



Milton Mount Primary School

Science Planning Summary Document

EYFS, Key Stage 1 & Key Stage 2

(2024 – 2025)

EYFS Autumn

Theme	(A1) Understanding the World: The Natural World (A2) Understanding the World: The Natural World	Seasonal changes and plants (growing in the garden) will be explore and visited across the whole year.
Knowledge	(A1) Exploring the natural world and making observations of animals and plants. (A2) Identify the changes in the natural world around them, including seasons and the changing states of matter.	
Skills	(A1) Making observations and drawings of animals and plants. (A2) Looking for signs of Autumn. Making observations and drawings.	
Vocabulary	(A1) seeds plant tree soil stem petal leaf root flower weed growth branch bush seedling (A2) nature winter spring summer autumn seeds plant tree soil stem petal leaf root flower weed growth branch bush seedling	

EYFS Spring

Theme	(Sp1) Understanding the World: The Natural World (Sp2) Understanding the World: The Natural World
Knowledge	(Sp1) Recognise that some environments are different to the one in which they live. Identify signs of Winter. (Sp2) Understand how to stay safe in our woodlands. Look at who lives on a farm. Identify signs of Spring.
Skills	(Sp1) Explore similarities and differences between the natural worlds around them. Looking for signs of Winter. (Sp2) Looking for signs of Spring. Discover where animals live and what they need to survive.
Vocabulary	(Sp1) season spring summer autumn winter rain snow sunshine warm cold weather temperature change planets (& names of them) solar system moon earth rocket spaceship (Sp2) animals living survive food alive nature winter spring summer autumn seasons change water

EYFS Summer

Theme	(Su1) Understanding the World: The Natural World (Su2) Understanding the World: The Natural World
Knowledge	(Su1) Explore changes of states of matter. (Su2) Identify signs of Summer. Learning about where insects and invertebrates live.
Skills	(Su1) Explore changes of states of matter. (Su2) Pond dipping and woodland exploring to compare and contrast microhabitats. Continuing with seasonal changes.
Vocabulary	(Su1) material fabric melt ice water frozen thaw float sink stretchy hard soft (Su2) seeds plant tree soil stem petal leaf root flower weed growth branch bush seedling

Year 1 Autumn	
Theme	(A1) Animals Including Humans – All About Me (A2) Exploring Everyday Materials 1
Knowledge	(A1) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (A2) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. Distinguish between an object and the material it is made from. 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. Describe the simple physical properties of a variety of everyday materials.
Skills	(A1) Identifying and classifying. Performing simple tests. Gathering and recording data to help in answering questions. Using their observations and ideas to suggest answers to questions. (A2) Identifying and classifying. Using their observations and ideas to suggest answers to questions. Performing simple tests. Gathering and recording data to help in answering questions. Gathering and recording data to help in answering questions.
Vocabulary	(A1) body, joint, skeleton, limb, head, eye, pupil, eyelash, sight, brain, vibration, ear, sound, sweet, flavour, mouth, taste, tongue, odour, smell, nose, nose hair, nostril (A2) material, wood, metal, fabric, plastic, object, brick, glass, elastic, property, opaque, stiff, dull, transparent, rubber, polyester, factory, manmade, natural, submerge, float, predict, buoyant, sink, waterproof, sponge, absorbent, soak
Year 1 Spring	
Theme	(Sp1) Seasonal Changes (Sp2) Exploring Everyday Materials 2
Knowledge	(Sp1) Observe changes across the 4 seasons. Observe and describe weather associated with the seasons and how day length varies. Identifying and classifying (Sp2) Describe the simple physical properties of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties
Skills	(Sp1) Using their observations and ideas to suggest answers to questions. Performing simple tests. Gathering and recording data to help in answering questions (Sp2) Performing simple tests. Using their observations and ideas to suggest answers to questions. Identifying and classifying
Vocabulary	(Sp1) season, summer, spring, autumn, winter, weather, harvest, autumn, hibernate, protect, sleet, temperature, frost, grow, changes, compare, heatwave, warm, sun protection, record, rainfall, results, graph, measuring (Sp2) solid, clay, strong, wind, roof, non-absorbent, slate, suitable, fabric, furniture, cotton, mattress, soft, wool, weather, evaluate, tile, properties
Year 1 Summer	
Theme	(Su1) Plants (Su2) Animals Including Humans – All About Animals
Knowledge	(Su1) Become familiar with common names of flowers and plant structures, including seeds. Identify and describe the basic structure of a variety of common flowering plants, including trees. Identify and name a variety of common wild and garden plants. Identify and name a variety of deciduous and evergreen trees. Understand how plants change over time. Observe the growth of flowers they have planted Keep records of how plants change over time (Su2) Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Identify and name a variety of common animals that are carnivores, herbivores and omnivores
Skills	(Su1) Asking simple questions. Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions Identifying and classifying. Comparing and contrasting familiar plants. Drawing diagrams showing the parts of different plants, including trees Describing how they were able to identify and group different plants. Comparing and contrasting what they have found out about different plants. Gathering and recording data to help in answering questions. (Su2) Grouping and sorting. Using their observations and ideas to suggest answers to questions.
Vocabulary	(Su1) plant, tree, seed, oak, flower, root, leaf, petal, stem, weed, daisy, dandelion, wild, buttercup, evergreen, deciduous, bush, branch, vegetable, farm, tractor, supermarket, fruit, observe, adult plant, seedling, young plant, growth (Su2) amphibian, reptile, bird, fish, mammal, hatchling, feather, backbone, characteristic, warm-blooded, scale, gill, cold-blooded, carnivore, omnivore, predator, canine, herbivore, natural, wild, shelter, pet, veterinary

