

# YEAR 1 SCIENCE CURRICULUM FRAMEWORK

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 different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out 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 through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

AUTUMN TERM 1	AUTUMN TERM 2	SPRING TERM 3
<b>MEMORY BOX</b>	<b>BRIGHT LIGHTS, BIG CITY</b>	<b>MOON ZOOM</b>
<ul style="list-style-type: none"> <li>• <b>identify, name, draw and label the basic parts of the human body</b></li> <li>• <b>ask simple questions</b></li> <li>• <b>observe closely</b></li> <li>• <b>using their observations and ideas to suggest answers to questions</b> <ul style="list-style-type: none"> <li>- Observe closely and talk about the physical and developmental differences between babies, toddlers, children and adults.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>distinguish between an object and the material from which it is made</b></li> <li>• <b>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</b></li> <li>• <b>describe the simple physical properties of a variety of everyday materials</b></li> <li>• <b>compare and group together a variety of everyday materials on the basis of their simple physical properties</b> <ul style="list-style-type: none"> <li>- Find out and list what materials the buildings were made from in 1666 and why. Explain why these materials helped the fire to spread so quickly.</li> </ul> </li> <li>• <b>Use their observations and ideas to suggest answers to questions.</b> <ul style="list-style-type: none"> <li>- Use everyday language/begin to use simple scientific words to ask or answer a scientific question.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>distinguish between an object and the material from which it is made</b></li> <li>• <b>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</b></li> <li>• <b>describe the simple physical properties of a variety of everyday materials</b></li> <li>• <b>compare and group together a variety of everyday materials on the basis of their simple physical properties</b> <ul style="list-style-type: none"> <li>- Explore samples collected from an alien crash site. Describe what they look like, how they feel and other scientific properties. Record the properties of each sample by writing down simple adjectives</li> <li>- Make a 'Welcome to Earth' box for the alien visitor to help them understand our planet. Select samples and objects made from everyday materials. Write labels for each item</li> </ul> </li> </ul>

		<p>to identify it, explain its simple properties and show what it can be used for.</p> <ul style="list-style-type: none"> <li>- Gather and record data about the Moon and the eight planets in our solar system, using a range of non-fiction books, posters, the web and film. Answer questions relating to the order of the planets from the Sun, their composition, properties and other interesting features</li> <li>• <b>Perform simple tests</b></li> <li>• <b>Use their observations and ideas to suggest answers to questions.</b> <ul style="list-style-type: none"> <li>- Make air-propelled rockets and launch them into 'outer space'.</li> <li>- Investigate whether the size of balloon affects how far a balloon-powered rocket travels along a string.</li> <li>- Create a simple circuit that lights a lamp. Explore ways of making the lamp brighter by adding more cells (batteries). Introduce a switch and use it to turn the lamp off and on</li> </ul> </li> </ul>
<b>SPRING TERM 4</b>	<b>SUMMER TERM 5</b>	<b>SUMMER TERM 6</b>
<b>PAWS, CLAWS AND WHISKERS</b>	<b>ENCHANTED WOODLAND</b>	<b>SPLENDID SKIES</b>
<ul style="list-style-type: none"> <li>• <b>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</b></li> <li>• <b>identify and name a variety of common animals that are carnivores, herbivores and omnivores</b></li> <li>• <b>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</b> <ul style="list-style-type: none"> <li>- Look at some familiar animal species such</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</b></li> <li>• <b>identify and describe the basic structure of a variety of common flowering plants, including trees</b> <ul style="list-style-type: none"> <li>- Learn that some trees are deciduous and some are evergreen. Look at pictures of both types and read/ learn their names.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Observe changes across the four seasons</b> <ul style="list-style-type: none"> <li>- Explore suitcases packed with clothes for different seasons. Match the suitcase to the season and suggest other things to include in each case.</li> </ul> </li> <li>• <b>Observe closely using simple equipment</b> <ul style="list-style-type: none"> <li>- Play outside on a windy day and feel the wind blow on their faces. Fly kites, blow windmills or</li> </ul> </li> </ul>

<p>as spiders or dogs.</p> <ul style="list-style-type: none"> <li>- Talk about the similarities and differences between animals of the same species, comparing their sizes, colouring, patterns and features.</li> <li>- Compare the basic body parts that humans have in common with big cats, identifying similarities and differences.</li> </ul> <ul style="list-style-type: none"> <li>• <b>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</b> <ul style="list-style-type: none"> <li>- Sort and group objects, materials and living things, with help, according to simple observational features</li> <li>- Investigate variation amongst children in the class</li> </ul> </li> <li>• <b>Gather and record data to help in answering questions</b></li> <li>• <b>Perform a simple test</b> <ul style="list-style-type: none"> <li>- Investigate camouflage by taking part in a 'Butterfly Hunt'.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Take a walk around the local environment to look at trees in the school grounds, in gardens and in the woods and describe the trees they can see- deciduous or evergreen?</li> <li>- Plant wild and woodland flowers using seeds and bulbs native to woodlands of the UK.</li> <li>- Observe how their wild flowers and saplings settle and grow after planting. Talk about what their plants need to thrive, and observe and water them regularly. Measure their plants as they grow or keep a growing diary to record changes as they happen.</li> <li>- Identify and name the leaves, flowers, petals, seeds, roots and stem of a wild flowering plant.</li> <li>- Dissect and observe them using a digital microscope or hand lens.</li> <li>- Sort items collected from a woodland walk into groups of living things, dead things and things that have never been alive</li> <li>- Investigate how pine cones open and close in different environmental conditions</li> </ul> <ul style="list-style-type: none"> <li>• <b>identify and name a variety of common animals</b> <ul style="list-style-type: none"> <li>- Sort pictures of animals into those which live in a woodland habitat and those which live in their homes and local environment</li> </ul> </li> </ul>	<p>hold coats, carrier bags or scarves above their heads to feel the force of the wind. Learn how to use an anemometer to measure the speed of the wind.</p> <ul style="list-style-type: none"> <li>• <b>Use their observations and ideas to suggest answers to questions.</b> <ul style="list-style-type: none"> <li>- Play with sponges in the watertray, watching the sponge absorb the water and squeezing it, when heavy with water, to make a rain shower. Use simple weather vocabulary to explain their play for example, rain, clouds, shower, storm and droplets.</li> </ul> </li> <li>• <b>Gather and record data to help in answering questions.</b> <ul style="list-style-type: none"> <li>- Make shadows using a range of scientific and play equipment indoors and outdoors. Plot the course of a shadow regularly over a sunny day. Draw around the shadow at timed intervals to explore how they move.</li> <li>- Explore the effects of the sun (light and temperature) on light-sensitive thermo beads and papers. Lay shapes and objects on photo-sensitive paper and leave outside in the sun, observing what happens over time. Compare with photo and thermo materials placed in the shade: talk about the differences observed and suggest reasons for them.</li> </ul> </li> <li>• <b>Observe closely, using simple equipment.</b> <ul style="list-style-type: none"> <li>- Use a thermometer to record the temperature over the course of a week. Read scales using standard and non-standard measures and record these on a simple chart.</li> </ul> </li> <li>• <b>Observe and describe weather associated with the seasons and how day length varies.</b></li> </ul>
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|  |  | <ul style="list-style-type: none"><li>- Analyse weather data collected over the course of the project and draw conclusions as to the most common type of weather in summer.</li></ul> |
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**Ongoing unit of work: Seasonal Change**

In this unit of work, pupils will:

- observe changes across the four seasons
- observe and describe weather associated with the seasons and how day length varies

**Working scientifically**

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 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