

## Changes to the Science Curriculum: Year 6

### At a glance

How does the new curriculum compare to the QCA Schemes of Work (2000)?

What's gone?	What's been added?
<ul style="list-style-type: none"> <li>Protecting the environment</li> <li>Food chains</li> <li>Usefulness of micro-organisms</li> <li>Reversible &amp; Irreversible changes (moved to Y5)</li> <li>Gravity &amp; forces</li> </ul>	<ul style="list-style-type: none"> <li>Classification of plants &amp; animals</li> <li>Evolution</li> <li>Circulatory system</li> <li>Diet, exercise, drugs &amp; lifestyle</li> </ul>

### In detail

This section displays the objectives of the old National Curriculum organised according to the QCA units published from 2000 against the new objectives in the 2014 Primary Curriculum

Red indicates no longer required in Y6; purple content has been moved to Y5; green content is new to Year 6

Scientific Investigation	
that science is about thinking creatively to try to explain how living and non-living things work, and to establish links between causes and effects	Not explicitly mentioned
that it is important to test ideas using evidence from observation and measurement	"using straightforward scientific evidence to answer questions or to support their findings"
ask questions that can be investigated scientifically and decide how to find answers	"asking relevant questions and using different types of scientific enquiries to answer them"
consider what sources of information, including first-hand experience and a range of other sources, they will use to answer questions	"using straightforward scientific evidence to answer questions or to support their findings"
think about what might happen or try things out when deciding what to do, what kind of evidence to collect, and what equipment and materials to use	"setting up simple practical enquiries, comparative and fair tests"
make a fair test or comparison by changing one factor and observing or measuring the effect while keeping other factors the same	"setting up simple practical enquiries, comparative and fair tests"
use simple equipment and materials appropriately and take action to control risks	"making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers"
make systematic observations and measurements, including the use of ICT for datalogging	
check observations and measurements by repeating them where appropriate	Not explicitly mentioned
use a wide range of methods, including diagrams, drawings, tables, bar charts, line graphs and ICT, to communicate data in an appropriate and systematic manner	"recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables"
make comparisons and identify simple patterns or associations in their own observations and measurements or other data	"identifying differences, similarities or changes related to simple scientific ideas and processes"
use observations, measurements or other data to draw conclusions	"gathering, recording, classifying and presenting data in a variety of ways to help in answering questions"
decide whether these conclusions agree with any prediction made and/or whether they enable further predictions to be made	"using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions"
use their scientific knowledge and understanding to explain observations, measurements or other data or conclusions	"reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions"
review their work and the work of others and describe its significance and limitations	Not explicitly mentioned

<b>Biology 1: Interdependence &amp; Adaptation</b>	
to make links between life processes in familiar animals and plants and the environments in which they are found	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
the effect of light, air, water and temperature on plant growth	Moved to Year 3
about ways in which living things and the environment need protection	No longer required in PoS
to use food chains to show feeding relationships in a habitat	Moved to Year 4
	give reasons for classifying plants and animals based on specific characteristics.
	recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

<b>Biology 2: Micro-organisms</b>	
that micro-organisms are living organisms that are often too small to be seen, and that they may be beneficial or harmful	describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals

<b>Additional Content</b>	
Moved from Year 5	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
Moved from Year 5	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
Moved from Year 5	describe the ways in which nutrients and water are transported within animals, including humans.

<b>Chemistry 1: More about dissolving</b>	
to describe changes that occur when materials are mixed	Moved to Year 5
about reversible changes, including dissolving, melting, boiling, condensing, freezing and evaporating	Moved to Year 5
how to recover dissolved solids by evaporating the liquid from the solution	Moved to Year 5

<b>Chemistry 2: Reversible &amp; Irreversible changes</b>	
that non-reversible changes result in the formation of new materials that may be useful	Moved to Year 5
that burning materials results in the formation of new materials and that this change is not usually reversible	Moved to Year 5

<b>Physics 1: Forces in Action</b>	
that objects are pulled downwards because of the gravitational attraction between them and the Earth	Moved to Year 5
about friction, including air resistance, as a force that slows moving objects and may prevent objects from starting to move	Moved to Year 5
that when objects [for example, a spring, a table] are pushed or pulled, an opposing pull or push can be felt	Moved to Year 5
how to measure forces and identify the direction in which they act	Moved to Year 5

<b>Physics 2: How we see things</b>	
that light travels from a source	“recognise that light appears to travel in straight lines”
that light is reflected from surfaces	“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”
that light cannot pass through some materials, and how this leads to the formation of shadows	“use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them”
that we see things only when light from them enters our eyes	“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” “explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes”

<b>Physics 2: Changing Circuits</b>	
how changing the number or type of components in a series circuit can make bulbs brighter or dimmer	“associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit” “compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches”
how to represent series circuits by drawings and conventional symbols, and how to construct series circuits on the basis of drawings and diagrams using conventional symbols	“use recognised symbols when representing a simple circuit in a diagram”

