

**Archbishop Hutton's
Primary School**



Key Stage 1 WORKING SCIENTIFICALLY

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes, and skills through the teaching of the programme of study content:

- asking simple questions and recognising that they can be answered in diverse 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 question.
- ✚ Pupils in years 1 and 2 should explore the world around them and raise their own questions.
- ✚ They should experience several types of scientific enquiries, including practical activities, and begin to recognise ways in which they might answer scientific questions.
- ✚ They should use simple features to compare objects, materials and living things and, with help, decide how to sort and group them, observe changes over time, and, with guidance, they should notice patterns and relationships.
- ✚ They should ask people questions and use simple secondary sources to find answers.
- ✚ They should use simple measurements and equipment (for example, hand lenses, egg timers) to gather data, conduct simple tests, record simple data, and talk about what they have found out and how they found it out.
- ✚ With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.
- ✚ These opportunities for working scientifically should be provided across years 1 and 2 so that the expectations in the programme of study can be met by the end of year 2. Pupils are not expected to cover each aspect for every area of study

NATIONAL CURRICULUM PROGRAMES OF STUDY

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using diverse types of scientific enquiry to answer their own questions, including observing changes over a period, noticing patterns, grouping, and classifying things, conducting simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done using first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs, and videos. 'Working scientifically' is described separately in the programme of study but must always be taught through and clearly related to the teaching of substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Pupils should read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Prior knowledge: EYFS

Animals Including humans.

- To know the life cycle of different animals.
- To know the names of animals.
- To know what a habitat is and the different habitats they will find a butterfly.
- To name the parts of an insect.
- To name the parts of a butterfly.
- To order people in age in a family.
- To order themselves using photographs in age from baby, toddler to now.
- To talk about changes in milestones for themselves.
- To use words to describe old and new.
- To identify parts of the body.
- To identify the heart and be able to point to it.
- To identify and say the five senses.

Year Group Expectations: Year 1/2

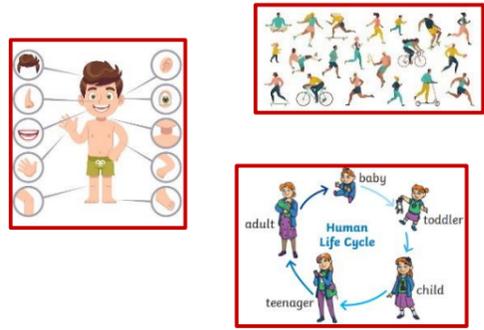
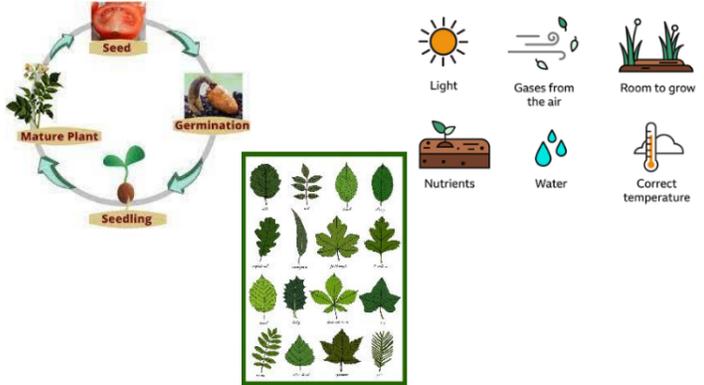
Animals Including humans.

- To identify, name, draw and label basic parts of the human body. Y1
- To know which parts of the body is associated with each sense. Y1
- To notice that animals, including humans, have offspring which grow into adults. Y2
- To find out about and describe the basic needs of animals, including humans, for survival (water, food, and air). Y2
- To describe the importance for humans of exercise, eating the right amounts of diverse types of food, and hygiene. Y2

KS2 expectations:

Animals Including humans.

- To identify that animal, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Y3
- To identify that humans and some other animals have skeletons and muscles for support, protection, and movement. Y3
- To describe the simple functions of the basic parts of the digestive system in humans Y4
- To identify the diverse types of teeth in humans and their simple functions. Y4
- To construct and interpret a variety of food chains, identifying producers, predators, and prey. Y4
- To identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood y6.
- To recognise the impact of diet, exercise, drugs, and lifestyle on the way their body's function. Y6

