



# **Milton Mount Primary School**

**Science Curriculum Map, Progression of Knowledge,  
Skills and Vocabulary Document  
EYFS, Key Stage 1 & Key Stage 2**

## **Intent**

At Milton Mount we are SCIENTISTS! We seek to inspire our next generation of young scientists with opportunities for awe, wonder and excitement in the world around them by ensuring enquiry-based curriculum coverage in a safe, hands-on, relevant and well-resourced way that provides challenge, support and progress for all.

Our curriculum starts in the Early Years Foundation Stage focusing on Understanding the World area of learning and continues through to Year 6, following the National curriculum content guidance.

## **Do More**

The curriculum is structured and sequenced so that all children actively engage in exploration-based lessons. Our aim is to plan, create and teach exciting lessons that include children engaging with science in a variety of ways, for example, investigating questions, observing, communicating and working within a team to evolve the whole child as a lifelong learner.

## **Know More**

Science is planned for and taught in line with the National Curriculum, whilst utilising 'Developing Experts' to ensure pupils knowledge is systematically built upon each year. We aim to provide lessons are rooted in scientific vocabulary, consolidate prior knowledge and encourage deeper understanding.

## **Remember More**

Sticky starters are used at the start of each lesson, allowing children to recall previously taught knowledge and information. Three questions are asked: one from the previous week, one from the previous unit (term) and one from the previous year. This enables children to bring previous knowledge into current learning, helping them to make connections within the world around them.

## **Experience More**

Use of our school's outdoor learning facilities and cross-curricular links with forest schools will encourage our young scientists to apply and deepen their curiosity and learning in a range of contexts. Opportunities to reflect on, discuss, present and question the results of their lessons and investigations will allow them to take their place among the articulate, problem-solving, critical thinkers our school and the world of science beyond require.

## **Consider more**

By doing, knowing, remembering and experiencing more, children at Milton Mount will have gathered a scientific perspective of the world around them. They will be able to make links and connections across scientific concepts as well as be able to pose and investigate their own generated questions.

## Science Curriculum Map

Science	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>EYFS</b>	<b>Seasons and Weather</b>					
Understanding the world: The Natural World	Explores and Talks about the Natural World Around them	Making Observations and Drawing pictures of plants and Animals	Contrasting the Natural World with other environments	Animals – Farm Visit	Understand the important processes and changes in the world around them Inc. seasons Changing States of Matter	Understanding the effect of Changing Seasons on Gardening
<b>Year 1</b>	Animals Inc. Humans – <i>All about me</i>	Exploring Everyday Materials	Seasonal Changes	Everyday Materials - Building	Animals Inc. Humans – <i>All about animals</i>	Plants
<b>Year 2</b>	Animals Inc. Humans – <i>Growth</i>	Use of Everyday Materials	Plants	Animals Inc. humans – <i>Life cycles</i>	Living things and their habitats	Living things and their habitats – <i>Habitats from around the world</i>
<b>Year 3</b>	Light	Forces and Magnets	Rocks	Scientific Enquiry	Animals Inc. Humans	Plants
<b>Year 4</b>	Living Things and their Habitats	Animals Inc. Humans	States of matter	Sound	Electricity	Living Things and their Habitats - <i>Conservation</i>
<b>Year 5</b>	Animals Inc. Humans	Earth and Space	Properties of Materials	Forces	Living things and their Habitats	Changes of Materials
<b>Year 6</b>	Light	Electricity	Animals Inc. Humans	Living Things and their habitats	Evolution and Inheritance	Looking After the Environment

## Science Progression of Knowledge and Skills 2024 – 2025

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Animals, including human</b>	<p>Understand the key features of the lifecycle of an animal.</p> <p>Making observations and drawing pictures of animals.</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p>	<p>Notice that animals, including humans, have offspring which grow into adults</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p>	<p>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</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and Movement</p>	<p>Describe the simple functions of the basic parts of the digestive system in humans</p> <p>Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey</p>	<p>Describe the changes as humans develop to old age</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, exercise, drugs and Lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, Including humans</p>
<b>Living things and their habitats</b>	<p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Recognise some environments are different to the one in which they live.</p> <p>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</p>		<p>Explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>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</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats</p> <p>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</p>	<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things</p>	<p>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals</p>	<p>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</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p>
<b>Plants</b>	<p>Plant seeds and care for growing plants.</p> <p>Understand the key features of the lifecycle of a plant.</p> <p>Making observations and drawing pictures of plants.</p>	<p>Identify and name a variety of common and wild and garden plants, including deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees</p>	<p>Observe and describe how Seeds and bulbs into mature plants</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>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</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>			
<b>Evolution and Inheritance</b>							<p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p>

							Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
<b>Materials</b>	<p>Use all their senses in hands-on exploration of natural materials.</p> <p>Explore collections of materials with similar/different properties.</p> <p>Talk about the differences between materials and changes they notice.</p>	<p>Distinguish between an object and the material from which it is made</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>Describe the simple physical properties of a variety of everyday materials</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p>	<p>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</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>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</p>			
<b>Seasonal changes</b>	<p>Understand the effect of the changing seasons on the natural world around them.</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Observe changes across the 4 seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies</p>					
<b>Rocks</b>				<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter</p>			
<b>States of matter</b>	<p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>				<p>Compare and group materials together, according to whether they are solids, liquids or gases</p> <p>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)</p>		

					Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	
<b>Earth and space</b>						<p>Describe the movement of the Earth and other planets relative to the sun in the solar system</p> <p>Describe the movement of the moon relative to the Earth</p> <p>Describe the sun, Earth and moon as approximately spherical bodies</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</p>
<b>Light</b>				<p>Recognise that they need light in order to see things and that dark is the absence of light</p> <p>Notice that light is reflected from surfaces</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>Find patterns in the way that the size of shadows changes</p>		<p>Recognise that light appears to travel in straight lines</p> <p>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</p> <p>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</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p>
<b>Forces</b>	Explore and talk about the different forces they can feel.			<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>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</p> <p>Describe magnets as having 2 poles</p> <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p>		<p>Explain that unsupported objects fall towards the</p> <p>Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</p>
<b>Electricity</b>					<p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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</p>	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>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</p>

					<p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductor</p>		Use recognised symbols when representing a simple circuit in a diagram
<b>Sound</b>					<p>Identify how sounds are made, associating some of them with something vibrating</p> <p>Recognise that vibrations from sounds travel through a medium to the ear</p> <p>Find patterns between the pitch of a sound and features of the object that produced it</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Recognise that sounds get fainter as the distance from the sound source increases</p>		
<b>Working Scientifically</b>		<p><i>Asking simple questions and recognise that they can be answered in different ways</i></p> <p><i>Observe closely, using simple equipment</i></p> <p><i>Perform simple tests</i></p> <p><i>Identify and classify</i></p> <p><i>Using their observations and ideas to suggest answers to questions</i></p> <p><i>Gather and record data to help in answering questions</i></p>	<p><i>Asking simple questions and recognise that they can be answered in different ways</i></p> <p><i>Observe closely, using simple equipment</i></p> <p><i>Perform simple tests</i></p> <p><i>Identify and classify</i></p> <p><i>Using their observations and ideas to suggest answers to questions</i></p> <p><i>Gather and record data to help in answering questions</i></p>	<p><i>Ask relevant questions and using different types of scientific enquiries to answer them</i></p> <p><i>Set up simple practical enquiries, comparative and fair tests</i></p> <p><i>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</i></p> <p><i>Gather, record, classify and present data in a variety of ways to help in answering questions</i></p> <p><i>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</i></p> <p><i>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</i></p> <p><i>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</i></p> <p><i>Identify differences, similarities or changes related to simple scientific ideas and processes</i></p>	<p><i>Ask relevant questions and using different types of scientific enquiries to answer them</i></p> <p><i>Set up simple practical enquiries, comparative and fair tests</i></p> <p><i>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</i></p> <p><i>Gather, record, classify and present data in a variety of ways to help in answering questions</i></p> <p><i>Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</i></p> <p><i>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</i></p> <p><i>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</i></p> <p><i>Identify differences, similarities or changes related to simple scientific ideas and processes</i></p>	<p><i>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</i></p> <p><i>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</i></p> <p><i>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</i></p> <p><i>Use test results to make predictions to set up further comparative and fair tests</i></p> <p><i>Report and present 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</i></p> <p><i>Identify scientific evidence that has been used to support or refute ideas or arguments</i></p>	<p><i>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</i></p> <p><i>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</i></p> <p><i>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</i></p> <p><i>Use test results to make predictions to set up further comparative and fair tests</i></p> <p><i>Report and present 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</i></p> <p><i>Identify scientific evidence that has been used to support or refute ideas or arguments</i></p>

