

Big Idea	Concept / Aspect	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	Asking Questions	<p><b>Science is taught through 'understanding the world' (UTW) activities during Continuous Provision and in Cornerstones input.</b></p> <p><b>Habitats / Environments</b> Exploring environments: city/pond/wood/forest/grass/beach/back garden</p> <p><b>Local environments</b> Town/countryside/village/town/rural/urban</p> <p><b>Levers and pulleys (Forces)</b> Push/pull Forces explored Mechanisms Nuts &amp; bolts &amp; flaps Floating/sinking</p> <p><b>Materials</b></p>	<p>Asking simple questions and recognising that they can be answered in different ways</p> <p>Observing closely, using simple equipment and measurement</p> <p>Performing simple tests</p> <p>Identifying and classifying</p> <p>Using their observations and ideas to suggest answers to questions</p> <p>Gathering, recording and communicating data and findings to help in answering questions</p> <p>Use scientific language and read and spell age-appropriate scientific vocabulary</p> <p>Begin to notice patterns and relationships</p>	<p>Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Using test results to make predictions to set up further comparative and fair tests</p> <p>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</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	
			<p><b>Vocabulary</b></p> <p>Questions, answers,</p>	<p><b>Vocabulary</b></p> <p>Previous vocab plus observe</p>	<p><b>Vocabulary</b></p> <p>Previous vocab plus scientific</p>	<p><b>Vocabulary</b></p> <p>Previous vocab plus enquiry types</p>	<p><b>Vocabulary</b></p> <p>Previous vocab plus, notice</p>	<p><b>Vocabulary</b></p> <p>Previous vocab plus opinion/fact,</p>

		Exploring materials	equipment, gather, measure, record, results, sort, group, test, explore, observe, compare, describe, similar/ities, different/ces, beaker, pipette, syringe	changes over time, notice patterns, secondary sources, magnifying glass, egg timers, identify, classify, data	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	increase, decrease, identify, classify, order, notice patterns, relationships, appearance, present results, data loggers	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	confidently name scientific enquiry types
		<b>Fossils</b> Dinosaur bones						
		<b>Balanced diet</b> Healthy snacks National Healthy Eating Week Exercise						
		<b>Recycling</b> Environment changes Ocean life						
		<b>Materials</b> Exploring materials						
		<b>Seasonal Changes</b> Winter/Summer/Spring/Autumn Rain, snow, wind, storm, sunshine, rainbow, cloudy	use a range of given question stems, such as: what; what if; why; when; who; and how; to ask questions about the objects, living things and processes they are exploring  construct a question based on a scenario or story the teacher has presented.	ask scientific enquiry questions with support  following a scientific enquiry, ask questions stimulated by what they have just found out.			describe the method they would use to gather data to answer a scientific enquiry question.	
	<b>Planning enquiries</b>			identify the data required to answer the scientific enquiry question  select appropriate practical equipment to gather the data  identify how to gather the data required to answer the scientific enquiry question  suggest the type of scientific enquiry they are using.			describe the method they would use to gather data to answer a scientific enquiry question.	
	<b>Making predictions</b>			use the data they have already gathered to suggest values for the next reading			use the data they have already gathered to suggest further values	

