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Ask Questions						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Children will ask questions about the environment including seasons.	**Ask questions:** ✓ Ask simple questions stimulated by their exploration of their world.	**Ask questions:** ✓ Ask simple questions about their experiences and observations and with support use these observations to suggest ways to discover an answer or solve a problem, recognising that some can be answered in a variety of ways.	**Ask questions:** ✓ Within a group, suggest relevant questions that can be explored further using different types of scientific enquiry	**Ask questions:** ✓ Ask relevant questions that can be answered by the appropriate scientific enquiry, research or experiment ✓	**Ask questions:** ✓ Refine a scientific question so that it can be investigated, choosing an appropriate type of scientific enquiry to provide the best evidence.	**Ask questions:** ✓ Recognise scientific questions which do not yet have definitive answers and use a range of scientific enquiries to explore possible answers.
Vocabulary Question, environment	**Vocabulary: (As previous +)** Question, stimulated	**Vocabulary: (As previous +)** simple questions, discover, experiences	**Vocabulary: (As previous +)** Scientific enquiry, explore	**Vocabulary: (As previous +)** Research or experiment	**Vocabulary: (As previous +)** Investigate, refine **Adult Vocabulary:** Best evidence	**Vocabulary: (As previous +)** scientific enquiry types

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Making Predictions:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They will be able to suggest what might happen with possible observations or possible actions.	Respond to suggestions to connect what has been observed with possible further actions or observations.	Use their observations and ideas to make predictions. Use understanding of what has been observed or own experience to predict outcomes of further actions or observations.	Use straightforward scientific evidence to make predictions. With support, use results, observations or own experience to prompt new questions and predictions for a further test.	Use straightforward scientific evidence to make further predictions. Use results to make predictions for new values and raise further questions.	Recognise when scientific evidence supports an idea or not and use this to support predictions. Use test results to prompt new questions and make predictions for setting up further tests.	Identify scientific evidence that has been used to support or refute ideas or arguments and use this to support predictions. Use test results to make predictions for setting up further comparative and fair tests.
Vocabulary Question, answer, observe, observing, what might happen	**Vocabulary: (As previous +)** Question, answer, observe, observing,		**Vocabulary: (As previous +)** predictions, predict, question, careful observations, experience, scientific evidence **Adult Vocabulary:** Identify, Notice relationships, evidence, further test		**Vocabulary: (As previous +)** repeat readings, further tests, comparative and fair tests	

Decide how to carry out an enquiry:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They will develop an understanding of	Perform simple tests to explore a question or idea	✓ Identify things to measure or observe that are relevant to the questions or	✓ Plan and carry out simple practical enquires,	✓ Plan and carry out simple practical enquires, comparative and	✓ Plan enquiries, deciding when it is appropriate to carry out a fair test or another	✓ Recognise significant variables in investigations, selecting

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growth, decay and changes over time and show care and concern for living things and the environment. They will use their senses when walking around and investigating.	suggested to them, with support observed with possible further actions or observations.	ideas they are investigating using a simple test. ✓ Suggest a practical way of how to find things out, or collect data to answer a question or idea they are investigating.	comparative and fair tests relevant to the questions or ideas they are investigating, with support.	fair tests relevant to the questions or ideas they are investigating. ✓ Identify one or more control variables from those provided when conducting a fair test.	type of practical enquiry from a range suggested. ✓ Identify one or more control variables in investigations when conducting a fair test.	the most suitable to investigate. Controlling variables where appropriate. ✓ Recognise which type of practical enquiry is most appropriate to the question or idea being investigated, before planning and carrying out the enquiry.
Vocabulary: investigate, smell, touch, see, hear and taste, **Adult Vocabulary:** chan	**Vocabulary: (As previous +)** simple test, fair test	**Vocabulary: (As previous +)** measure, carful observation, investigate, find things out, collect data, answer	**Vocabulary: (As previous +)** fair test, comparative,	**Vocabulary: (As previous +)** variables		**Vocabulary: (As previous +)** controlling variable, dependant variable, research

