




Progression of skills –Science

	<p>Curriculum intent:</p> <p>At Shawclough Primary School, our children are <b>SCIENTISTS!</b> Our <b>intent</b> is to give every child a broad and balanced Science curriculum which enables them to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in. We want our children to love science. We want them to have no limits to what their ambitions are and grow up wanting to be astronauts, forensic scientists, toxicologists or microbiologists. We want our children to remember their science lessons in our school, to cherish these memories and embrace the scientific opportunities they are presented with! To achieve this, it involves exciting, practical hands on experiences that encourage curiosity and questioning. Our aim is that these stimulating and challenging experiences help every child secure and extend their scientific knowledge and vocabulary, as well as promoting a love and thirst for learning. At Shawclough, we have a coherently planned and sequenced curriculum which has been carefully designed and developed with the need of every child at the centre of what we do. We want to equip our children with not only the minimum statutory requirements of the science National Curriculum but to prepare them for the opportunities, responsibilities and experiences of later life.</p>
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		ELGs	Nursery	Reception	Vocabulary
Working scientifically					
		Explore the natural world around them, making observations and drawing pictures of animals and plants.	Use all their senses in hands on exploration of natural materials. Explore collections of materials with similar and or different properties. Talk about what they see, using a wide vocabulary.	Explore a variety of concepts and materials first hand. To talk about what they see, what is happening and discuss why, beginning to ask questions to further understanding. To access a high quality provision in order to develop skills in observation, pattern seeking, measuring and evaluating.	
Animals	Know some similarities and differences between the natural world around them and		Understand the key features of a life cycle of a plant and an animal Begin to understand the need to respect and care for the natural environment and all living things	Explore the natural world around them To describe animals and plants (both from photos and real life experiences). Explore the natural world around them, making observations and drawing pictures of animals and plants.	



Humans	contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	Continue developing positive attitudes about the differences between people.	Describe what they see, hear and feel whilst outside	
Living things and their habitat		Begin to understand the need to respect and care for the natural environment and all living things	Explore the natural world around them To describe their own environment and local area? To describe another environment e.g. desert, Artic etc.? To 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.	
Materials		Talk about the differences between materials and changes they notice	Talk about the differences in materials? To talk about the weather linked to seasonal change and talk about changes e.g. freezing, melting (linked to baking, paint mixing, mud play, etc.)? Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter	
Plants		Plant seeds and care for growing plants Understand the key features of a life cycle of a plant and an animal	Explore the natural world around them Describe animals and plants (both from photos and real life experiences). Making observations and drawing pictures of animals and plants.	
Earth, sun and moon, space and seasonal changes		First hand observation of seasonal changes.	Understand the effect of changing seasons on the natural world around them. Talk about the weather linked to seasonal change and talk about changes e.g. freezing, melting (linked to baking, paint mixing, mud play, etc.) Understand some important processes and changes in the natural world around them,	



			including the seasons and changing states of matter	
Forces		Explore and talk about different forces they can feel	Talk about forces they feel e.g. push, pull etc.	
Rocks		Explore collections of materials with similar or different properties		
Light		Explore how things work		
Sound		Explore how things work	Describe what they can see, hear and feel outside.	



National Curriculum	Year 1	Vocabulary
<b>Working scientifically</b>		
<ul style="list-style-type: none"> <li>• asking simple questions and recognising that they can be answered in different ways</li> <li>• observing closely, using simple equipment</li> <li>• performing simple tests</li> <li>• identifying and classifying</li> <li>• using their observations and ideas to suggest answers to questions</li> <li>• gathering and recording data to help in answering questions</li> </ul>	<p>Ask simple scientific questions            Use simple equipment to make observations            Carry out simple tests            Identify and classify things            Suggest what I have found out            Use simple data to answer questions</p>	<p>Questions, answers, equipment, gather, measure, record, results, sort, group, test, explore, observe, compare, describe, similar/ities, different/ces, beaker, pipette, syringe.</p>
<p style="text-align: center;"><b>Plants</b></p> <ul style="list-style-type: none"> <li>• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>• identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>		<p>Names of: wild plants, garden plants, flowering plants, trees, leaf, flower, blossom, petal, fruit, berry, root, bulb, seed, trunk, branch, stem bark, stalk, vegetable.</p>
<p style="text-align: center;"><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>• identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> </ul>	<p>Name a variety of animals including fish, amphibians, reptiles, birds and mammals.            Classification of animals based on their diet (carnivore, herbivore and omnivore).            Classification of animals into categories (including fish, amphibians, reptiles, birds and mammals.)            Describe common animals linking them to find common structures.</p>	<p>Body, head, neck, arms, elbows, legs, knees, face, ears, eyes, eyebrows, eyelashes, nose, hair, mouth, teeth, tongue, feet, toes, fingers, nails, ankles, calf, thigh, hips, waist, trunk, chest, shoulders, back, hands,</p>



