

YEAR 2		Science
Topic 1: Fire Fighters (5)		
KNOW	DO	UNDERSTAND
Topic 2: Let's Go Engineering! (4)		
KNOW	DO	UNDERSTAND
<p>NC Content: S: Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. S: Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p><i>Vocabulary: materials, suitability, particular, solid, insulation, waterproof, sturdy, robust, wood, metal, plastic, glass, brick, rock, paper, cardboard, opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching.</i></p> <p>Children know how to evaluate different materials for different tasks.</p> <p>Children can describe the material and explain which object would be best for each use.</p> <p>Children can identify what a solid object is.</p> <p>Children can manipulate solid objects by squashing, bending and twisting. They can use this knowledge to suggest the material for different uses.</p> <p><i>Questions:</i> <i>Out of the following materials, which ones can change shape? Plastic, glass, brick, paper.</i> <i>If I was building a house, which material should I use and why?</i></p>	<p>WS: asking simple questions and recognising that they can be answered in different ways WS: observing closely, using simple equipment WS: performing simple tests WS: identifying and classifying WS: gathering and recording data to help in answering questions.</p> <p>Children use their understanding of different materials to make a shelter for a penguin – insulating, waterproof, sturdy etc.</p> <p>Children use materials to create a place to keep an ice cube – insulating etc. Children record how long their ice cube stays frozen. Having observed this, they then have another go and record their results again.</p> <p>Children can record data and create graphs on the computer.</p> <p><i>Questions:</i> <i>Which material was best at insulating your ice cube?</i> <i>How did you present your data and why?</i></p>	<p><i>PRIOR LEARNING: From Year 1, children will have a good understanding of different materials. They will be able to distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday materials and compare and group together a variety of everyday materials on the basis of their simple physical properties.</i></p> <p>In Year 2, they will continue to develop this, by applying the materials to different situations.</p> <p>They will understand that some solids are really helpful when they are squashy, whereas you need some solids to be really hard.</p>
Topic 3: Chocolate (5)		
KNOW	DO	UNDERSTAND

Topic 4: Superheroes! (5)		
KNOW	DO	UNDERSTAND
Topic 5: Suitcases and Sandcastles (4)		
KNOW	DO	UNDERSTAND
Topic 6: Go Wild! (5)		
KNOW	DO	UNDERSTAND
<p>NC content: S: explore and compare the differences between things that are living, dead and things that have never been alive. S: identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. S: identify and name a variety of plants and animals in their habitats, including microhabitats. S: describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p> <p><i>Vocabulary: living, dead, habitats, basic needs, depend, variety, microhabitats, food chain, sources, classification, basic needs, shelter.</i></p> <p>Children know how to tell whether something is living, dead or alive. Children can explain what we need to stay alive and healthy. They can give examples of things that are living or have lived and things that have never lived – introduce idea of shells and sponges.</p> <p>Pupils know the terms ‘habitat’ (a natural environment or home of a variety of plants and animals) and ‘micro-habitat’ (a very small habitat, for example for woodlice under stones, logs or leaf litter).</p> <p>Children can give examples of different animals and their</p>	<p>NC content: WS: asking simple questions and recognising that they can be answered in different ways WS: identifying and classifying When exploring whether things are alive, dead or never been alive, they will describe how they decided where to place things, exploring questions for example: ‘Is a flame alive? Is a deciduous tree dead in winter?’ and talk about ways of answering their questions. When exploring different habitats, e.g. rainforests, artic etc, children ask questions about how an animal might live there.</p> <p>Children come up with a question, like: Where do insects live in the park? Children use their observation skills to examine Sparkhill Park. They will look for microhabitats, e.g. woodlice living under a log. Children use basic scientific equipment. Children identify and classify animals, based on year 1 &2 knowledge. Children compare this to Australia – different habitat completely.</p> <p><i>Questions:</i> <i>What equipment might I use to study a microhabitat?</i> <i>Where might I find a woodlouse’s microhabitat?</i></p>	<p><i>PRIOR LEARNING: From Year 1, children can identify and name a variety of common wild and garden plants. They can identify the basic structure of a variety of common flowering plants. Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</i></p> <p>In Year 2, children will build on this, by looking at micro habitats as well. They will understand how to classify something as dead, alive or never been alive.</p> <p>Children will have a wider understanding of the local area and how animals basics needs are very similar to our own.</p> <p>Children will start to think about how we adapt to our local area – if cold, put a coat on etc.</p> <p><i>Questions:</i> <i>How are animals needs similar to ours?</i></p>

habitats – why does their habitat work for them?		
Pupils can compare animals in familiar habitats with animals found in less familiar habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest.		
DT WEEK		
KNOW	DO	UNDERSTAND
Topic 7: Health Heroes		
KNOW	DO	UNDERSTAND
<p>NC content: S: notice that animals, including humans, have offspring which grow into adults S: find out about and describe the basic needs of animals, including humans, for survival (water, food and air) S: describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene S: Observe and describe how seeds and bulbs grow into mature plants. S: Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><i>Vocabulary: offspring, survival, basic needs, exercise, hygiene, seeds, bulbs, mature, suitable, temperature, food groups, young, old, food types – carbohydrates, protein, fruit and vegetables, sugar, fats.</i></p> <p>Children know that animals, including humans, have offspring, that become adults.</p> <p>Children know that, to survive, humans need water, food and air.</p> <p>Children know that to stay healthy humans need to exercise, eat healthily and clean ourselves regularly.</p> <ul style="list-style-type: none"> - Children can describe a healthy diet. <p>Children know that seeds and bulbs grow into plants.</p>	<p>NC content: WS: identifying and classifying WS: gathering and recording data to help in answering question WS: observing closely, using simple equipment WS: using their observations and ideas to suggest answers to questions</p> <p>Children will design their own experiment to test what a plant needs to grow well. Children will record this data to help them answer this question.</p> <p>Children will observe the insides of a seed and ask questions.</p> <p>Children will identify and classify different foods to determine whether they are carbohydrates, protein etc.</p> <p><i>Questions</i> Do plants grow well in a dark room? How could we test it?</p>	<p><i>PRIOR LEARNING: Children will build on their knowledge from year 1 by understanding what a plant needs to grow. They can also label basic parts of a plant and of a human.</i></p> <p>They will understand the need for water, food and air to keep us alive, but also the importance to stay healthy – link to PSHE.</p> <p>Children will have a better understanding of where their food comes from and why it is important to eat a balanced diet.</p> <p><i>Questions:</i> How are we similar to plants and other animals? Is it healthy to just eat chocolate and sweets all the time? Would I be healthy if all I ate was salad?</p>

<p>Children know what a plant needs to grow healthily – sunlight, water, air etc.</p> <p><i>Questions:</i></p> <p><i>What do humans need to survive?</i></p> <p><i>Why is it important that we exercise?</i></p> <p><i>Why is it important that we clean ourselves?</i></p> <p><i>What to bulbs and seeds need to grow?</i></p>		
LANGUAGE/ART WEEK: French		
KNOW	DO	UNDERSTAND