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ges, over time					

Take Measurements:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They can talk about similarities and differences between living things and materials and make simple observations about animals.	✓ Observe objects, living things, events and the world around them closely, using their senses and simple equipment. ✓ Make measurements using nonstandard units of measure.	✓ Observe closely and use equipment provided for observation and measuring correctly. ✓ Make measurements using non-standard and standard units of measure.	✓ Use a range of equipment for measuring and observing, including thermometers and data loggers. ✓ Take simple, accurate measurements and/or careful observations using whole number standard units relevant to questions or ideas under investigation.	✓ Plan and carry out simple practical enquires, comparative and fair tests relevant to the questions or ideas they are investigating. ✓ Identify one or more control variables from those provided when conducting a fair test.	✓ Make systematic and careful observations of objects, living things and events. ✓ Choose from a range of provided, appropriate equipment for measuring and observing, including thermometers and data loggers. ✓ Take accurate measurements using more complex standard units and parts of units.	✓ Correctly choose and use appropriate equipment to support observation and data collection with increasing accuracy. ✓ Decide whether it is appropriate to repeat observations or measurements and explain how this impacts on data collection.

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Vocabulary: Observation, similarities, differences, equipment	**Vocabulary: (As previous +)** measurement using nonstandard and units of measure	**Vocabulary: (As previous +)** measuring accurately	**Vocabulary: (As previous +)** Observing, accurate measurements, **Adult Vocabulary:** data logger, thermometer	**Vocabulary: (As previous +)** complex standard units, parts of units, systematic, careful, data,

Record Data:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They will be able to suggest what they might wear.	✓ Present evidence they have collected in simple templates provided for them to help in answering questions. ✓ Draw or photograph evidence and label with support.	✓ Gather and record data in appropriate ways with increasing independence to help in answering questions.	✓ Gather and present evidence and data using simple scientific language and vocabulary as writing, drawings, labelled diagrams and displays and through computing, keys, bar charts or tables (using ranges and intervals chosen for them), to help	✓ Gather and present simple scientific data in a variety of ways as Year 3, including tables and bar charts where intervals and ranges are agreed through discussion, to help in answering questions. .	✓ Select appropriate ways of gathering and presenting scientific data through models, writing, drawings, displays, computing, tables or graphs (choosing appropriate ranges and intervals). ✓ Use correct scientific symbols where appropriate in recording.	✓ Decide on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classificati

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			in answering questions.			on keys, tables, scatter graphs, bar and line graphs.
Vocabulary: diagram, group, draw, record		**Vocabulary: (As previous +)** Chart, Table, Pictogram, Tally chart, block diagram / graph, Order, notice patterns, Link ideas, Stop watch, map, data, chart **Adult Vocabulary:** Gather, Evidence, Data, Venn diagram, Identify, Classify, Rank, Notice relationships	**Vocabulary: (As previous +)** drawings, labelled diagrams, keys, bar charts, tables, **Adult Vocabulary:** Systematic, Accurate, Disprove, Notice relationships, oral/written explanations		**Vocabulary: (As previous +)** scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph and line graph **Adult Vocabulary:** Systematic, Accurate, Disprove, Notice relationships, oral/written explanations	

Present Data:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They will develop questioning and curiosity through play and	✓ Present findings in simple templates provided for them or orally.	Report on and record findings as drawings, photographs, labelled diagrams, orally, as displays or	✓ Report on findings from enquiries, including oral and written explanations, displays or	✓ Report on findings from enquiries, including oral and written explanations, displays or	✓ Present findings in written form, displays and other presentations including orally, explaining results	✓ Report and present findings from enquiries, including

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understand the concept of forces and electricity through twisting, pushing, slotting and magnetic toys and seeing the effects of pushing different buttons to make sounds and movements.	✓ Draw or photograph evidence and label with support	in simple prepared tables or charts.	presentations of results and conclusions with support/as a group. ✓ Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables with support/as a group.	presentations of results and conclusions. ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	and conclusions drawn from results. ✓ Identify causal relationships in reporting outcomes where appropriate.	conclusions, causal relationships and explanations of results in oral and written form, such as displays and other presentations.
Vocabulary: describe, compare	**Vocabulary: (As previous +)** contrast, identify **Adult Vocabulary:** Evidence, Identify		**Vocabulary: (As previous +)** conclusions, written/oral explanations, evidence, results		**Vocabulary: (As previous +)** relationship,	**Vocabulary: (As previous +)** enquires

