

## Science – Comparing the new and the old curriculums – Key Stage 1

The tables below list the learning objectives from both the Curriculum 2000 programmes of study and those from the new curriculum. Changes or additions are added in the third column and the changes to learning objectives are highlighted in red.

Changes and additions to the new curriculum include:

- ‘Scientific Enquiry’ is now termed ‘Working Scientifically’ but seems to constitute most of the same skills. However, the learning objective for ‘fair testing’ has gone.
- Some of the more obvious elements of scientific enquiry are now included in the notes and guidance. These are non-statutory.
- The learning objectives for caring for animals, plants and the environment have also been dropped, although they are implied in the notes and guidance.
- There is no learning objectives for teaching KS.1 children about drugs.
- ‘Environment’ is now termed ‘habitat’.
- There is more emphasis in the new curriculum on knowing the names of different animals and plants.
- The new curriculum introduces a new unit called, ‘Seasonal Changes’.
- Two units have been dropped entirely: ‘Electricity’ and ‘Forces & Motion’.

These changes seem to indicate a slightly reduced curriculum load and more emphasis on the names of things: animals, plants, classifications etc. Most schools should find resourcing the new unit on seasons relatively easy, but don’t throw away the ones for electricity and forces, they’ll probably be back after the next curriculum review.

## Science – Programmes of Study

### Key Stage 1

Curriculum 2000	New Curriculum	Changes
<p><b>SC1: Scientific Enquiry</b></p> <p><b><u>Ideas and evidence in science</u></b>  <b>1.</b> Pupils should be taught that it is important to collect evidence by making observations and measurements when trying to answer a question.</p> <p><b><u>Investigative skills</u></b>  <b>2.</b> Pupils should be taught to:</p> <p><b>Planning</b></p> <ul style="list-style-type: none"> <li>• ask questions and decide how they might find answers to them</li> <li>• use first-hand experience and simple information sources to answer questions</li> <li>• think about what might happen before deciding what to do</li> <li>• recognise when a test or comparison is unfair</li> </ul>	<p><b>Working scientifically</b></p> <p>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:</p> <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>	<p>This section is now called ‘working scientifically’ instead of scientific enquiry, although they appear to be very similar things.</p> <p>There are some small changes, in the new curriculum the following aspects have been dropped:</p> <ul style="list-style-type: none"> <li>• recognise when a test or comparison is unfair</li> <li>• follow simple instructions to control the risks to themselves and to others</li> <li>• explore, using the senses of sight, hearing, smell, touch and taste as appropriate</li> <li>• review their work and explain what they did to others.</li> </ul> <p>(Although these last three are implied in the ‘notes &amp; guidance’)</p>

<p><b>Obtaining and presenting evidence</b></p> <ul style="list-style-type: none"> <li>• follow simple instructions to control the risks to themselves and to others</li> <li>• explore, using the senses of sight, hearing, smell, touch and taste as appropriate, and make and record observations and measurements</li> <li>• communicate what happened in a variety of ways, including using ICT</li> </ul> <p><b>Considering evidence and evaluating</b></p> <ul style="list-style-type: none"> <li>• make simple comparisons and identify simple patterns or associations</li> <li>• compare what happened with what they expected would happen, and try to explain it, drawing on their knowledge and understanding</li> <li>• review their work and explain what they did to others.</li> </ul>		
<p><b>Sc2 Life processes and living things</b> <b><u>Life processes</u></b></p> <p>1. Pupils should be taught:</p> <ol style="list-style-type: none"> <li>the differences between things that are living and things that have never been alive</li> <li>that animals, including humans, move, feed, grow, use their senses and reproduce</li> <li>to relate life processes to animals and plants found in the local environment.</li> </ol>	<p>These aspects can be found in the units below:</p> <ol style="list-style-type: none"> <li>All living things and their habitats</li> <li>Animals, including humans</li> </ol>	<p>No change</p>
<p><b><u>Humans and other animals</u></b></p> <p>2. Pupils should be taught:</p> <ol style="list-style-type: none"> <li>to recognise and compare the main external parts of the bodies of humans and other animals</li> <li>that humans and other animals need food and water to stay alive</li> <li>that taking exercise and eating the right types and amounts of food help humans to keep healthy</li> <li>about the role of drugs as medicines</li> <li>how to treat animals with care and sensitivity</li> <li>that humans and other animals can produce offspring and that</li> </ol>	<p>YR.1 <b>Animals, including humans</b> Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates</li> <li>• identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>• describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, and including pets)</li> <li>• identify, name, draw and label the basic parts of the human</li> </ul>	<p>These LO have been dropped from the new curriculum:</p> <ol style="list-style-type: none"> <li>about the role of drugs as medicines</li> <li>how to treat animals with care and sensitivity (although included in the guidance)</li> </ol> <p>These LO have been added:</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates</li> <li>• identify and name a variety of common animals that are carnivores, herbivores and</li> </ul>