<ul style="list-style-type: none"> <li>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> <li>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>	<p>Name, draw and label the basic parts of the body.</p> <p>Link the senses to the appropriate body part.</p> <p>Use their senses to compare different textures, sounds, tastes, smells, sight.</p>	<p>wrist, tail, wing, claw, fin, scales, feathers, fur, beak, senses, hearing, seeing, touching.</p>
<p style="text-align: center;"><b>Everyday materials</b></p> <ul style="list-style-type: none"> <li>distinguish between an object and the material from which it is made</li> <li>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>describe the simple physical properties of a variety of everyday materials</li> <li>compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul>	<p>Distinguish between an object and the material it is made from.</p> <p>Identify and name everyday materials, including wood, plastic, glass, metal, water and rock.</p> <p>Describe the simple properties of a variety of everyday materials.</p> <p>Compare and group a variety of everyday objects based on the materials they are made from.</p>	<p>Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, waterproof, absorbent, tear, rough, smooth, shiny, dull, see through, not see through.</p>
<p style="text-align: center;"><b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>observe changes across the 4 seasons</li> <li>observe and describe weather associated with the seasons and how day length varies</li> </ul>	<p>Observe and comment on changes in the seasons.</p> <p>Name the seasons and suggest the type of weather in each season.</p> <p>Comment on how day length varies within each season.</p>	<p>Season, Spring, Summer, Autumn, Winter, weather, hot, warm, cool, cold, sunny, cloudy, windy, rainy, snowing, hailing, sleet, frost, fog, mist, icy, rainbow, thunder, lightning, storm, light, dark, day, night.</p>



National Curriculum	Year 2	Vocabulary
<b>Working scientifically</b>		
<ul style="list-style-type: none"> <li>• asking simple questions and recognising that they can be answered in different ways</li> <li>• observing closely, using simple equipment</li> <li>• performing simple tests</li> <li>• identifying and classifying</li> <li>• using their observations and ideas to suggest answers to questions</li> <li>• gathering and recording data to help in answering questions</li> </ul>	<p>Ask simple scientific questions            Use simple equipment to make close observations            Carry out simple tests            Identify and classify things            Using my tests and observations to suggest what I have found out            Gather, record and use data to answer questions.</p>	<p>Previous vocab plus observe changes over time, notice patterns, secondary sources, hand lenses, egg timers, identify, classify, data.</p>
<p style="text-align: center;"><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>• 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</li> <li>• identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>• 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</li> </ul>		<p>Living, dead, never been alive, names of local habitats, land, woodland, meadow, name micro habitats, under log, stony path, under bushes, suited, basic needs, depend, food, food chain, shelter.</p>
<p style="text-align: center;"><b>Plants</b></p> <ul style="list-style-type: none"> <li>• observe and describe how seeds and bulbs grow into mature plants</li> </ul>		<p>Seeds, bulbs, water, light, growth, healthy, shoot, seedling.</p>