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Answering questions using data:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They will be able to suggest what they might wear.	Respond to suggestions to connect what has been observed with possible further actions or observations.	Use understanding of what has been observed or own experience/ideas to answer questions. .	Use straightforward scientific evidence and results of enquiries to answer questions.	Use results to answer questions.	Use results to answer questions.	Use results to answer questions
Vocabulary: describe, compare, explain	**Vocabulary: (As previous +)** contrast, identify, answer,	**Vocabulary: (As previous +)** compare, evidence				

Drawing Conclusions:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They can talk about similarities and differences between living things and materials	✓ Use their ideas to suggest answers to questions . ✓ Say what has changed when observin	Respond to suggestions to identify some evidence needed to answer a question. .	Say whether what happened was what they expected, acknowledging any unexpected outcomes.	Identify and use straightforward scientific evidence to support and explain their findings.	Recognise when scientific evidence is for or against an argument.	Provide straightforward explanations for differences in repeated measurements or observations.

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and make simple observations about animals.	g objects, living things or events					
Vocabulary: similarities, differences, describe	**Vocabulary: (As previous +)** observation, observing, compare, contrast and describe **Adult should also use**: Compare, contrast and describe		**Vocabulary: (As previous +)** evidence, improve, conclusions **Adult should also use**: Secondary resources		**Vocabulary: (As previous +)** casual relationship, support, refute ideas	

Evaluate their enquiry:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
.		.	Use results of enquiries to consider whether they meet predictions and explain why.	Use results to suggest improvements.	Recognise that the test may need improvements to improve reliability.	Compare their results with others and give reasons why they may be different.
			Vocabulary: compare, contrast, secondary resource, research, improvement			

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Plants:						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Make simple observations about plants and can explain why some things occur. Drawing pictures of plants.	✓ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees ✓ identify and describe the basic structure of a variety of common flowering plants, including trees. ✓ Describe the basic structure of a variety of common flowering plants,	. ✓ observe and describe how seeds and bulbs grow into mature plants ✓ find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	✓ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers ✓ 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 ✓ investigate the way in which water is transported within plants ✓ explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. ✓ know that plants make their own food			

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	including trees. 					
Vocabulary: Plant, leaf, stem, flower, grow, rain, sun, water, soil, seed, root, petals, bulb	**Vocabulary: (As previous +)** Berry, blossom, bud, bulb, branch, flower, fruit, habitat, identify, leaf/leaves, petal, plant, root, seed, bark, stalk, bud, stem, tree, trunk. Names of trees in local area, garden and wild flowering plants. **Adult should also use:** Wild plant, garden plant, flowering plant, deciduous, evergreen	**Vocabulary: (As previous +)** Earth, fully grown, grow, growth, healthy, light, nutrients, seed, seedling, shoot, soil, water, bulb, shade, sun, water, healthy **Adult should also use:** Mature plant, germinate/germination, pollination, seed dispersal, temperature	**Vocabulary: (As previous +)** Absorb, fertiliser, plant life cycle, pollination, seed dispersal, seed formation, temperature, transported Photosynthesis, pollen, insect/wind pollination, seed dispersal – wind dispersal, animal dispersal, water dispersal. **Adult should also use:** Structure, function, plant tissues, pores, competition for resources	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**

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Animals, Including Humans						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
✓ Health and selfcare- children notice changes in their bodies after exercise such as heart beating faster. Children understand the importance of handwashing. ✓ explore and notice patterns in the natural world e.g. all the birds we can see in the sky have wings. ✓ know the effects	✓ 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. ✓ Describe and compare the structure of a variety of common animals. (fish, amphibians, reptiles, birds and mammals, including pets) ✓ Identify, name, draw and label the basic parts of the human body	✓ notice that animals, including humans, have offspring which grow into adults □□✓ find out about and describe the basic needs of animals, including humans, for survival (water, food and air) ✓ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	✓ 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 ✓ identify that humans and some animals have skeletons and muscles for support, protection and movement.	✓ describe the simple functions of the basic parts of the digestive system in humans ✓ identify the different types of teeth in humans and their simple functions ✓ construct and interpret a variety of food chains, identifying producers,	✓ Describe including humans. the changes as humans develop from birth to old age (covered in PSHE)	✓□identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ✓ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function ✓ describe the ways in which nutrients and water are transported within animals, including humans. ✓ explore questions to understand how the circulatory system enables the body to function.