<p>these offspring grow into adults</p> <p>g. about the senses that enable humans and other animals to be aware of the world around them.</p>	<p>body and say which part of the body is associated with each sense.</p> <p>Yr.2</p> <p>Pupils should be taught to:</p> <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>	<p>omnivores</p>
<p><b><u>Green plants</u></b></p> <p>3. Pupils should be taught:</p> <p>a. to recognise that plants need light and water to grow</p> <p>b. to recognise and name the leaf, flower, stem and root of flowering plants</p> <p>c. that seeds grow into flowering plants.</p>	<p>Yr.1</p> <p><b>Plants</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen</li> <li>identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers</li> </ul> <p>Yr.2</p> <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 a suitable temperature to grow and stay healthy.</li> </ul>	<p>These LO have been added to the new curriculum:</p> <ul style="list-style-type: none"> <li>identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen</li> </ul>
<p><b><u>Variation and classification</u></b></p> <p>4. Pupils should be taught to:</p> <p>a. recognise similarities and differences between themselves and others, and to treat others with sensitivity</p> <p>b. group living things according to observable similarities and differences.</p>		<p>This section has been dropped as a separate unit, but the learning objectives can be found in the notes &amp; guidance for the new curriculum.</p>
<p><b><u>Living things in their environment</u></b></p> <p>5. Pupils should be taught to:</p> <p>a. find out about the different kinds of plants and animals in the local environment</p> <p>b. identify similarities and differences between local environments and ways in which these affect animals and plants that are found there</p> <p>c. care for the environment.</p>	<p>Yr.2</p> <p><b>All living things and their habitats</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>explore and compare the differences 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</li> </ul>	<p>Environment is now habitat in the new curriculum.</p> <p>This LO have been dropped from the new curriculum:</p> <ul style="list-style-type: none"> <li>care for the environment (although included in the guidance)</li> </ul>

	<p>the basic needs of different kinds of animals and plants, and how they depend on each other</p> <ul style="list-style-type: none"> <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 different sources of food.</li> </ul>	
<p><b>Sc3 Materials and their properties</b>  <b><u>Grouping materials</u></b>  1. Pupils should be taught to:</p> <ol style="list-style-type: none"> <li>a. use their senses to explore and recognise the similarities and differences between materials</li> <li>b. sort objects into groups on the basis of simple material properties [for example, roughness, hardness, shininess, ability to float, transparency and whether they are magnetic or non-magnetic]</li> <li>c. recognise and name common types of material [for example, metal, plastic, wood, paper, rock] and recognise that some of them are found naturally</li> <li>d. find out about the uses of a variety of materials [for example, glass, wood, wool] and how these are chosen for specific uses on the basis of their simple properties.</li> </ol> <p><b><u>Changing materials</u></b>  2. Pupils should be taught to:</p> <ol style="list-style-type: none"> <li>a. find out how the shapes of objects made from some materials can be changed by some processes, including squashing, bending, twisting and stretching</li> <li>b. explore and describe the way some everyday materials [for example, water, chocolate, bread, clay] change when they are heated or cooled.</li> </ol>	<p>Yr.1  <b>Everyday materials</b>  Pupils should be taught to:</p> <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, plastic, glass, metal, 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 physical properties</li> <li>• find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul> <p>Yr.2  Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard</li> <li>• compare how things move on different surfaces.</li> </ul>	No change
<p><b>Sc4 Physical processes</b>  <b><u>Electricity</u></b>  1. Pupils should be taught:</p> <ol style="list-style-type: none"> <li>a. about everyday appliances that use electricity</li> </ol>		Dropped for the new curriculum

<p>b. about simple series circuits involving batteries, wires, bulbs and other components [for example, buzzers, motors]</p> <p>c. how a switch can be used to break a circuit.</p>		
<p><b><u>Forces and motion</u></b></p> <p>2. Pupils should be taught:</p> <p>a. to find out about, and describe the movement of, familiar things [for example, cars going faster, slowing down, changing direction]</p> <p>b. that both pushes and pulls are examples of forces</p> <p>c. to recognise that when things speed up, slow down or change direction, there is a cause [for example, a push or a pull].</p>		Dropped for the new curriculum
<p><b><u>Light and sound</u></b></p> <p>3. Pupils should be taught:</p> <p><b>Light and dark</b></p> <p>a. to identify different light sources, including the Sun</p> <p>b. that darkness is the absence of light</p> <p><b>Making and detecting sounds</b></p> <p>c. that there are many kinds of sound and sources of sound</p> <p>d. that sounds travel away from sources, getting fainter as they do so, and that they are heard when they enter the ear.</p>	<p>Yr.1</p> <p><b>Light</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• observe and name a variety of sources of light,</li> <li>• associate shadows with a light source being blocked by something.</li> </ul> <p>Yr.2</p> <p><b>Sound</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• observe and name a variety of sources of sound, noticing that we hear with our ears</li> <li>• recognise that sounds get fainter as the distance from the sound source increases.</li> </ul>	No change
	<p><b>Yr.1</b></p> <p><b>Seasonal changes</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• observe changes across the four seasons</li> <li>• observe and describe weather associated with the seasons and how day length varies.</li> </ul>	New subject of study in the new curriculum
<p><b><u>Breadth of study</u></b></p> <p>1. During the key stage, pupils should be taught the Knowledge, skills and understanding through:</p> <p>a. a range of domestic and environmental contexts that are familiar and of interest to them</p> <p>b. looking at the part science has played in the development of many useful things</p> <p>c. using a range of sources of information and data, including ICT-based sources</p> <p>d. using first-hand and secondary</p>		These have now been replaced with the ‘notes and guidance (non-statutory)’ in the new curriculum.

<p>data to carry out a range of scientific investigations, including complete investigations.</p> <p>2. During the key stage, pupils should be taught to:</p> <p><b>Communication</b> use simple scientific language to communicate ideas and to name and describe living things, materials, phenomena and processes</p> <p><b>Health and safety</b> recognise that there are hazards in living things, materials and physical processes, and assess risks and take action to reduce risks to themselves and others.</p>		
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