<ul style="list-style-type: none"> <li>• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>		
<p style="text-align: center;"><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• notice that animals, including humans, have offspring which grow into adults</li> <li>• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>		<p>Offspring, life cycles, grow, change, adults, basic needs, water, food, air survival, exercise, food types (fruit and veg, bread, rice, pasta milk, dairy, foods high in fat and sugar, meat, fish, eggs, beans), hygiene.</p>
<p style="text-align: center;"><b>Uses of everyday materials</b></p> <ul style="list-style-type: none"> <li>• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>• find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>		<p>Suitable/unsuitable, use, object, material, property, wood, plastic, glass, metal, water, rock, fabrics, hard, soft, stretchy, flexible, waterproof, absorbent, transparent, translucent, opaque, shape, change, twist, squash, bend, stretch, roll, squeeze.</p>



National Curriculum	Year 3	Vocabulary
<b>Working Scientifically</b>		
<p>Y3/4</p> <ul style="list-style-type: none"> <li>• asking relevant questions and using different types of scientific enquiries to answer them</li> <li>• setting up simple practical enquiries, comparative and fair tests</li> <li>• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>• identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>• using straightforward scientific evidence to answer questions or to support their findings</li> </ul>	<p>Ask relevant scientific questions            Use observations and knowledge to answer scientific questions            Set up a simple enquiry to explore a scientific question            Set up a test to compare two things            Set up a fair test and explain why it is fair            Make careful and accurate observations, including the use of standard units            Use equipment, including thermometers and data loggers to make measurements            Gather, record, classify and present data in different ways to answer scientific questions            Use diagrams, keys, bar charts and tables; using scientific language            Use findings to report in different ways, including oral and written explanations, presentation            Draw conclusions and suggest improvements            Make a prediction with a reason            Identify differences, similarities and changes related to an enquiry.</p>	<p>Previous vocab plus scientific enquiry changes over time, notice patterns, secondary sources, comparative tests, fair tests, careful, accurate, observations, equipment, gather, measure, record, data, evidence, results, keys, bar charts, table, results, conclusions, predictions, support, thermometers.</p>
<p style="text-align: center;"><b>PLANTS</b></p> <p>identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <ul style="list-style-type: none"> <li>• 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</li> </ul>		<p>Leaf, flower, blossom, petal, fruit, root, bulb, seed trunk, branch, stem, water, light, air, nutrients, soil, fertiliser, grow, healthy, transported, life cycle, pollination, seed formation, seed dispersal.</p>





<ul style="list-style-type: none"> <li>investigate the way in which water is transported within plants</li> <li>explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul>		
<p><b>ANIMALS, including humans</b></p> <ul style="list-style-type: none"> <li>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</li> <li>identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>		<p>Nutrition, food types, carbohydrates, protein, vitamins and minerals, fat, sugar, fruits and veg, dietary fibre, water, balanced diet, skeleton, muscles, support, protection, movement, names of bones, vertebrate, invertebrate.</p>
<p style="text-align: center;"><b>ROCKS</b></p> <p>compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <ul style="list-style-type: none"> <li>describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>recognise that soils are made from rocks and organic matter</li> </ul>		<p>Rock, stone, pebble, boulder, soil, fossils, grains, crystals, texture, absorb water, let water through, marble, chalk, granite, sandstone, slate, sandy soil, clay soil, chalky soil, peat.</p>
<p style="text-align: center;"><b>LIGHT</b></p> <ul style="list-style-type: none"> <li>recognise that they need light in order to see things and that dark is the absence of light</li> <li>notice that light is reflected from surfaces</li> <li>recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>find patterns in the way that the size of shadows change</li> </ul>		<p>Light, light source, darkness, reflect, reflective, mirror, shadow, block, direction, transparent, opaque, translucent.</p>



### **FORCES and MAGNETS**

- compare how things move on different surfaces
- notice that some forces need contact between 2 objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- 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
- describe magnets as having 2 poles
- predict whether 2 magnets will attract or repel each other, depending on which poles are facing

Force, contact force, non contact force, magnetic force, magnet, strength, bar/ring/button/horseshoe magnets, attract, repel, magnetic material, metal, iron, steel, non magnetic, poles, north/south pole.