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exercise has on our body. ✓ know about heathy food and the need of variety in our diet. ✓ can talk about the different parts of our body. ✓ Draw and lable main parts of human bodies and including animals.	and say which part of the body is associated with each sense. ✓ Say which part of the body is associated with each sense.			predators and prey.		✓ learn how to keep their bodies healthy and how their bodies might be damaged – including h ow some drugs and other substances can be harmful to the human body. Learn about sexual reproduction in humans and the changes that occur during puberty *(Mainly covered during PHSE)*
Vocabulary: Head, body, eyes, ears, mouth, teeth, leg, names of animal, senses, touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue, tail, wing, claw, fin, scales, feathers, fur, beak,	**Vocabulary: (As previous +)** Names of common animals, Names of body parts, including animals (wing, claw, tail, beak, fur, feather, fin, scale, paws, hooves) Carnivore, habitat, herbivore, omnivore, pets, senses, wild	**Vocabulary: (As previous +)** Adult, baby, young, basic needs (water, food, air), carbohydrate, nutrition, child, dairy, exercise, fats, fruit, grow, hygiene, infection,	**Vocabulary: (As previous +)** Backbone, balanced diet, blood vessels, bones, brain, carbohydrate, dietary fibre, heart, invertebrates, joints, movement, minerals, muscles, nutrients,	**Vocabulary: (As previous +)** Absorb, anus, blood stream, canines, consumer, decay, dentine, digestion, enamel, energy, faeces, gums, incisors, large	**Vocabulary:** Puberty, vocabulary linked to describe a range of sexual characteristics.	**Vocabulary: (As previous +)** (As prev. +) Addiction, aorta, artery, atrium, blood, bronchi, capillaries, carbon dioxide, circulatory system, deoxygenated, diaphragm, lifestyle, lungs, nicotine,

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paws, hooves, exercise, healthy, diet, fruit, vegetable,	animals, reptile, amphibian, mammal Sense; taste - tongue, mouth, teeth, sight - eyes; hearing - ears, sound; touch - fingers, skin, nerves; smell – nose. Hands, feet, arms, legs, head, neck, torso, chest, back, body, **Adult should also use:** Amphibians, reptiles, mammals	offspring, reproduce, oils, protein, sugar, survival, vegetables, teenager, toddler, unhealthy, calf, foal, kitten, puppy, piglet, **Adult should also use:** Develop, reproduction, life cycle, heart rate, nutrition	nutrition, protection, ribs, sockets, skeleton, skull, spine, support, tendons, vertebrates, vitamins, sugars, protein, fat, water, protect, move, joints, nutrition, nutrients, protein, protect **Adult should also use:** Endoskeleton, exoskeleton	intestine, molars, nerves, oesophagus, plaque, predator, prey, producer, saliva, small intestines, stomach, swallowing, mouth, teeth, digestive system, nutrients, herbivore, omnivore **Adult should also use:** chemical enzymes, gastric juices, reabsorption of water		oxygen, oxygenated, plasma, pulmonary vein/artery, pulse, red blood cells, respiration, vein, ventricles, white blood cells, heart, rate, pumps, blood vessels, transported, nutrients, water, muscles, cycle, diet, exercise, drugs, lifestyle **Adult should also use:** gaseous exchange, aerobic respiration, trachea, haemoglobin, bronchioles, alveoli

Living Things						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They can talk about their own environment. Know some similarties and differences		✓ explore and compare the differences between things that are living, dead, and things that have never been alive		✓ recognise that living things (including those in the locality) can be grouped in a variety of ways ✓ explore and use classification keys to help group, identify and name	✓ describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird ✓ describe the life	✓ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-

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between natural world around them and contrasting environment. They can make observations of animals through pictures, words or photographs and can explain why some things occur. The world: Show care and concern for living things and the environment 		✓ identify that most living things live in habitats to which they are suited ✓ describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they de pend on each other ✓ identify and name a variety of plants and animals in their habitats, including micr o-habitats ✓ describe how animals obtain their food from plants and other animals ✓ understand a simple food chain, and identify and name different sources of food. 		a variety of living things in their local and wider environment ✓ Recognise that environments c an change and that this can sometimes pose dangers and have an impact on living things 	process of repro duction in some plants and animals. ✓ find out about the work of naturalists and animal behaviourists, for example, David Attenborough a nd Jane Goodall. ✓ find out about re production, including sexual and asexual reproduction in plants 	organisms, plants and animals ✓ give reas ons for classif ying plants an d animals based on specific chara cteristics. ✓ know that broad groupings, such as micro-organisms, plants and animals can be subdivided. (Kingdom, Phylum, Class, Order, Family, Genus, Species) ✓ should classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mam mals). ✓ find out about significance of the work of philosophers and scientists such as Aristotle and Carl Linnaeus.