					use the scientific understanding gained from scientific enquiry to make predictions they can investigate using further comparative and fair tests.
	<b>Gathering data</b>		<p>talk about their observations of objects, materials and living things</p> <p>talk about their observations when comparing objects, materials and living things</p> <p>talk about their observations when describing changes</p> <p>when using a magnifying glass, adjust the position of the magnifying glass in order to see the enlarged image clearly</p> <p>when using a digital microscope, relate features on the enlarged view to the object</p> <p>make direct comparisons of length and height</p> <p>use bricks, lolly sticks etc. or paper strips to take non-standard measurements of length</p> <p>use simple measuring equipment, such as teaspoons, pipettes, rulers, metre sticks etc.</p>	<p>make systematic and careful observations</p> <p>measure time in standard units using stopwatches or timers</p> <p>measure length in standard units using rulers, meter sticks, tape measures or trundle wheels</p> <p>measure temperature in standard units using thermometers</p> <p>measure capacity in standard units using syringes, beakers or measuring cylinders</p> <p>use sensors to take measurements (e.g. light, sound, temperature).</p>	<p>make relevant systematic and detailed observations</p> <p>use a range of equipment to take measurements (e.g. distance, time, temperature, capacity, force) using standard units</p> <p>select measuring equipment to give appropriately precise results</p> <p>identify when a sensor can be used to gather evidence</p> <p>take repeat readings as appropriate</p>
	<b>Recoding data</b>		<p>use a camera to take photographs or videos to record their observations</p> <p>record their observations using drawings</p> <p>record their observations using labelled drawings</p>	<p>record data in a simple table they construct themselves</p> <p>record data onto a complex table provided for them</p> <p>record their measurements directly onto a bar chart with the axes and scales</p>	<p>choose an appropriate method to record the data they will gather using experience of recording methods learnt in Key Stage 1 and Lower Key Stage 2 (e.g. photographs, videos, drawings, labelled diagrams, writing, tables, keys)</p> <p>construct, and record data in, a complex</p>

			<p>record their observations or comparisons in writing</p> <p>physically group objects, materials and living things or their images by a criterion</p> <p>physically group objects or materials according to the data they gather (classifying)</p> <p>use data they gather to physically rank objects or materials (comparative testing)</p> <p>add their data to a prepared table or simple Venn diagram</p> <p>add pictures to a pictogram</p> <p>add tally marks to a tally chart and count up the total number</p> <p>make a physical block graph or bar chart by using bricks, lolly sticks etc. or paper strips with which they measured lengths or heights.</p>	<p>provided</p> <p>record observations and information using a drawing, a labelled diagram and, in Year 4 only, a key.</p>	<p>table</p> <p>construct, and record data in, a bar chart</p> <p>construct, and record data in, a line graph</p> <p>add data on to a scatter graph with the axes and scales provided.</p>
	<b>Presenting data</b>			<p>present, with support, the recorded data in a different way in order to help answer the question</p>	<p>present the recorded data in a different way in order to help answer the question.</p>
	<b>Drawing conclusions</b>		<p>use their observations and simple secondary sources (e.g. identification sheets) to name living things they find in the local area</p> <p>recognise 'biggest and smallest', 'best and worst' etc. from their data</p> <p>give an answer to their scientific enquiry question that is consistent with the data they have gathered either through observations, measurements or from research</p>	<p>communicate their findings from practical activities</p> <p>answer the scientific enquiry question using the data gathered.</p>	<p>answer the scientific enquiry question using the data gathered</p> <p>discuss whether other evidence (e.g. from other groups or their scientific understanding) supports or refutes their answer</p> <p>talk about how their scientific ideas change due to new data that they have gathered</p> <p>talk about how scientific discoveries</p>

			recognise that they can answer scientific enquiry questions in different ways.			have changed scientific understanding in the past and continue to do so today		
	<b>Evaluating an enquiry</b>				<p>identify ways in which they adapted their method as they progressed or how they could change it to improve the data gathered</p> <p>compare two methods for a test.</p>	<p>evaluate the precision of their measurements</p> <p>evaluate whether the results are trustworthy enough to answer the scientific enquiry question.</p>		
<b>Biology</b>	<b>Animals including Humans</b>	<p><b>Life cycles</b> Frogs Butterfly/chrysalis /caterpillar Eggs to chicks</p> <p><b>Seaside Animals</b> Classification of sea animals</p> <p><b>Sun safety</b> Sun cream Sun exposure</p> <p><b>Keeping healthy</b> Exercise Fruit and vegetables</p> <p><b>Animals</b> Classification of types of animals</p> <p><b>Classification of animals</b> Carnivores Herbivores</p> <p><b>Plants</b> Plant life cycles Classification of different plants</p>	<p>Identify, name, draw and label the basic parts of the human body</p> <p>Say which part of the body is associated with each sense.</p> <p>Humans, grow and change as they become older</p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the</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><b>Vocabulary</b> Head, neck, body, eyes, ears, mouth, foot, thumb, nose, knee, toe, elbow shoulder, hand, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws,</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><b>Vocabulary</b> Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move,</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</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p><b>Vocabulary</b> Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars,</p>	<p>Describe the changes as humans develop to old age.</p> <p><b>Vocabulary</b> Growth, development, puberty, ageing, womb, gestation, embryo, foetus, baby, toddler, teenager, adult, elderly</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> <p><b>Vocabulary</b> Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory</p>

