



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.		



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Geography		
Geography	Year 1	
	Locational knowledge	
	1a	name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas.
	Place knowledge	
	1b	understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country
	Human and physical geography	
	1c	key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop
	Geographical skills and fieldwork	
	1d	use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage
	1e	use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map
	Year 2	
	Locational knowledge	
	2a	name and locate the world's seven continents and five oceans
	Place knowledge	
2b	understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country	
Human and physical geography		
2c	the location of hot and cold areas of the world in relation to the Equator and the North and South Poles	
2d	use basic geographical vocabulary to refer to: -key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather	
Year 3		
Geographical skills and fieldwork		
3a	use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage	
Locational knowledge		
3b	locate the world's countries, using maps to focus on Europe (including the location of Russia), concentrating on their environmental regions, key physical and human characteristics, countries, and major cities	
Place knowledge		
3c	understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country.	
Human and physical geography		
3d	physical geography, including: climate zones, biomes and vegetation belts, mountains, volcanoes	
3e	human geography, including: types of settlement and land use	
Year 4		
Locational knowledge		
4a	name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key	



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		topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
		Human and physical geography
	4b	physical geography, including: rivers, mountains, volcanoes and earthquakes, and the water cycle
	4c	human geography, including: types of settlement and land use.
Year 5		Place knowledge
	5a	understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America
		Human and physical geography
	5b	physical geography, including: climate zones, biomes and vegetation belts
	5c	human geography, including: types of settlement and land use,
Year 6		Place knowledge
	6a	understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America
		Human and physical geography
	6b	human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water



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History			
History	Key Stage 1	1a	changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life
		1b	events beyond living memory that are significant nationally or globally [for example, the Great Fire of London, the first aeroplane flight or events commemorated through festivals or anniversaries]
		1c	the lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods [for example, Elizabeth I and Queen Victoria, Christopher Columbus and Neil Armstrong, William Caxton and Tim Berners-Lee, Pieter Bruegel the Elder and LS Lowry, Rosa Parks and Emily Davison, Mary Seacole and/or Florence Nightingale and Edith Cavell]
		1d	significant historical events, people and places in their own locality.
	Key Stage 2	2a	changes in Britain from the Stone Age to the Iron Age
		2b	the Roman Empire and its impact on Britain
		2c	Britain's settlement by Anglo-Saxons and Scots
		2d	the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor
		2e	a local history study
		2f	a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
		2g	the achievements of the earliest civilizations – an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China
		2h	Ancient Greece – a study of Greek life and achievements and their influence on the western world
2i	a non-European society that provides contrasts with British history – one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.		



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Art and Design			
Art and Design	Key Stage 1	1a	to use a range of materials creatively to design and make products
		1b	to use drawing, painting and sculpture to develop and share their ideas, experiences and imagination
		1c	to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space
		1d	about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.
	Key Stage 2	2a	to create sketch books to record their observations and use them to review and revisit ideas
		2b	to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]
		2c	about great artists, architects and designers in history.



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Design Technology	
Design Technology	Key Stage 1
	Design
	1a design purposeful, functional, appealing products for themselves and other users based on design criteria
	1b generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
	Make
	1c select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
	1d select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
	Evaluate
	1e explore and evaluate a range of existing products
	1f evaluate their ideas and products against design criteria
	Technical Knowledge
	1g build structures, exploring how they can be made stronger, stiffer and more stable
	1h explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
	Cooking and nutrition
1i use the basic principles of a healthy and varied diet to prepare dishes	
1j understand where food comes from.	
Design Technology	Key Stage 2
	Design
	2a use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
	2b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
	Make
	2c select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
	2d select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities
	Evaluate
	2e investigate and analyse a range of existing products
	2f evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
	2g understand how key events and individuals in design and technology have helped shape the world
	Technical Knowledge
	2h apply their understanding of how to strengthen, stiffen and reinforce more complex structures
2i understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	



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	2j	understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
	2k	apply their understanding of computing to program, monitor and control their products.
	Cooking and nutrition	
	2l	understand and apply the principles of a healthy and varied diet
	2m	prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
	2n	understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.



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Computing			
Computing	Key Stage 1	1a	understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
		1b	create and debug simple programs
		1c	use logical reasoning to predict the behaviour of simple programs
		1d	use technology purposefully to create, organise, store, manipulate and retrieve digital content
		1e	recognise common uses of information technology beyond school
		1f	use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
	Key Stage 2	2a	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
		2b	use sequence, selection, and repetition in programs; work with variables and various forms of input and output
		2c	use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
		2d	understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
		2e	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
		2f	select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
		2g	use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.



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Music			
Music	Key Stage 1	1a	use their voices expressively and creatively by singing songs and speaking chants and rhymes
		1b	play tuned and untuned instruments musically
		1c	listen with concentration and understanding to a range of high-quality live and recorded music
		1d	experiment with, create, select and combine sounds using the inter-related dimensions of music.
	Key Stage 2	2a	play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression
		2b	improvise and compose music for a range of purposes using the inter-related dimensions of music
		2c	listen with attention to detail and recall sounds with increasing aural memory
		2d	use and understand staff and other musical notations
		2e	appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
		2f	develop an understanding of the history of music.



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PE			
PE	Key Stage 1	1a	master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities
		1b	participate in team games, developing simple tactics for attacking and defending
		1c	perform dances using simple movement patterns.
	Key Stage 2	2a	use running, jumping, throwing and catching in isolation and in combination
		2b	play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending
		2c	develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]
		2d	perform dances using a range of movement patterns
		2e	take part in outdoor and adventurous activity challenges both individually and within a team
		2f	compare their performances with previous ones and demonstrate improvement to achieve their personal best.
	Key Stage 1 or 2	Swimming and water safety	
		g	swim competently, confidently and proficiently over a distance of at least 25 metres
		h	use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]
i		perform safe self-rescue in different water-based situations.	



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Languages			
Languages	Key Stage 2	2a	listen attentively to spoken language and show understanding by joining in and responding
		2b	explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words
		2c	engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help*
		2d	speak in sentences, using familiar vocabulary, phrases and basic language structures
		2e	develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases*
		2f	present ideas and information orally to a range of audiences*
		2g	read carefully and show understanding of words, phrases and simple writing
		2h	appreciate stories, songs, poems and rhymes in the language
		2i	broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary
		2j	write phrases from memory, and adapt these to create new sentences, to express ideas clearly
		2k	describe people, places, things and actions orally* and in writing
2l	understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English.		
The starred (*) content above will not be applicable to ancient languages.			