<p>To identify the tongue and know I use this for my sense of taste. To taste a range of fruits and vegetables and know they have vitamins and nutrients that are good for my body. To know how to wash their hands correctly for 20 seconds using soap and water.</p>		<p>To describe the ways in which nutrients and water are transported within animals, including humans. Y6</p>
<p>Plants To know the life cycle of a plant. To know what plants, need to grow. Name common garden fruit and vegetables. Investigate leaves with a magnifying glass.</p>	<p>Plants To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Y1 To identify and describe the basic structure of a variety of common flowering plants, including trees. Y1 To observe and describe how seeds and bulbs grow into mature plants. Y2 To find out and describe how plants need water, light, and a suitable temperature to grow and stay healthy. Y2 To identify and name a variety of plants and animals in their habitats, including microhabitats; observe and describe how seeds and bulbs grow into mature plants; find out and describe how plants need water, light, and a suitable temperature to grow and stay healthy. Y2</p>	<p>Plants To identify and describe the functions of various parts of flowering plants: roots, stem/trunk, leaves and flowers. Y3 To explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. To investigate the way in which water is transported within plants. Y3 To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Y3</p>
<p>Everyday Materials To know about similarities and differences in relation to places, objects materials and living things. To use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p>	<p>Everyday Materials To distinguish between an object and the material from which it is made. Y1 To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Y1 To describe the simple physical properties of a variety of everyday materials. Y1 To compare and group together a variety of everyday materials based on their simple physical properties. Y1 To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard for particular uses. Y2 To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting, and stretching. Y2</p>	<p>Everyday Materials To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard for particular uses. Y3 To compare and group together various kinds of rocks based on their appearance and simple physical properties. Y3 To describe in simple terms how fossils are formed when things that have lived are trapped within rock. Y3 To recognise that soils are made from rocks and organic matter. Y3</p>
<p>SCIENCE Theme: My Brilliant Body Keeping Fit & Healthy</p>	<p>SCIENCE Theme: The Scientist Lab Growing & changing</p>	<p>SCIENCE Theme: A Material World Being Builders</p>
		

	<p>Key Knowledge:</p> <ul style="list-style-type: none"> • How do humans change and grow over time? • What helps to keep humans healthy? • What make my body strong and keeps me fit? • What is a balanced diet and why is it important to help humans thrive? 		<p>Key Knowledge:</p> <ul style="list-style-type: none"> • The parts and functions of a flowering plant • To recognise some common British plants and trees. • To know how humans can use plants. • To know about different trees • To know what plants, need to grow and survive. • Grow a plant from seed and know what is needs to grow and survive. • Those certain plants only service with variables 		<p>Key Knowledge:</p> <ul style="list-style-type: none"> • What are things around me made of? • Materials have different properties. • To know whether things are natural or manmade. • What materials are waterproof or not waterproof?
	<p>Procedural Knowledge</p> <ul style="list-style-type: none"> • Animals need to eat to survive. • What we put in our bodies affects our health • Various parts of the body have distinct functions and can-do different things. • Exercise is important to keep heathy. • Animals need certain things to survive. • Personal hygiene is important. • Senses are important to animals. 		<p>Procedural Knowledge</p> <ul style="list-style-type: none"> • That various parts of a plant all have a specific purpose for it to survive. • To name common plants, flowers, and trees in my community. • Plants play an important part on the planet to humans and the environment such a medicine and cleaning the air. • Trees can be deciduous or evergreen and all look different. 		<p>Procedural Knowledge</p> <ul style="list-style-type: none"> • Materials have different properties and uses. • Know the names of materials. • Group materials based on their properties. • Discuss why materials can be used for certain things. • Use language to describe their properties. • That some materials are natural, and some are man-made.
	<p>Key Vocabulary: diet, exercise, hygiene, life cycle, muscles, nutrition, organs, senses, skeleton</p>		<p>Key Vocabulary: wild plants, garden plants, weed, deciduous, evergreen, germination, sprout, shoot, seed dispersal.</p>		<p>Key Vocabulary: smooth, bendy, not bendy, waterproof, not waterproof, absorbent, not absorbent, transparent, opaque, object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, floppy, breaks/tears, rough, smooth, shiny, dull, see through, not see through.</p>
	<p>Assessment: Can label key features on a picture/diagram. Y1 Can describe how animals, including humans, have offspring which grow into adults, using the appropriate names for the stages. Y2 Can state the basic needs of animals, including humans, for</p>		<p>Assessment: Can name trees and other plants that they see regularly. Y1 Can describe some of the key features of these trees and plants e.g., the shape of the leaves, the colour of the flower/blossom. Y1 Can point out tress which lost their leaves and those that kept them the entire year. Y1 Can point to and name the parts of a plant, recognising that they are not always the same. Y1</p>		<p>Assessment: Can label a picture or diagram of an object made from varied materials. Y1 Can describe the properties of varied materials. Y1 Can sort objects and materials using a range of properties. Y1 Can choose an appropriate method for evaluating an object for a particular property. Y1 Can use their test evidence to answer the questions about properties e.g. Which cloth is the most absorbent? Y1</p>

	<p>survival. Y2 Can state the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Y2 Can name foods in each section of the Eatwell Guide.Y2</p>	<p>can sort and group parts of plants using similarities and differences. Y1 Can use simple charts. Y1 Can collect information on features that change during the year. Y1 Can use photographs to talk about how plant change over time. UY1 Can describe how plants that they have grown from seeds and bulbs have developed over time. Y2 Can identify plants that grew well in different conditions. Y2 Can spot similarities and difference between bulbs and seeds. Y2 Can nurture seeds and bulbs into mature plants identifying the different requirements of different plants. Y2</p>	<p>Can name an object, say what material it is made from, identify its properties, and make a link between the properties and this particular use. Y2 For a given object can identify what properties a suitable material needs to have. Y2 Whilst changing the shape of an object can describe the actions used. Y2 Can use the words flexible and/or stretchy to describe materials that can be changed in shape and stiff and/or rigid for those that cannot. Y2</p>
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