



New National Curriculum Objectives

Science		
Science	Key Stage I	
	Working scientifically	
	a	asking simple questions and recognising that they can be answered in different ways
	b	observing closely, using simple equipment
	c	performing simple tests
	d	identifying and classifying
	e	using their observations and ideas to suggest answers to questions
	f	gathering and recording data to help in answering questions.
	Year I	
	Plants	
	Ia	identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
	Ib	identify and describe the basic structure of a variety of common flowering plants, including trees.
	Animals, including humans	
	Ic	identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
	Id	identify and name a variety of common animals that are carnivores, herbivores and omnivores
	Ie	describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)
	If	identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
	Everyday materials	
	Ig	distinguish between an object and the material from which it is made
	Ih	identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
Ii	describe the simple physical properties of a variety of everyday materials	
Ij	compare and group together a variety of everyday materials on the basis of their simple physical properties.	
Seasonal changes		
Ik	observe changes across the four seasons	
Il	observe and describe weather associated with the seasons and how day length varies.	
Year 2		
Living things and their habitats		
2a	explore and compare the differences between things that are living, dead, and things that have never been alive	
2b	identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	
2c	identify and name a variety of plants and animals in their habitats, including micro-habitats 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.	
Plants		
2d	observe and describe how seeds and bulbs grow into mature plants	



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Science	Year 2	2e	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	
		Animals, including humans		
		2f	notice that animals, including humans, have offspring which grow into adults	
		2g	find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	
		2h	describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	
		Use of everyday materials		
		2i	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	
	2j	find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		
	Lower KS2	Working scientifically		
		g	asking relevant questions and using different types of scientific enquiries to answer them	
		h	setting up simple practical enquiries, comparative and fair tests	
		i	making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	
		j	gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	
		k	recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	
		l	reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	
		m	using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	
		n	identifying differences, similarities or changes related to simple scientific ideas and processes	
		o	using straightforward scientific evidence to answer questions or to support their findings.	
	Year 3	Plants		
		3a	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	
		3b	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	
		3c	investigate the way in which water is transported within plants	
		3d	explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	
		Animals, including humans		
3e		identify that animals, 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		
3f		identify that humans and some other animals have skeletons and muscles for support, protection and movement.		
Rocks				
3g		compare and group together different kinds of rocks on the basis of their appearance and simple physical properties		



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Science	Year 3	3h	describe in simple terms how fossils are formed when things that have lived are trapped within rock	
		3i	recognise that soils are made from rocks and organic matter.	
		Light		
		3j	recognise that they need light in order to see things and that dark is the absence of light	
		3k	notice that light is reflected from surfaces	
		3l	recognise that light from the sun can be dangerous and that there are ways to protect their eyes	
		3m	recognise that shadows are formed when the light from a light source is blocked by a solid object	
		3n	find patterns in the way that the size of shadows change.	
		Forces and magnets		
		3o	compare how things move on different surfaces	
		3p	notice that some forces need contact between two objects, but magnetic forces can act at a distance	
		3q	observe how magnets attract or repel each other and attract some materials and not others	
		3r	compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials	
		3s	describe magnets as having two poles	
	3t	predict whether two magnets will attract or repel each other, depending on which poles are facing.		
	Year 4	Living things and their habitats		
		4a	recognise that living things can be grouped in a variety of ways	
		4b	explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	
		4c	recognise that environments can change and that this can sometimes pose dangers to living things.	
		Animals, including humans		
		4d	describe the simple functions of the basic parts of the digestive system in humans	
		4e	identify the different types of teeth in humans and their simple functions	
		4f	construct and interpret a variety of food chains, identifying producers, predators and prey.	
		States of matter		
4g		compare and group materials together, according to whether they are solids, liquids or gases		
4h		observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)		
4i		identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		
Sound				
4j		identify how sounds are made, associating some of them with something vibrating		
4k	recognise that vibrations from sounds travel through a medium to the ear			
4l	find patterns between the pitch of a sound and features of the object that produced it			



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Science	Year 4	4m	find patterns between the volume of a sound and the strength of the vibrations that produced it	
		4n	recognise that sounds get fainter as the distance from the sound source increases.	
		Electricity		
		4o	identify common appliances that run on electricity	
		4p	construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers	
		4q	identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery	
		4r	recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit	
		4s	recognise some common conductors and insulators, and associate metals with being good conductors.	
	Upper Key Stage 2	Working scientifically		
		p	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	
		q	taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	
		r	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	
		s	using test results to make predictions to set up further comparative and fair tests	
		t	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	
		u	identifying scientific evidence that has been used to support or refute ideas or arguments.	
	Year 5	Living things and their habitats		
		5a	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	
		5b	describe the life process of reproduction in some plants and animals.	
		Animals, including humans		
		5c	describe the changes as humans develop to old age.	
		Properties and changes of materials		
		5d	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	
		5e	know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	
5f		use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating		
5g		give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic		
5h		demonstrate that dissolving, mixing and changes of state are reversible changes		
5i	explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.			



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Science	Year 5	Earth and space	
		5j	describe the movement of the Earth, and other planets, relative to the Sun in the solar system
		5k	describe the movement of the Moon relative to the Earth
		5l	describe the Sun, Earth and Moon as approximately spherical bodies
		5m	use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.
		Forces	
		5n	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
		5o	identify the effects of air resistance, water resistance and friction, that act between moving surfaces
	5p	recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
	Year 6	Living things and their habitats	
		6a	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
		6b	give reasons for classifying plants and animals based on specific characteristics.
		Animals, including humans	
		6c	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
		6d	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
		6e	describe the ways in which nutrients and water are transported within animals, including humans.
		Evolution and inheritance	
		6f	recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
		6g	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
		6h	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
Light			
6i	recognise that light appears to travel in straight lines		
6j	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		
6k	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		
6l	use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.		
Electricity			
6m	associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit		
6n	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		
6o	use recognised symbols when representing a simple circuit in a diagram.		