		<p><b>Classification of insects</b> Vertebrates and invertebrates</p> <p><b>Human bodies</b> Growth Circulation Skeleton</p>	<p>structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p><b>Vocabulary</b> Animals Model and encourage children to use vocabulary such as: names of animals, live, on land, in water, jungle, desert, North Pole, South Pole, sea, hot, cold, wet, dry, snow, ice</p> <p>Expose children to supplementary vocabulary such as: environment, polar regions, ocean, camouflage</p> <p>Humans Model and encourage children to use vocabulary such as: hair (black, brown, dark, light, blonde, ginger, grey, white, long, short, straight, curly), eyes (blue, brown,</p>	<p>hooves, senses, touch, see, smell, taste, hear, fingers (skin), tongue, amphibian, bird, fish, mammals, reptiles, carnivores, herbivores, omnivore</p>	<p>skull, ribs, spine, muscles, joints</p>	<p>herbivore, carnivore, omnivore, producer, predator, prey, food chain</p>		<p>system, diet, exercise, drugs and lifestyle</p>
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	<p><b>Living Things and their Habitats</b></p>	<p>Exploring environments: city, pond, wood, forest, grass, beach, back garden</p> <p>Town/ countryside/ village/ town/ rural/ urban</p> <p>Environment changes</p> <p>Ocean life</p> <p><b>Vocabulary</b></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</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</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><b>Vocabulary</b> Life cycle, reproduce, sexual, sperm, fertilises, egg, live young,</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</p>

		<p>Model and encourage children to use vocabulary such as:</p> <p>plant, tree, bush, flower, vegetable, herb, weed, animal, names of plants and animals they see, name of a contrasting environment e.g. beach, forest</p> <p>Expose children to supplementary vocabulary such as:</p> <p>environment</p>		<p>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 micro-habitats</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><b>Vocabulary</b> Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, names of local habitats e.g. pond, woodland etc., names of micro-habitats e.g. under logs, in bushes etc.</p>		<p>sometimes pose dangers to living things.</p> <p><b>Vocabulary</b> Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate</p>	<p>metamorphosis, asexual, plantlets, runners, bulbs, cuttings</p>	<p>on specific characteristics.</p> <p><b>Vocabulary</b> Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering</p>
	<p><b>Plants</b></p>	<p>Plant life cycles</p> <p>Classification of different plants</p> <p><b>Vocabulary</b></p>	<p>Identify and name a variety of common wild and garden plants, including</p>	<p>Observe and describe how seeds and bulbs grow into mature plants</p>	<p>Identify and describe the functions of different parts of flowering plants:</p>			

		<p>Model and encourage children to use vocabulary such as:  plant, leaf, stem, trunk, branch, root, bark, flower, petal, seed, berry, fruit, vegetable, bulb, plant, hole, dig, water, weed, grow, shoot, die, dead, soil</p> <p>Expose children to supplementary vocabulary such as:  seedling, healthy, unhealthy, strong, sturdy, wilting, decay, mould, life cycle</p>	<p>deciduous and evergreen trees</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p><b>Vocabulary</b>  Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, deciduous, evergreen</p>	<p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><b>Vocabulary</b>  As for year 1 plus - light, shade, sun, warm, cool, water, grow, healthy, germinate</p>	<p>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> <p><b>Vocabulary</b>  Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal – wind dispersal, animal dispersal, water dispersal, air, light, water, nutrients, soil, reproduction, transportation, flower, energy</p>			
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	<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> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p><b>Vocabulary</b> Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils</p>
<b>Chemistry</b>	<b>Materials</b>	Exploring materials <b>Vocabulary</b>	Distinguish between an object and the material	Identify and compare the suitability of a		Compare and group materials together,	Compare and group together everyday materials	