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Vocabulary: Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, pond, woodland, under logs, in bushes	**Vocabulary:**	**Vocabulary: (Some previously taught in year 1 animals, inc. humans)** Adaptation, adapted, alive, breathe, carnivore, conditions, characteristics, dead, excrete, excretion, feed, food chain, food source, grow, growth, heat, herbivore, living, micro-habitats, move, non-living, omnivore, reproduce, reproduction, shelter, Names of habitats, micro-habitats and describe conditions, never lived, movement, respiration, sensitivity, nutrition, suitability, plants, animal, predator **Adult should also use**: life processes, respire, producer, consumer, sources of food, depends on/suited to	**Vocabulary:**	**Vocabulary: (As KS1+)** Amphibians, classify, classification keys, environment, mammals, human impact, invertebrates, pollution, reptiles, vertebrates, Plant groups (trees, grasses, flowering and non-flowering plants) **Adult should also use:** organism, population, deforestation, development, variation characteristics.	**Vocabulary: (As previous +)** Anther, asexual reproduction, carpel, external fertilisation, fertilisation, filament, germination, gestation, internal fertilisation, larva, metamorphosis, pollen, pollination, seed dispersal, seed formation, sepal, sexual reproduction, sperm, stamen, style, stigma **Adult should also use:** plantlets, runners	**Vocabulary: (As previous +)** Bacteria, fauna, fermentation, flora, fungi/fungus, genus, microbes, micro-organism, organism, species. Name invertebrates: arachnid, mollusc, insect and crustacean.

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Evolution and Inheritance						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They know about similarities and differences between themselves and others, and among families, communities and traditions. Drawing on their experiences and what has been read in class. 						✓ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. ✓ Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. ✓ Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.   
Vocabulary: Baby, toddler, child, adult, eyes, hair, nose		**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:** Adaptation, chromosomes, competition, DNA, evolution, evolutionary change features, environmental conditions, environmental variations, fossil records, genes, natural selection, reproduction, survival of the fittest, variation **Adult should also use:** Dominance, recessive

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Materials						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**

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Moving and handling Introduce and encourage children to use the vocabulary of manipulation, e.g. squeeze and prod. The world: Can talk about why things happen and how things work. Exploring media and materials- notice changes in properties as they are transformed through becoming wet, dry, flaky or fixed. Think about cause and effect. Safely use and explore a variety of materials, tools and techniques. 	✓ distinguish between an object and the material from which it is made ✓ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ✓ describe the simple physical properties of a variety of everyday materials ✓ compare and group together a variety of everyday materials on the basis of their simple physical properties. 	✓ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses ✓ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 		**States of matter** ✓ explore a variety of everyday materials and develop simple descriptions of the states of matter ✓ compare and group materials together, according to whether they are solids, liquids or gases ✓ observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this	✓ 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 ✓ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution ✓ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating ✓ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic	

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				happens in degrees Celsius (°C) ✓ identify t he part playe d by evapora tion and con densation in the water cy cle and associate the rate of e vaporation w ith temperature. 	✓ demonstrate that dissolving, mixing a nd changes of state are reversible changes ✓ explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associate d with burning, the action of acid on bicarbonate of soda and rusting in metals ✓ explore reversible changes, including, evapora ting, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. ✓ explore changes that are difficult to reverse, for example, burning, rusting and other reactions, for example, vinegar with bicarbo nate of soda. 	

