
















## Science MTP - Living things and their habitats - Year 2

National Curriculum Objectives		Sticky Knowledge		Key Scientists	
<ul style="list-style-type: none"> <li>Explore and compare the difference between things that are living, dead and things that have never been alive.</li> <li>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.</li> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food.</li> </ul>		<ul style="list-style-type: none"> <li>Some things are living, some were once living but now dead and some things never lived.</li> <li>All living things move, breathe, sense, grow, make babies, get rid of waste and get their energy from food.</li> <li>Different animals and plants live in different places. Living things are adapted to survive in different habitats.</li> <li>Environmental change can affect plants and animals that live there.</li> <li>Arrows in a food chain show the flow of energy.</li> </ul>		Sylvia Earle <i>(Marine Biologist &amp; Explorer)</i>  Ernest Shackleton <i>(Arctic Explorer)</i>	
		Vocabulary			
		alive, animals, basic needs, characteristics, conditions, dead, depend on, environment, food, food chain, habitat, healthy, living, micro-habitat, plants, provide, shelter, sources, suited			
Prior Learning		Future Learning		Key Questions	
<b>In EYFS children should:</b> <ul style="list-style-type: none"> <li>Make comments and questions about the place they live and the wider natural world.</li> <li>Notice features of objects in their environment.</li> <li>Talk about things they have observed such as plants and animals.</li> <li>Show care and concern for living things and the environment.</li> </ul>		<b>In Year 4 children will:</b> <ul style="list-style-type: none"> <li>Recognise that living things can be grouped in a variety of ways.</li> <li>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</li> <li>Recognise that environments can change and that this can sometimes pose danger to living things.</li> </ul>		<ul style="list-style-type: none"> <li>Do all animals eat the same thing?</li> <li>Which animals hunt, and which animals are hunted?</li> <li>What animals live in our school environment?</li> <li>How are animals and plants 'adapted' to live in their habitats?</li> <li>Why do animals and plants like to live in different places?</li> <li>How do seasons affect our animals and plants?</li> <li>Which animals hibernate and why?</li> <li>Why do snails hibernate, but slugs don't?</li> <li>How do habitats change over our school year?</li> </ul>	
					<b>BIG Question</b> (assessment opportunity)
Which pets are the easiest to look after?  Is there the same level of light in the evergreen wood compared with the deciduous wood?	How would you group these plants and animals based on what habitat you would find them in?	How does the school pond change over the period of a year?	What conditions do woodlice prefer to live in?  Which habitat do worms prefer – where can we find the most worms?	How are the animals in India different to the ones that we find in Britain?  How does the habitat of the Arctic compare with the habitat of the rainforest?	Why do different animals live in different places?  <div style="text-align: right; color: green;">@MrsF_primary</div>






## Science MTP - Plants - Year 2

National Curriculum Objectives		Sticky Knowledge			Key Scientists
<ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and warmth to grow and stay healthy.</li> </ul>		<ul style="list-style-type: none"> <li>Plants grow from seeds/bulbs.</li> <li>Plants need light, water and warmth to grow and survive.</li> <li>Flowers make seeds to make more plants (reproduce).</li> <li>Plants are important.</li> <li>We need plants to survive (to clean air, to eat).</li> <li>We can eat different parts of the plants (leaves, stems, roots, seeds, fruit).</li> </ul>			Jane Colden <i>(Botanist)</i>  Agnes Arber <i>(Botanist)</i>
		<b>Vocabulary</b>			
		bulbs, environment, germination, grow, healthy, light, mature plants, reproduction, seeds, store of food, survival, temperature, water			
Prior Learning		Future Learning		Key Questions	
<b>In Year 1 Children should:</b> <ul style="list-style-type: none"> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>Identify and describe the basic structure of a variety of common flowering plants.</li> </ul>		<b>In Year 3 Children will:</b> <ul style="list-style-type: none"> <li>Identify and describe the functions of different parts of the flowering plant: roots, stem/trunk/leaves and flowers.</li> <li>Explore the part flowers play in a flowering plants life cycle, including: pollination, seed formation and seed dispersal.</li> <li>Explain the requirements of plants for life and growth (air, light, water, nutrients from soil, room to grow) and how they vary between plants.</li> <li>Investigate the way in which water is transported between plants.</li> </ul>		<ul style="list-style-type: none"> <li>Do cress produce seeds, how could we find out?</li> <li>Do all plants produce flowers and seeds?</li> <li>What is different between freshly cut and planted flowers?</li> <li>Do plants flower all year round?</li> <li>What are flowers for?</li> <li>What happens to a plant after it has produced seeds?</li> <li>How does light affect plant growth?</li> <li>How does warmth affect plant growth?</li> <li>What does the life cycle of a blackberry look like?</li> </ul>	
 Do cress seeds grow quicker inside or outside?	 Can we identify and group different seeds and bulbs?	 What happens to my bean after I have planted it?	 Do bigger seeds grow into bigger plants?	 How does a cactus survive in a desert with no water?	<b>BIG Question</b> (assessment opportunity)  What should I do to grow a healthy plant?  <span style="color: green;">@MrsF_primary</span>