		<p>Model and encourage children to use vocabulary such as: ice, water, frozen, icicle, snow, melt, wet, cold, slippery, smooth, big, bigger, biggest, smaller, smaller, smallest, hard, soft, bendy, rigid, wood, plastic, paper, card, metal, strong, weak, hot, apply heat, waterproof, soggy, not waterproof, best, change, change back</p> <p>Expose children to supplementary vocabulary such as: solid, liquid, gas, most suited</p>	<p>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><b>Vocabulary</b> Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see</p>	<p>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><b>Vocabulary</b> Names of materials – increased range from year 1 Properties of materials - as for year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/puling, twist/twisting, squash/squashing. Bend/bending, stretch/stretching</p>		<p>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> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p><b>Vocabulary</b> Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle,</p>	<p>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</p>	
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			through, not see through				<p>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> <p><b>Vocabulary</b>          Thermal / electrical insulator / conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve          reversible/non-reversible change, burning, rusting, new material</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</p>			

					<p>are formed when things that have lived are trapped within rock</p> <p>Recognise that soils are made from rocks and organic matter.</p> <p><b>Vocabulary</b>  Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil</p>				
<b>Physics</b>	<b>Seasonal Changes</b>	<p>Winter/Summer/Spring/Autumn</p> <p>Rain, snow, wind, storm, sunshine, rainbow, cloudy</p> <p><b>Vocabulary</b>  Model and encourage children to use vocabulary such as:  spring, summer, autumn, winter, seasons, sunny, cloudy, hot, warm, cold, shower, raining, storm,</p>	<p>Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p> <p><b>Vocabulary</b>  Weather (sunny, rainy, windy, snowy etc.), seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset,</p>						

		<p>thunder, lightning, hail, sleet, snow, icy, frost, puddles, windy, rainbow, animals, young, plants, flowers</p> <p>Expose children to supplementary vocabulary such as: hibernate, migrate, snowflake</p>	<p>day length, monsoon, thunder storm</p>					
	<p><b>Light</b></p>				<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 a solid object</p> <p>Find patterns in the way that the</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</p>

					<p>size of shadows change.</p> <p><b>Vocabulary</b>  Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous</p>			<p>shadows have the same shape as the objects that cast them.</p> <p><b>Vocabulary</b>  As for year 3 plus straight lines, light rays</p>
	<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</p>		

						as the distance from the sound source increases.		
						<p><b>Vocabulary</b> Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation</p>		
	<b>Forces</b>	<p>Push/pull</p> <p>Forces explored</p> <p>Mechanisms</p> <p>Floating and sinking</p> <p><b>Vocabulary</b> Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole</p>			<p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two 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>Explain that unsupported objects fall towards the 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> <p><b>Vocabulary</b> Force, gravity, Earth, air resistance, water resistance, friction, mechanisms,</p>	

					<p>Describe magnets as having two poles</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> <p><b>Vocabulary</b>  Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole</p>		<p>simple machines, levers, pulleys, gears</p>	
	<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> <p><b>Vocabulary</b>  Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune)  spherical, solar system, rotates, star, orbit, planets</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</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is</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>part of a complete loop with a battery</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 conductors.</p> <p><b>Vocabulary</b> Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol</p>		<p>Use recognised symbols when representing a simple circuit in a diagram.</p> <p><b>Vocabulary</b> Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage - NB Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words cells and batteries are now used interchangeably</p>
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