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Vocabulary: Wet, dry, shiny, dull, bendy, stiff, squashy, hard/soft, lumpy, wrinkly. Smooth, rough. Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, stretchy, floppy, breaks/tears, see-through, not see-through	**Vocabulary: (As previous +)** Absorbent, bendy, dull, hard, gas, glass, liquid, material, metal, object, plastic, rock, rough, shiny, smooth, soft, solid, stiff, transparent, water, waterproof, wood. **Adult should also use:** properties, reflection	**Vocabulary: (As previous +)** Changes, concrete, elastic, fabric, flexible, man-made, material, natural, opaque, properties, reflective, rigid, rubber, shape, squash, squashing, stretch, stretching, strong, suitable, translucent, transparent, twist, twisting, use/useful, weak, unsuitable, wood, metal, plastic, glass, brick, rock, paper, carboard, bend, bending, absorbent, waterproof, **Adult should also use:** characteristics, suitability, purpose	**Vocabulary:**	**Vocabulary: (As previous +)** Air, boiling point, boiling, condensation/condensing, degree Celsius, energy, transfer, evaporation/evaporating, freezing, freezing point, gaseous, grain, matter, melting, melting point, oxygen, particles, powder, water cycle, water vapour. **Adult should also use:** solidify, precipitation, transpiration, forces of attraction.	**Vocabulary: (As previous +)** Burning, dissolve, electrical conductor, filter, insoluble, irreversible change, mixture, reversible change, rust, sieving, soluble, solute, solution, solvent, thermal conductor, thermal insulator. **Adult should also use:** combustion, oxidisation, chemical reaction, residue, filtrate.	**Vocabulary:**

Rocks

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			✓ compare and group together different kinds of rocks on the basis of appearance and simple physical properties ✓ describe in simple terms how fossils are formed when things that have lived are trapped within rock ✓ recognise that soils are made from rocks and organic matter. 			
		Vocabulary:	**Vocabulary:** Absorb, extinct, crystals, fossils, granite, grains, humus, igneous, impermeable, layers, magma, metamorphic, mineral, molten, palaeontology/palaeontologists, permeable, rock, sediment, sedimentary, soil Name of rocks: granite, marble, sand, clay, limestone, chalk **Adult should also use**: Erosion, particles, physical properties, porous.	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**

Seasonal Changes						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
They show concern and care for the environment and can notice changes and differences.	✓ observe changes across the four seasons ✓ observe and describe weather associated with the seasons and how day length varies. 					

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Develops an understanding of decay and changing over time. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.						
Vocabulary: Weather (sunny, rainy, windy, snowy etc.), seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset, day length,	**Vocabulary: (+ as previous year)** Autumn, dark, light, moon movement, season, shadow, spring, summer, winter. Names common types of weather and features, temperature, longer, shorter. **Adult should also use:** Day length	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**

Earth and Space						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**

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					✓ describe the movement of the Earth, and other planets, relative to the Sun in the solar system ✓ describe the movement of the Moon relative to the Earth ✓ describe the Sun, Earth and Moon as approximately spherical bodies ✓ use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. ✓ learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). ✓ understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). ✓ understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones).  .	
Vocabulary:	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:** Asteroids, axes/axis, celestial body, comets, galaxy, light years, meteors, orbit, phases of the moon, planet, revolve, rotation, shadow clocks,	**Vocabulary:**

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					spherical, spin, solar system, star, sun, sundials, time zone, names of planets. **Adult should also use:** Geocentric model, Heliocentric model, elliptical orbit.	

Sound						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
The world: Children respond to their senses: sights, sounds and smells in the environment. 				✓ identify how sounds are made, associating them with something vibrating ✓ recognise that vibrations from sounds travel through a medium to the ear ✓ find patterns between the pitch of a sound and features of the object that produced it ✓ find patterns between the volume of a sound and the strength of the vibrations that produced it ✓ recognise that sounds get fainter as the distance from the sound source increases. 		
Vocabulary: sound	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary:** Brass, echo, insulation, instrument, percussion, pitch, sound source, sound wave, string, travel, tune, tuning fork, vibration, volume, woodwind **Adult should also use:** Strength of vibrations, reflection of sound	**Vocabulary:**	**Vocabulary:**

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Light						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
The world: Children respond to their senses: sights, sounds and smells in the environment.			✓ recognise that they need light in order to see things and that dark is the absence of light ✓ notice that light is reflected from surfaces ✓ recognise that light from the sun can be dangerous and that there are ways to protect their eyes ✓ recognise that shadows are formed when the light from a light source is blocked by a solid object ✓ find patterns in the way that the size of shadows changes.			✓ recognise that light appears to travel in straight lines ✓ 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 ✓ 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 ✓ use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. ✓ look at a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters. Introduce the term refraction (they do not need to explain why these phenomena occur).