## Science MTP - Animals, including humans - Year 2

National Curriculum Objectives		Sticky Knowledge		Key Scientists	
<ul style="list-style-type: none"> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>		<ul style="list-style-type: none"> <li>Different animals move in different ways to help them survive.</li> <li>Exercise and a good diet keeps animals' bodies in good condition and increases survival chances.</li> <li>Animals reproduce new animals when they reach maturity. Some animals give birth to live young and some animals lay eggs.</li> <li>Animals grow until maturity and then don't grow any larger. All animals eventually die.</li> <li>To stop illness and infection we need to maintain a healthy lifestyle and keep ourselves clean.</li> </ul>		Maria Sibylla Merian <i>(Scientific Illustrator &amp; Entomologist)</i>  Louis Pasteur <i>(Biologist &amp; Chemist)</i>	
		Vocabulary			
		adult, air, animals, baby, basic needs, child, exercise, food, growth, humans, hygiene, maturity, nutrition, offspring, reproduction, survival, teenager, toddler, water, egg/chick/chicken, spawn/tadpole/frog, egg/caterpillar/pupa/butterfly, lamb/sheep			
Prior Learning		Future Learning		Key Questions	
<b>In Year 1 Children should:</b> <ul style="list-style-type: none"> <li>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</li> <li>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> </ul>		<b>In Year 3 Children will:</b> <ul style="list-style-type: none"> <li>Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food; they get their nutrition from what they eat.</li> <li>Know how nutrients, water and oxygen are transported within animals and humans.</li> <li>Know about the importance of a nutritious, balanced diet.</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> </ul>		<ul style="list-style-type: none"> <li>Do all animals grow and live the same way?</li> <li>Do bigger animals live longer?</li> <li>Why are we all different heights?</li> <li>How and why do we grow and change?</li> <li>What do we 'want' and what do we 'need'?</li> <li>Why do we need to eat different types of food?</li> <li>Do all babies look like their parents?</li> </ul>	
 Do bananas make us run faster?	 Which offspring belongs to which animal?	 How does a tadpole/butterfly change over time? How much food and drink do I have over a week?	 Which age group of children wash their hands the most in a day?	 What food do you need in a healthy diet and why?	<b>BIG Question</b> (assessment opportunity)  Do living things change or stay the same?  <span style="color: green;">@MrsF_primary</span>

## Science MTP - Uses of everyday materials - Year 2

National Curriculum Objectives		Sticky Knowledge		Key Scientists	
<ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>		<ul style="list-style-type: none"> <li>Materials can be changed by physical force (twisting, bending, squashing and stretching).</li> <li>Materials can be used for more than one thing e.g. metal: coins, cans, cars, table legs.</li> <li>Different materials can be used for the same thing e.g. a spoon made from wood, metal, plastic.</li> <li>Suitability means having the right properties for a particular purpose.</li> </ul>		John Dunlop <i>(Inventor)</i>  Robert Gair <i>(Inventor)</i>	
		Vocabulary			
		bending, brick, cardboard, changed, glass, materials, metal, paper, plastic, properties, purpose, rock, shapes, squashing, stretching, suitability, suitable, twisting, unsuitable, uses, wood			
Prior Learning		Future Learning		Key Questions	
In Y1 children should: <ul style="list-style-type: none"> <li>Distinguish between an object and the material from which it is made.</li> <li>Identify and name a variety of everyday materials, including wood, metal, plastic, glass, water and rock.</li> <li>Describe the simple physical properties of a variety of everyday materials.</li> <li>Compare and group together a variety of everyday materials on the basis of their simple properties.</li> </ul>		In Year 3 children will: <ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</li> <li>Recognise that soils are made from rocks and organic matter.</li> </ul>		<ul style="list-style-type: none"> <li>Which rocks are the least crumbly?</li> <li>Which materials absorb the most water?</li> <li>Which material would be the strongest to use as to make a roof on a model?</li> <li>How long do plastics last for?</li> <li>What types of bricks can you see in our village?</li> <li>Which material makes the bounciest ball?</li> <li>What are aeroplane wheels made out of and why?</li> </ul>	
 Are all objects made out of metal rigid?	 Can you group different types of paper and cardboard?	 How do different types of paper/card change over time when they are buried in the ground?	 How does water affect the strength of different types of paper or cardboard?	 How is corrugated cardboard made?	<b>BIG Question</b> (assessment opportunity)  What is the best material for each part of my model?  <span style="color: green;">@MrsF_primary</span>