	National Curriculum	Year 4	Vocabulary
<b>Working Scientifically</b>			
	<p>Y3/4</p> <ul style="list-style-type: none"> <li>• asking relevant questions and using different types of scientific enquiries to answer them</li> <li>• setting up simple practical enquiries, comparative and fair tests</li> <li>• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>• identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>• using straightforward scientific evidence to answer questions or to support their findings</li> </ul>	<p>Use diagrams, keys, bar charts and tables; using scientific language            Gather, record, classify and present data in different ways to answer scientific questions            Use equipment, including thermometers and data loggers to make measurements            Make careful and accurate observations, including the use of standard units            Set up a fair test and explain why it is fair.            Set up a test to compare two things            Set up a simple enquiry to explore a scientific question            Use observations and knowledge to answer scientific questions            Ask relevant scientific questions            Use diagrams, keys, bar charts and tables; using scientific language            Use findings to report in different ways, including oral and written explanations, presentation            Draw conclusions and suggest improvements            Make a prediction with a reason            Identify differences, similarities and changes related to an enquiry</p>	<p>Previous vocab plus enquiry types            Increase, decrease, identify, classify, order, notice patterns, relationships, appearance, present results, data loggers.</p>



<p><b>Living things and their habitats</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• recognise that living things can be grouped in a variety of ways</li> <li>• explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</li> <li>• recognise that environments can change and that this can sometimes pose dangers to living things.</li> </ul>		<p>Classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrates, names of them, human impact, positive, negative (impact).</p>
<p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• describe the simple functions of the basic parts of the digestive system in humans</li> <li>• identify the different types of teeth in humans and their simple functions</li> <li>• construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>		<p>Digestive system, nutrition, mouth, teeth, canine, incisor, molar, pre-molar, saliva, tongue, tip, tear, chew, grind, cut, oesophagus (gullet), stomach, small intestine, large intestine, rectum, anus, carnivore, herbivore, omnivore, producer, consumer, predator, prey, food chain.</p>
<p><b>States of matter</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• compare and group materials together, according to whether they are solids, liquids or gases</li> <li>• 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)</li> </ul>		<p>States of matter, solid, liquid, gas, air, oxygen, powder, granular/grain, crystals, change state, ice/water/steam, water vapour, heating, cooling, temperature, degrees celsius, melt, freeze, solidify, melting point, boil, boiling point, evaporation, condensation,</p>



<ul style="list-style-type: none"> <li>• identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>		<p>water cycle, precipitation, transpiration.</p>
<p><b>Sound</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify how sounds are made, associating some of them with something vibrating</li> <li>• recognise that vibrations from sounds travel through a medium to the ear</li> <li>• find patterns between the pitch of a sound and features of the object that produced it</li> <li>• find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>• recognise that sounds get fainter as the distance from the sound source increases</li> </ul>		<p>Sound, sound source, noise, vibration, travel, solid, liquid, gas, pitch, tune, high, low, volume, loud, quiet, fainter, muffle, strength of vibrations, insulation, instrument, percussion, strings, bass, woodwind, tuned instrument.</p>
<p><b>Electricity</b></p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• identify common appliances that run on electricity</li> <li>• construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>• 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</li> <li>• recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>• recognise some common conductors and insulators, and associate metals with being good conductors</li> </ul>		<p>Electricity, appliance, device, mains, plus, electrical circuit, complete circuit, circuit diagram, circuit symbol, components cell, battery, positive/negative, connect, connection, short circuit, wire, crocodile clip, bulb, bright/dim, switch, buzzer, motor, faster/slower, conductor, insulator, metal/non metal.</p>



	National Curriculum	Year 5	Vocabulary
<b>Working Scientifically</b>			
Y5/6	<ul style="list-style-type: none"> <li>• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>• taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>• recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>• using test results to make predictions to set up further comparative and fair tests</li> <li>• reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>• identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	<p>Read, spell and pronounce scientific vocabulary accurately</p> <p>Relate the outcome from an enquiry to scientific knowledge, in order to state whether evidence supports or refutes an argument or theory</p> <p>Explain a conclusion from an enquiry Explain causal relationships in an enquiry Report findings from enquiries in a range of ways</p> <p>Use the outcome of test results to make predictions and set up a further comparative fair test make</p> <p>Record date and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Measure accurately and precisely, using a range of equipment</p> <p>Control variables in an enquiry</p> <p>Plan different types of scientific enquiry.</p>	<p>Previous vocab plus, notice patterns, relationships independent variable, dependent variable, controlled variable, accuracy, precision, degree of trust, classification keys, scatter graphs, line graphs, causal relationships, support/refute, data loggers.</p>
Living things and their habitats Pupils should be taught to:	<ul style="list-style-type: none"> <li>• describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>• describe the life process of reproduction in some plants and animals</li> </ul>		<p>Life cycle, reproduction, sexual, asexual, germination, pollination, seed formation, seed dispersal, pollen, stamen, stigma, plantlets, runners, mammal, amphibian, insect, bird, fish, reptile, eggs, live young.</p>