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Vocabulary: smell, look, see	**Vocabulary:**	**Vocabulary:**	**Vocabulary:** Absorb, beam, block, direction of light, bright, dim, dull, dark, light, light source, mirror, opaque, reflect, reflective, shadow, shiny, sun light, translucent, transparent Names of light sources, dark, absence of light, matt, surface, dangerous, absence of light, sunlight, dangerous **Adult should also use:** Speed of light, emit, light spectrum		**Vocabulary:**	**Vocabulary: (As prev. +):** Absorption, cornea, lenses, iris, light ray, optics, pupil, prism, rainbow, refraction, symmetry, spectrum, transmission. .

Forces						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Moving and handling Introduce and encourage children to use the vocabulary of manipulation, e.g squeeze and prod. Technology- shows an interest in technological toys with knobs or pulleys, or real objects such as			✓ compare how things move on different surfaces ✓ notice that some forces need contact between two 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 every day materials on the basis of		✓ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object ✓ identify the effects of air resistance, water resistance and friction, that act between moving surfaces ✓ recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. ✓ explore the effects of air resistance by observing how different	

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cameras or mobile phones. 			whether they are attracted to a magnet, and identify some magnetic materials ✓ describe magnets as having two poles ✓ predict whether two magnets will attract or repel each other, depending on which poles are facing. 		objects such as parachutes and sycamore seeds fall. ✓ explore the effects of friction on movement and find out how it slows or stops moving objects. ✓ find out how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation. 	
Vocabulary: Push, pull, twist, stretch, turn, open, lift, squeeze, pinch, flick, tap, force, attract, repel, magnetic materials, iron, steel, poles, north pole, south pole	**Vocabulary:**	**Vocabulary:**	**Vocabulary: (As prev. +):** Air resistance, attract, bar magnet, button magnet, compass, contact, float, force, push, pull, twist, contact force, force-meter, friction, gravity, horse shoe magnet, iron, magnet, magnetic force, magnetic North, non-contact force, non-magnetic, North pole, poles, repel, ring magnet, sink, South pole, strength, metal, steel, ring magnet, button magnet, **Adult should also use:** Constant force, Newton meter, Newton	**Vocabulary:**	**Vocabulary: (As previous +)** Drag forces, gears, levers, mechanisms, Newton, non-contact force, pulleys, reliable, springs, transference of force and motion, water resistance, weight, Earth, air resistance, simple machines, levers, pulleys, gears	**Vocabulary:** .

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Electricity						
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Technology- shows skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or new images. 				✓ identify common appliances that run on electricity ✓ construct a simple series circuit, identifying/naming its basic parts, including cell, wire, bulb, switch and buz zer ✓ use their circuits to create simple devices ✓ draw the circuit as a pictorial representatio n using conventional circuit co mponent symbols ✓ identify precautions for working safely with electricity ✓ identify whether or not a lamp will light in a simple series circuit ✓ recognise that a switch opens and closes a		✓ associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit ✓ compare and give reasons for variations in how componen ts function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches ✓ construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors. ✓ learn how to represent a simple circuit in a diagram using recogni sed symbols.

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				circuit and associate this with whether or not a lamp lights in a simple series circuit ✓ recognise some common conductors and insulators, an d associate metals with being good conductors. 		
Vocabulary: battery, switch, electricity, move, sound, work, safety, electrical	**Vocabulary:**	**Vocabulary:**	**Vocabulary:**	**Vocabulary: (As previous +)** Battery, bulb, buzzer, cell, circuit, closed, circuit, components, complete circuit, conductor, connect/ connectors, loose connection, short circuit, connection, crocodile clip, electricity, electrical device/ appliance, insula tor, mains, motor, negative, open circuit, plug, positive, rechargeable, simple circuit, symbol, switch, terminals, wires, metal, non-metal **Adult should also use:** series circuit, terminal	**Vocabulary:**	**Vocabulary (As previous +)** Current, electrons, filament, fuse, resistance, series circuit, terminal, voltage volume, voltage **Adult should also use:** Parallel circuit