

# Science Curriculum Map2014

## Key stage 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<b>KEY STAGE 1</b>  <b>Working scientifically</b>	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: <ul style="list-style-type: none"> <li>• asking simple questions and recognising that they can be answered in different ways</li> <li>• observing closely, using simple equipment</li> <li>• performing simple tests</li> <li>• identifying and classifying</li> <li>• using their observations and ideas to suggest answers to questions</li> <li>• gathering and recording data to help in answering questions</li> </ul>				
Year 1	<b>Seasonal changes</b>	changes over four seasons & weather changes <b>This unit will be covered throughout the year.</b>				
	<b>Ourselves</b>	<b>Everyday materials</b>	<b>Push &amp; pulls</b>	<b>Animals including Humans</b>	<b>Plants</b>	<b>Light &amp; dark</b>
	Name human and animal body parts. Name and investigate our senses sight, hearing, touch smell and taste.	What are objects made of? Name materials & their properties.	What happens when something is pushed or pulled? Investigate a variety of objects and how they move.	Name common animals, fish, amphibians, reptiles, birds mammals and their body parts.	Identify variety of wild, garden plants & trees, structure of flowering plants & trees.	Identify different light sources including the sun.
Year 2	<b>Animals including humans</b>	<b>Electricity</b>	<b>Plants</b>	<b>Forces</b>	<b>Uses of every day materials</b>	<b>Living things and their habitat</b>
	Animals including humans move, feed, grow, and reproduce.	What common appliances run on electricity? Construct a simple series of circuits naming basic parts	Find out how seeds/bulbs grow into plants. Identify why plants need water, light and suitable temp to grow.	Compare how things move on different surfaces.	Compare suitability and how solid objects can change shape.	Compare living, dead, never been alive. Plants/animals in diff habitats, food chains.

## Key Stage 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<b>LOWER KEY STAGE 2</b>  <b>Working scientifically</b>	During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: <ul style="list-style-type: none"> <li>• asking relevant questions and using different types of scientific enquiries to answer them</li> <li>• setting up simple practical enquiries, comparative and fair tests</li> <li>• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>• identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>• using straightforward scientific evidence to answer questions or to support their findings</li> </ul>				
Year 3	<b>Rocks</b>	<b>Characteristics of materials</b>	<b>Animals including humans</b>	<b>Plants</b>	<b>Forces and Magnets</b>	<b>Light</b>
	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed.	Identify and compare the suitability of a variety of everyday materials.	Identify that animals, including humans, need the right types and amount of nutrition,	Describe functions of parts of flowering plants, how water is transported within plants; life-cycle of plants.	Compare how things move on different surfaces. Observe how magnets attract or repel each other and attract some materials and not others. Describe magnets as having two poles.	Recognise that they need light in order to see things and that dark is the absence of light. Recognise that shadows are formed when the light from a light source is blocked by a solid object.
Year 4	<b>Animals including humans</b>	<b>Electricity</b>	<b>Keeping warm</b>	<b>States of matter</b>	<b>Living things and their habitats</b>	<b>Forces</b>
	Identify that animals, including humans, need the right types and amount of nutrition. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Recognise some common conductors and insulators, and associate metals with being good conductors.	Recognise that temperature is a measure of how hot or cold objects are; identify materials that are good thermal insulators; recognise that the same materials keep cold objects cold as keep warm objects warm	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	Recognise that living things can be grouped in a variety of ways. Identify and name a variety of living things in their local and wider environment	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces.

	<b>LOWER KEY STAGE 2</b>					
	<b>Working scientifically</b>		<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>			
Year 5	<b>Sound</b>	<b>Living things and their habitats</b>	<b>Earth &amp; space</b>	<b>Properties &amp; changes of materials</b>	<b>Animals including humans</b>	<b>Light</b>
	Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals.	Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.	Describe the changes as humans develop to old age. Main parts of the human circulatory system, diet.	Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
Year 6	<b>Evolution and inheritance</b>	<b>Micro -organisms</b>	<b>Reversible irreversible changes</b>	<b>More about dissolving</b>	<b>Electricity</b>	<b>Living things &amp; their habitats</b>
	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Describe how living things are classified into broad groups according to common characteristics and based on similarities and differences	Knowledge of solids, gasses and liquids. Investigate that some materials will dissolve in liquid to form a solution and how to recover a substance from a solution.	Demonstrate that dissolving, mixing and changes of state are reversible changes	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Use recognised symbols when representing a simple circuit in a diagram.	Will work scientifically by: using classification systems and keys to identify some animals and plants in the immediate environment. They could research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system. <b>+ fossils and inheritance</b>