



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Planning and communication	draw simple pictures	describe their observations using some scientific vocabulary	use pictures, writing, diagrams and tables as directed by their teacher	record observations, comparisons and measurements using tables and bar charts	record observations systematically	choose scales for graphs which show data and features effectively
	talk about what they see and do	use a range of simple texts to find information	use simple texts, directed by the teacher, to find information	begin to plot points to form a simple graph	use appropriate scientific language and conventions to communicate quantitative and qualitative data	identify measurements and observations which do not fit into the main pattern
	use simple charts to communicate findings	suggest how to find things out	record their observations in written, pictorial and diagrammatic forms	use graphs to point out and interpret patterns in their data	select a range of appropriate sources of information including books and the internet	begin to explain anomalous data
	identify key features	identify key features	select the appropriate format to record their observations	select information from a range of sources provided for them		use appropriate ways to communicate quantitative data using scientific language
	ask questions	ask questions				
Investigating and Observing	test ideas suggested to them	use simple equipment provided to aid observation	with help, pupils begin to realise that scientific ideas are based on evidence	with help, pupils begin to realise that scientific ideas are based on evidence	use previous knowledge and experience combined with experimental evidence to provide scientific explanations	describe evidence for a scientific idea
	say what they think will happen			show in the way they perform their tasks how to vary one factor while keeping others the same	recognise the key factors to be considered in carrying out a fair test	use scientific knowledge to identify an approach for an investigation
	use first hand experiences to answer questions	compare objects, living things or events	show in the way they perform their tasks how to vary one factor while keeping others the same	decide on an appropriate approach in their own investigations to answer questions		explain how the interpretation leads to new ideas
	begin to compare some living things	make observations relevant to their task	decide on an appropriate approach in their own investigations to answer questions	describe which factors they are varying and which will remain the same and say why		
Observing and recording	make observations using appropriate senses	respond to questions asked by the teacher	make relevant observations	carry out measurement accurately	make a series of observations, comparisons and measurements with increasing precision	measure quantities with precision using fine – scale divisions
	record observations	ask questions	measure using given equipment	make a series of observations, comparisons and measurements	select apparatus for a range of tasks	select and use information effectively
		collect and record data (supported by the teacher)	select equipment from a limited range	select and use suitable equipment	plan to use apparatus effectively	make enough measurements or observations for the required task
	communicate observations orally, in drawing, labelling, simple writing and using ICT	suggest how they could collect data to answer questions		make a series of observations and measurements adequate for the task	begin to make repeat observations and measurements systematically	
Considering Evidence and Evaluating	make simple comparisons and groupings	say what has happened	begin to offer explanations for what they see and communicate in a scientific way what they have found out	predict outcomes using previous experience and knowledge and compare with actual results	make predictions based on their scientific knowledge and understanding	make reasoned suggestions on how to improve working methods
	say what has happened	say what their observations show and whether it was what they expected	begin to identify patterns in recorded measurements	begin to relate their conclusions to scientific knowledge and understanding	draw conclusions that are consistent with the evidence	show how interpretation of evidence leads to new ideas
	say whether what has happened was what they expected	begin to draw simple conclusions and explain what they did	suggest improvements in their work	suggest improvements in their work, giving reasons	relate evidence to scientific knowledge and understanding	explain conclusions, showing understanding of scientific ideas
	begin to suggest improvements in their work	evaluate their findings		offer simple explanations for any differences in their results	make practical suggestions about how their working methods could be improved	
Breadth of study	Plants	Plants	Plants	All Living Things	Living Things and their Habitats	Living Things and their Habitats
	identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	observe and describe how seeds and bulbs grow into mature plants	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	recognise that living things can be grouped in a variety of ways	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	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
	identify and describe the basic structure of a variety of common flowering plants, including trees	find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	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	explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	describe the life process of reproduction in some plants and animals.	give reasons for classifying plants and animals based on specific characteristics.
		investigate the way in which water is transported within plants	explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	recognise that environments can change and that this can sometimes pose dangers to living things		
Breadth of study	Animals inc Humans	Animals inc Humans	Animals inc Humans	Animals inc Humans	Animals inc Humans	Animals inc Humans
	identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals	notice that animals, including humans, have offspring which grow into adults	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	describe the simple functions of the basic parts of the digestive system in humans	describe the changes as humans develop to old age.	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood
	identify and name a variety of common animals that are carnivores, herbivores and omnivores	find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	identify that humans and some other animals have skeletons and muscles for support, protection and movement	identify the different types of teeth in humans and their simple functions		recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
	describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene		construct and interpret a variety of food chains, identifying producers, predators and prey	describe the ways in which nutrients and water are transported within animals, including humans.	
	identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.					
Breadth of study	Everyday Materials	Uses of Everyday Materials	Rocks	States of Matter	Properties and Changes of Materials	Evolution
	distinguish between an object and the material from which it is made	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses	compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	compare and group materials together, according to whether they are solids, liquids or gases	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	recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

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	identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	compare how things move on different surfaces	describe in simple terms how fossils are formed when things that have lived are trapped within rock	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)	know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution	recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
	describe the simple physical properties of a variety of everyday materials	find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	recognise that soils are made from rocks and organic matter	identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes	identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
	compare and group together a variety of everyday materials on the basis of their simple physical properties				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.	
Breadth of study	Seasonal Changes	Living things and their Habitats	Forces and Magnets	Electricity	Forces	Electricity
	observe changes across the 4 seasons	explore and compare the differences between things that are living, dead, and things that have never been alive	compare how things move on different surfaces	identify common appliances that run on electricity	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
	observe and describe weather associated with the seasons and how day length varies.	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	notice that some forces need contact between 2 objects, but magnetic forces can act at a distance	construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers	identify the effects of air resistance, water resistance and friction, that act between moving surfaces	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
		identify and name a variety of plants and animals in their habitats, including microhabitats	observe how magnets attract or repel each other and attract some materials and not others	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	recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect	use recognised symbols when representing a simple circuit in a diagram
		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.	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	recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit		
			describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing	recognise some common conductors and insulators, and associate metals with being good conductors		
Breadth of study			Light	Sound	Earth and Space	Light
			recognise that they need light in order to see things and that dark is the absence of light	identify how sounds are made, associating some of them with something vibrating	describe the movement of the Earth, and other planets, relative to the Sun in the solar system	recognise that light appears to travel in straight lines
			notice that light is reflected from surfaces	recognise that vibrations from sounds travel through a medium to the ear	describe the movement of the Moon relative to the Earth	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
			recognise that light from the sun can be dangerous and that there are ways to protect their eyes	find patterns between the pitch of a sound and features of the object that produced it	describe the Sun, Earth and Moon as approximately spherical bodies	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
			recognise that shadows are formed when the light from a light source is blocked by a solid object	find patterns between the volume of a sound and the strength of the vibrations that produced it	use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.	use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them
			find patterns in the way that the size of shadows change	recognise that sounds get fainter as the distance from the sound source increases		