## The development of SMSC and the promotion of British Values in the Science Curriculum

<p><b>Spiritual</b>          Providing opportunities to search for meaning and purpose in natural and physical phenomena and to wonder what is special about life, an awe at the scale of living things from the smallest micro-organism to the largest tree and the interdependence of all living things and materials on Earth.          Reflection and the emotional drive to know more and to wonder about the world and aesthetically appreciate its wonders including, for example the enormity of space and the beauty of natural objects or phenomenon, plants, animals, crystals, rainbows and the Earth from space etc.          Promoting teaching styles which: value pupils' questions and give them space for their own thoughts, ideas and concerns; enable pupils to make connections between aspects of their learning; encourage pupils to relate their learning to a wider frame of reference – for example, asking why? how? And where as well as what? Showing respect for the different opinions expressed by others, for example regarding creation.          Science and spiritual ideas can cause conflict but in a modern society it is important to understand why these conflicts arise so our children can respect the views of others. It is also seen that science can stand alongside spiritual beliefs. This is looked at from a neutral stand point within science lessons.</p>	<p><b>Moral</b>          Encouraging pupils to take responsibility for their actions; for example, in respect of property, care of the environment and developing codes of behaviour.          Encouraging pupils to become increasingly curious, to develop open mindedness to suggestions of others and to make judgements on evidence not prejudice.          Encouraging children to use their understanding of the world in a positive manner.          Begin to understand that moral dilemmas are often involved in scientific developments. When considering the environment, the use of further natural resources and its effect on future generations is an important moral consideration.          Children are also encouraged to ask themselves, What are the consequences of our actions on the world around us? What are the consequences of my actions on myself and others?</p>
<p><b>Social</b>          Encouraging pupils to work co-operatively and develop team working skills in practical work and to share the results to improve reliability.          Developing team working skills and taking responsibility in that team.          Pupils taking responsibility for their own and others' safety.          Consideration of the benefits and drawbacks of scientific and technological developments and the social responsibilities.</p>	<p><b>Cultural</b>          Encouraging thinking of scientific discoveries as part of our culture as great as music and films with credit given to scientific discoveries made by people of all backgrounds and other cultures, not just British or American. Science is a contemporary activity with developments being made all over the modern world by both men and women in many different cultures (now and in the past).            Children are encouraged to investigate and discuss the historical impact of scientists from around the world linked to famous discoveries.</p>



Children are encouraged to consider their impact on the world around them and start to look at what we can do to help the next generation have a habitable planet. They need to develop their empathy and tolerance towards different viewpoints.

## British Values

Children develop the ability to take a full and active part in practical lessons while keeping to the rules to keep ourselves and others safe. They take turns to use equipment and have their say. Children are encouraged to understand the consequences of their actions and to confidently share their opinions and ideas while respecting the opinions of others. They learn to work as a team, supporting and advising each other. They make their own choices when planning an investigation and recognise that others may have different points of view. They recognise that some of the most important scientific discoveries have come from other parts of the world. They respect the views and opinions of others (and freedom of others to hold different beliefs) for example in issues such as creation, genetically modified crops or the impact of pollution. They look at scientific discoveries which have come from other cultures and how religious beliefs often compete with scientific understanding. They learn to be respectful of these beliefs and to appreciate and understand them.

