

Year 1 and 2 - Science Programme of Study

Programme of study	Everyday materials	Everyday materials	Living things and their habitats	Animals including humans	Plants	Seasonal changes
Coverage	Properties of different materials	Materials and changing materials	Micro-habitats and habitats around the UK (farming, allotments)	Name common animals	Identifying plants and trees	Observe weather associated with the seasons
Content	<p>Recognise the difference between the name of an object and the material from which it is made.</p> <p>Identify a range of everyday materials including wood, plastic, glass, metal, water and rock.</p> <p>Describe the physical properties of everyday materials.</p> <p>Understand how to group everyday materials according to their physical properties.</p> <p>Understand how everyday materials can be used for more than one thing.</p> <p>Understand how different everyday materials can be used for the same thing.</p> <p>Understand why the properties of materials make them suitable or unsuitable for particular purposes.</p> <p>Recognise that squashing, bending, twisting and stretching can change the shapes of solid objects made from some everyday materials.</p>	<p>Recognise whether things are alive, dead or have never lived.</p> <p>Identify different plants and animals and recognize that they are suited to their different habitats, including micro-habitats.</p> <p>Recognise how different habitats provide for the basic needs of animals and plants.</p> <p>Understand that animals get their food from other animals and/or from plants.</p> <p>Recognise that a food chain is made of a series of plants and animals that eat each other and shows how energy</p>	<p>Be able to name and locate parts of the human body, including those relating to the senses.</p> <p>Be able to identify and name different common animals including fish amphibians, reptiles, birds and mammals.</p> <p>Be able to describe and compare the observable features of animals from a range of groups.</p> <p>Recognise that animals can be grouped according to whether they are carnivores, herbivores and omnivores.</p>	<p>Be able to name a variety of different plants (including deciduous and evergreen trees).</p> <p>Understand and describe how plants are suited to different habitats.</p> <p>Understand and describe the structure of plants including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches and stem.</p> <p>Understand and describe the main changes as seeds and</p>	<p>Understand and describe the main changes across the seasons.</p> <p>Understand weather associated with the seasons.</p> <p>Understand how day length varies across the year.</p>	

		<p>is transferred from one organism to another via food.</p>	<p>Know the basic needs of animals for survival.</p> <p>Know about the basic needs of animals, including humans, for survival.</p> <p>Describe the importance of exercise, balanced diet and hygiene for humans.</p> <p>Describe the main changes as young animals, including humans, grow into adults.</p>	<p>bulbs grow into mature plants.</p> <p>Understand and describe the basic needs of plants for water, light and a suitable temperature to grow and stay healthy.</p>	
<p>Notes and guidance</p>	<p>Explore, name, discuss and raise and answer questions about everyday materials to become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent.</p>	<p>Should raise and answer questions that help them to become familiar with the life processes that are common to all living things.</p> <p>Be introduced to the terms 'habitat' (a natural environment or home of a variety of plants and animals) and 'micro-habitat' (a</p>	<p>Explore the common names of some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p>	<p>Use the local environment throughout the year to explore and answer questions about plants growing in their habitat.</p> <p>Observe the growth of flowers and vegetables that they have planted.</p>	<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>

		<p>very small habitat, for example for woodlice under stones, logs or leaf litter).</p> <p>Raise and answer questions about the local environment that help them to identify and study a variety of plants and animals within their habitat and observe how living things depend on each other, for example, plants serving as a source of food and shelter for animals.</p> <p>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, at a farm.</p>	<p>Be introduced to the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>Become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Explore how plants need water, light and a suitable temperature to grow and stay healthy.</p>	

Working Scientifically

- ♣ Asking simple questions and recognising that they can be answered in different ways
- ♣ Observing closely, using simple equipment
- ♣ Performing simple tests
- ♣ Identifying and classifying
- ♣ Using their observations and ideas to suggest answers to questions
- ♣ Gathering and recording data to help in answering questions.

<p>Performing simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?' 'What is the best material for the little pigs house'.</p> <p>Observe a block of ice and see how it changes over time.</p>	<p>Sorting and classifying things according to whether they are living, dead or were never alive, and recording their findings using charts.</p>	<p>Sorting animals which would make a good pet and why.</p>	<p>Observing closely, using magnifying glasses, and comparing and contrasting familiar plants.</p>	<p>Making tables and charts about the weather; and making displays of what happens in the world around them, including day length, as the seasons change.</p>
	<p>Describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p>	<p>Using their observations to compare and contrast animals at first hand or through videos and photographs</p>	<p>Describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees.</p>	<p>Record the direction of the wind and consider if it will change?</p>
	<p>Describe the conditions in different habitats and micro-habitats (under log, on stony path, under bushes) and find out how the conditions affect the number and type(s) of plants</p>	<p>Describing how they identify and group them</p> <p>Grouping animals according to what they eat.</p>	<p>Compare and contrast what they have found out about different plants.</p>	

		and animals that live there.			
Identifying and Classifying	<ul style="list-style-type: none"> ♣ Focus on asking questions about the similarities and differences between things. ♣ Going outside to explore the world around them at all times of the year. ♣ Reporting by producing scientific drawings of their observations, increasing in fine detail. ♣ Developing scientific vocabulary. 				
	Which materials will float and which will sink? Does everything that is metal stick to a magnet? Why is waterproof materials sometimes used to make clothes?	How would you group things to show which are living, dead, or have never been alive?	How can we organise all the animals in the pet shop?		How would you group these things based on which season you are most likely to see them in?
Comparative testing	<ul style="list-style-type: none"> ♣ Report findings using tally charts, pictograms, or block charts 				
	Which materials are the most flexible? Which materials are the heaviest? How does puddle size change over time?	Predict what each micro-habitat will attract and observe over time.		How can we sort the leaves that we collected on our playground?	In which season does it rain the most?
Pattern seeking	<ul style="list-style-type: none"> ♣ Begin to look for patterns in their measurements and observations. ♣ Describe them both orally and in writing. ♣ Start to think about cause and effect relationships. ♣ Start to use appropriate vocabulary to discuss these. 				
	Is there a pattern in the types of materials that are used to make objects in a school?	What conditions do woodlice prefer to live in? Which habitat do worms prefer – where can we find the most worms?		Is there a pattern in where we find moss growing in the school grounds?	Do trees with bigger leaves lose their leaves first in autumn? Does the wind always blow the same way?
Research	<ul style="list-style-type: none"> ♣ Pose their own 'big question'. ♣ Interpret the information they find and consider its relevance in answering their questions. ♣ Use a range of secondary sources, including books, websites, and video. 				

	♣ Listen to presentations from experts and science professionals to get their information, or ask them questions in interviews and letters.				
	How are bricks made? How have the materials we use changed over time?	How are plastics made? (living vs non-living vs dead)	How are the animals in different to the ones that we find in Britain? Do meerkats have the same senses as humans? (Reading link).	What are the most common British plants and where can we find them?	
Ideas over time	♣ Report findings using posters, leaflets, newspapers, reports or letters ♣ Timeline of scientists				
	How are building materials different now to 1666? (Great fire of London). Look at explosive materials (Hist link Guy Fawkes)		What strange ideas did Italian scientist Luigi Galvani have about animals in 1780? Why did he think that?	How did Beatrix Potter help our understanding of mushrooms and toadstools?	