<p>Animals, including humans</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>describe the changes as humans develop to old age</li> </ul>		
<p>Properties and changes of materials</p> <ul style="list-style-type: none"> <li>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</li> <li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>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</li> </ul>		<p>Y4 plus rigid, hard, soft, stretchy, flexible, waterproof, absorbent, electrical/thermal conductivity, melting, dissolve, solution, insoluble, solute, solvent, particle, mixture, filtering, sieving, residue, reversible/non reversible changes, new material, burning, rusting.</p>
<p>Earth and space</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>describe the movement of the Earth and other planets relative to the sun in the solar system</li> <li>describe the movement of the moon relative to the Earth</li> </ul>		<p>Earth, planets, sun, solar system, moon, celestial body, spherical, rotation, spin, night and day, names of planets, dwarf planet, orbit, geocentric model, heliocentric model, shadow clocks, sundials, astronomical clocks.</p>



<ul style="list-style-type: none"><li>• describe the sun, Earth and moon as approximately spherical bodies</li><li>• use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li></ul>		
<p>Forces</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"><li>• explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li><li>• identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li><li>• recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</li></ul>		<p>Fall, Earth, gravity, weight, mass, air resistance, water resistance, friction, moving surfaces, mechanisms, levers, pulleys, gears, force, transfers.</p>





National Curriculum	Year 6	Vocabulary
<b>Working Scientifically</b>		
<p>Y5/6</p> <ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	<p>Plan different types of scientific enquiry            Control variables in an enquiry            Measure accurately and precisely, using a range of equipment            Record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.            Use the outcome of text to make predictions and set up a further comparative fair test            Report findings from enquiries in a range of ways            Explain a conclusion from an enquiry.            Explain casual relationships in an enquiry.            Relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.            Read, spell and pronounce scientific vocabulary accurately.</p>	<p>Previous vocab plus opinion/fact, confidently name scientific enquiry types.</p>
<p>Animals including humans            Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> <li>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> </ul>		<p>Circulatory system, heart, blood, blood vessels, pumps, oxygen, carbon dioxide, lungs, nutrients, water, diet, exercise, drugs, lifestyle, evolution, suited/suitable, adapted, adaptation, offspring, reproduction,</p>



<ul style="list-style-type: none"> <li>describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>		variation, inherit, inheritance, fossils.
<p>Evolution and inheritance</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>		Adaption, evolution, characteristics, genetics, survival.
<p>Light</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>recognise that light appears to travel in straight lines</li> <li>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</li> <li>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</li> <li>use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</li> </ul>		Light, light source, darkness, reflect, reflective, shadow, block, absorb, direction, transparent, opaque, translucent.
<p>Electricity</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>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</li> </ul>		Electricity, appliance, device, electrical circuit, complete circuit, circuit diagram, circuit symbol, components, cell, battery, positive, negative, terminal, connection, short circuit, wire, crocodile clip, bulb, bright/dim, switch, buzzer, volume, motor,



<ul style="list-style-type: none"><li>• use recognised symbols when representing a simple circuit in a diagram</li></ul>		conductor, insulator, voltage, current, resistance.
<p>Living things and their habitats.</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"><li>• 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.</li><li>• give reasons for classifying plants and animals based on specific characteristics.</li></ul>		Organism, micro-organism, fungus, mushrooms, classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrates, name some of these, arachnid, mollusc, insect, crustacean.