Year 2 Autumn	
Theme	(A1) Animals inc Humans – Growth (A2) Use of Everyday Materials
Knowledge	(A1) Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance of exercise, eating the right amounts of different types of food and hygiene for humans. (A2) Identify and compare the suitability of a variety of everyday materials. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
Skills	(A1) Using their observations and ideas to suggest answers to questions. Identifying and classifying. Performing simple tests (A2) Using their observations and ideas to suggest answers to questions. Predicting, observing, investigating, measuring and recording
Vocabulary	(A1) essential, oxygen, nutrition, survival, shelter, vital, healthy, survive, grow, non-essential, carbohydrate, calcium, dairy, protein, vitamins, fresh food, pre-cooked food, processed food, nutrients, balanced diet, strength, exercise, coordination, flexibility, balance, bacteria, prevent, germs, virus, hygiene. (A2) material, suitable, object, bridge, structure, obstacle, triangle, construction, hinder, stretchy, floppy, limit, force, twist, bend, stretch, squash, protective, fluorescent, safety, mackintosh, bound, highway, road, merchant
Year 2 Spring	
Theme	(Sp1) Plants (Sp2) Animals inc humans – Life cycles
Knowledge	(Sp1) Observe and describe how seeds and bulbs grow into mature plants. Understand the requirements of plants for germination, growth and survival, as well as the processes of reproduction and growth in plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy into mature plants. (Sp2) Notice that animals, including humans, have offspring which grow into adults.
Skills	(Sp1) Identifying differences, similarities or changes related to simple scientific ideas and processes. Observing and recording, with some accuracy. Asking simple questions and recognising that they can be answered in different ways. Performing simple tests. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. Identifying and classifying. (Sp2) Identifying and classifying. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions.
Vocabulary	(Sp1) compare, bulb, seed, growth, plant, investigate, experiment, method, predict, control, carbon dioxide, photosynthesis, glucose, oxygen, energy, germination, seedling, life cycle, pollination, reproduction, crop, thrive, insulate, manure, healthy, forest, desert, survive, adapt, condition. (Sp2) grow, survive, adult, independent, life cycle, helpless, toddler, womb, develop, foetus, differences, offspring, resemble, gene, inherit, reproduction, chick, predict, bar chart, transformation, chrysalis, caterpillar, metamorphosis, larva, frog, amphibian, froglet, frogspawn, tadpole.
Year 2 Summer	
Theme	(Su1) Living things and their habitats (Su2) Living things and their habitats – Habitats from around the world
Knowledge	(Su1) Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain. Identify and name different sources of food. (Su2) 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. Identify and name a variety of plants and animals in their habitats, including microhabitats.
Skills	(Su1) Identifying and classifying. Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions. Asking simple questions and recognising that they can be answered in different ways. Gathering and recording data to help in answering questions. Sorting and grouping. (Su2) Identifying and classifying. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. Asking simple questions and recognising that they can be answered in different ways.
Vocabulary	(Su1) excrete, reproduce, respire, senses, fungi, microhabitat, habitat, colony, condition, insect, antennae, suitable, producer, consumer, nutrient, caterpillar, food chain, rot, refrigerated lorry, forklift truck, automated, frozen food, canned (Su2) environment, mate, organism, rainforest, moisture, extinct, climate, endangered, pollution, poaching, biodiversity, deforestation, plankton, ocean, ecosystem, coral reef, trench, narwhal, tundra, Arctic, caribou, Antarctic, earthworm, desert, lizard, cactus, pond