### Progression of Scientific Vocabulary

Topic/Year group	EYFS	1	2	3	4	5	6
<b>Plants</b>	seeds plant tree soil stem petal leaf root flower weed growth branch bush seedling	seed plant tree soil predicts stem petal leaf root flower environment weed daisy dandelion wild deciduous evergreen seasons branch bush supermarket fruit vegetable farm tractor growth seedling young plant adult plant observe	seeds bulbs growth plant compares predict investigate control experiment method photosynthesis carbon dioxide oxygen glucose energy pollination life cycle germination reproduction seedling manure crop insulate thrive healthy forest desert adapt condition survive	nutrients fertiliser nursery potassium stunted chlorophyll stomata xylem photosynthesis UV light xylem phloem absorb stomata transpiration anther stigma style filament reproduction pollination pollen nectar seed dispersal pollinator germination vulnerable anchor sapling formation			
<b>Animals inc humans</b>	head body leg arm hands feet animals living survive food alive nature winter spring summer autumn	head body skeleton limb joint brain eyelash eye sight pupil sound ear sign language vibration deafness tongue mouth taste flavour sweet touch fingertips skin organ brain smell odour nose nostril nose hair  fish amphibian reptile mammal bird feather warm-blooded characteristic backbone hatchling amphibian reptile gills scale cold-blooded herbivore carnivore omnivore predator canines pet wild shelter veterinary natural similarities	survival shelter nutrition oxygen essential vital non-essential survive grow healthy protein carbohydrate dairy vitamins calcium fat balanced diet nutrients fresh food pre-cooked processed food exercise strength flexibility balance coordination hygiene prevent germs bacteria virus  life cycle grow survive independent adult foetus womb helpless toddler develop offspring inherit gene resemble differences reproduction hatchling chick bar chart		digestive system oesophagus stomach small intestine large intestine saliva peristalsis absorb liver gall bladder incisors canines molars jaw gum enamel plaque tooth decay cavity fluoride ecosystem producer consumer prey predator food web tundra hide interdependence threatened	foetus dependent adolescent puberty reproduce gestation pregnant duration extreme breeding womb umbilical chord embryo trimester midwife growth spurt childhood motor skills milk teeth constant adolescence puberty hormones mood swing develop lifestyle keratin elasticity cataracts neurodegenerative	circulatory system atrium ventricle vessel valves vessel artery vein capillary microscope blood plasma platelet white blood cell red blood cell absorb diffusion osmosis concentration nutrients diet exercise heart rate BPM pulse drug painkiller stimulant depressant hallucinogens

		differences compare unsuitable climate	predict caterpillar transformation larva chrysalis metamorphosis frog amphibian frogspawn tadpole froglet				
<b>Uses of/Everyday materials Properties and changes of materials</b>	material fabric melt ice water frozen thaw float sink stretchy hard soft	material fabric wood plastic metal object glass property brick elastic property opaque transparent dull stiff natural man-made factory rubber polyester predict float sink submerge buoyant absorbent sponge waterproof umbrella soak  solid strong brick clay wind waterproof absorbent non-absorbent roof slate transparent opaque suitable window pane window frame fabric furniture cotton mattress soft wool weather jumper suitable waterproof evaluate material properties tile garden	material property suitable object brick bridge triangle obstacle structure construction stretchy elastic floppy hinder limit bend twist squash stretch force mackintosh protective fluorescent safety waterproof John McAdam merchant bound highway road			conductive magnetic durable transparent versatile thermal conduction molecules degrees Celsius (°C) insulator hardness force iron steel stone dissolve solute insoluble soluble solvent solute solvent solution substance saturation pure substance mixture filtering sieving evaporation  pure substance solute solvent solution evaporate reversible mixture physical change melting evaporate irreversible chemical change compare effervescence product fair test variable control variable corrosion rusting combustion fuel oxygen extinguish smother reaction predict acid bicarbonate of soda carbon dioxide	
<b>Seasonal changes (Looking after the environment – Y6)</b>	season spring summer autumn winter rain snow sunshine warm cold weather temperature change	season spring summer autumn hibernate weather protect harvest winter weather frost sleet temperature compare changes grow chick warm sun protection temperature heatwave rainfall measuring record results graph					weather climate prevent global warming climate change recycle landfill rubbish biodegrade council net zero renewable non-renewable greenhouse gases emissions industrial revolution fossil fuel coal combustion fuel COP sustainability conference pledge subsidy species sensitive natural disaster habitat vulnerable
<b>Living things and their habitat</b>	animals living survive food alive nature winter spring summer autumn seasons change water		senses nutrition reproduce excrete respire habitat microhabitat fungi survive shelter antennae suitable condition colony insect producer consumer herbivore carnivore omnivore food chain life cycle nutrients rot caterpillar automated frozen food forklift truck refrigerated lorry canned  habitat microhabitat organism environment mate rainforest moisture extinct climate endangered biodiversity deforestation poaching pollution rainforest plankton ocean ecosystem coral reef trench Antarctic Arctic caribou		habitat microhabitat conditions adapted camouflage coastal grassland environment climate exposure classify characteristics vertebrate invertebrate species sub-groups identify criteria classification keys organism adapted region features colouring blubber ecosystem oxygenised flowering plant non-flowering plant pond dipping  ecosystem Northern Hemisphere Southern Hemisphere migrate monsoon rainforest deforestation drought biodiversity recycling fossil fuels pollution greenhouse gases emissions climate change chemicals	reproduction asexual fertilisation tuber genes pouch mammary glands placental mammal monotreme mammal marsupial metamorphosis caterpillar amphibian larva pupa egg fledgling egg tooth hatch embryo documentary naturalist primatologist endangered natural sciences living organism reproduction life cycle vertebrate warm-blooded	classify microorganism fern living organism conifer kingdom mrs gren cell multicellular unicellular Carl Linnaeus classification Latin species domain microorganism bacteria fungi virus protozoa plant microscopic fungi mycelium ecosystem classify microorganism living organism habitat reproduction

