the function of teeth. Consequently, it makes sense to teach the statement 'construct and interpret a variety of food chains, identifying producers, predators and prey' after learning about teeth within the Animals including humans topic.*	Living things and their habitats *Pupils should be taught to construct and interpret a variety of food chains, identify producers, predators and prey. This statement is within the Animals, including human's topic. In order to construct food chains based on their first-hand experience, this statement should be taught after they have visited a habitat to name and identify the plants and animals.*

Year 5	Properties and changes of materials *There is a lot of content to cover in this topic and therefore more time has been allocated to allow for sufficient coverage.*	Forces *If the Forces topic is taught before the Earth and space topic, pupils are able to use their understanding of gravity to help them make sense of why the planets orbit the Sun, and the Moon orbits the Earth.*	Living things and their habitats	Animals including humans *Before learning about the life cycle of humans, it is helpful if pupils have learnt about the life cycle of plants and animals. It is therefore appropriate to teach the Living things and their habitats topic before the Animals, including human's topic.* *The content in this topic is small and therefore requires less time to cover adequately than other topics.*	Earth and space *If the Forces topic is taught before the Earth and space topic, pupils are able to use their understanding of gravity to help them make sense of why the planets orbit the Sun, and the Moon orbits the Earth.* *This topic is conceptually more challenging and is therefore best taught later in the year.*
Year 6	Electricity	Animals including humans	Living things and their habitats	Evolution and inheritance *Conceptually challenging – best taught later in the year*	Light *Conceptually challenging – best taught later in the year*