			narwhal tundra earthworm desert lizard cactus pond		sewage contaminate pesticides water treatment plant conserve drought freshwater pure water butt endangered marine sanctuaries protect conservation areas recycling		
<b>Rocks</b>				igneous rocks intrusive igneous rock extrusive igneous rock crystals magma sedimentary rock metamorphic rock limestone marble sandstone weathering chemical weathering physical weathering biological weathering acid rain appearance texture submerged erosion receding fossil extinct sediment embedded amber decompose fragments clay soil chalky soil sandy soil			
<b>Light</b>				light source natural artificial reflect vitamin D ultraviolet rays sunburn exposure protection fluorescent high visibility reflective surface materials shadow opaque sundial rays blocks position cast opposite direction length size shape closer further puppet			light eye light source symbol scientific diagram reflected prediction fair test variable table periscope angle mirror line of sight utilise shadow block opaque transparent translucent plan sun shade real life problem rotate direction optical phenomena disperse spectrum refraction
<b>Forces and magnets</b>				force contact force non-contact forces air resistance friction motion surface resistance texture tilt magnet attract repel bar magnet horseshoe magnet magnetism magnetic magnetic field iron steel non-contact forces magnetism attract non- magnetic materials recycle compass magnetic needle magnetic north direction orientteering		Sir Isaac Newton gravity astronomy weight mass water resistance streamlined upthrust buoyant sink friction resistance lubricant Newton meter Newton lever load pivot fulcrum pulley mechanism gear mesh rack and pinion bevel gear	
<b>States of matter</b>					matter solid liquid gas volume particle bond arranged cooled heated particle melting melting point temperature thermometer freezing reverse boiling sublimation deposition evaporation condensation absorb water vapour process water cycle precipitation surface runoff transpiration groundwater		
<b>Sound</b>					vibration medium waves eardrum signals source energy particles echo vacuum materials reflect absorb insulate defenders volume decibels decibel metre amplitude power pitch high pitch low pitch instruments		

					orchestra energy particles travel sound source fade		
<b>Electricity</b>					electricity batteries mains electricity appliance socket circuit series circuit component cell voltage current power battery wire bulb conductor insulator metal copper rubber switch current control complete circuit incomplete circuit non-renewable energy renewable energy wind turbines solar panels hydropower		symbol circuit circuit diagram battery wires electricity current voltage voltmeter brightness blown resistor variable resistor LED dimmer switch output variable fair test control test systematically synchronised traffic light signal sensor timer- based closed electric circuit indicating conductor insulator resistor
<b>Earth and space</b>	planets & names of them solar system moon earth rocket spaceship					terrestrial planet gas giant planets Solar System spherical orbit astronomy heliocentric geocentric dwarf planet orbit axis poles season hemisphere orbit sundial time zone gnomon dial shadow rocky planet gas planet moon orbit solar system	
<b>Evolution and inheritance</b>							offspring characteristic inherit variation environmental adaptation habitat climate nutrition feature nutrients epiphytes toxic predators pollinate fossil Mary Anning Palaeontologist ichthyosaurus Jurassic coast Charles Darwin evolved extinct natural selection theory ancestor tools primate Homo sapien Neandertha
<b>Scientific Enquiry</b>					solar renewable energy scientific investigation prediction plausible record results data table graph acid alkali PH method practical conclusion evidence explanation compare enquiry baking measurements fair test control experiment variable conclusive scientific knowledge equipment diagram collated nutrition carbohydrate protein vitamin mineral vertebrate invertebrate endoskeleton exoskeleton hydrostatic skeleton humerus ulna radius tibia fibular endoskeleton vertebrate skull rib cage spine muscle contract hamstrings biceps diaphragm		