Year 3 Autumn	
Theme	(A1) Rocks (A2) Scientific Enquiry
Knowledge	(A1) Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Explore how and why rocks might have changed over time. 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. (A2) NC skills.
Skills	(A1) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Identifying differences, similarities or changes related to simple scientific ideas and processes. (A2) Asking relevant questions and using different types of scientific enquiries to answer them. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Identifying differences, similarities or changes related to simple scientific ideas and processes. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Setting up simple practical enquiries and comparative and fair tests. Using straightforward scientific evidence to answer questions or to support their findings. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Vocabulary	(A1) extrusive igneous rock, igneous rocks, magma, crystals, sandstone, marble, metamorphic rock, limestone, sedimentary rock, chemical weathering, weathering, physical weathering, acid rain, biological weathering, texture, erosion, receding, appearance, submerged, sediment, amber, embedded, fossil, extinct, fragments, decompose, clay soil, sandy soil, chalky soil (A2) solar, renewable energy, scientific investigation, prediction, plausible, record, results, graph, data, table, acid, practical, method, alkali, pH Scale, evidence, compare, enquiry, conclusion, explanation, baking, variable, control experiment, fair test, measurement, collated, conclusive, scientific knowledge, diagram, equipment
Year 3 Spring	
Theme	(Sp12) Forces and Magnets (Sp2) Animals inc Humans
Knowledge	(Sp1) Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. Compare how things move on different surfaces. Describe magnets as having 2 poles. Predict whether 2 magnets will attract or repel each other, depending on which poles are facing. 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. (Sp2) 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 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 other animals have skeletons and muscles for support, protection and movement.
Skills	(Sp1) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Setting up simple practical enquiries and comparative and fair tests. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. (Sp2) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using straightforward scientific evidence to answer questions or to support their findings. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Identifying differences, similarities or changes related to simple scientific ideas and processes.
Vocabulary	(Sp1) Friction, air resistance, non-contact forces, force, contact force, motion, texture, resistance, tilt, surface, repel, magnet, horseshoe magnet, attract, bar magnet, iron, magnetic field, steel, magnetism, magnetic, non-magnetic materials, attract, magnetism, recycle, non-contact forces, magnetic north, magnetic needle, compass, direction, orienteering (Sp2) carbohydrate, vitamin, mineral, nutrition, protein, diet, balanced, energy, nutrition label, portion, vertebrate, hydrostatic skeleton, exoskeleton, endoskeleton, invertebrate, ulna, tibia, fibular, radius, humerus, spine, rib cage, skull, muscle, diaphragm, biceps, contract, hamstrings
Year 3 Summer	
Theme	(Su1) Plants (Su2) Light
Knowledge	(Su1) 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. Identify and describe the functions of different parts of a flowering 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. (Su2) Recognise that they need light in order to see things and that dark is the absence of light. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Notice that light is reflected from surfaces. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.

Skills	<p>(Su1) Asking relevant questions and using different types of scientific enquiries to answer them. Setting up simple practical enquiries and comparative and fair tests. Making systematic and careful observations. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>(Su2) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identifying differences, similarities or changes related to simple scientific ideas and processes.</p>
Vocabulary	<p>(Su1) Potassium, fertiliser, nutrients, nursery, stunted, chlorophyll, photosynthesis, UV light, xylem, stomata, stomata, transpiration, phloem, absorb, stigma, filament, style, anther, nectar, seed dispersal, pollen, pollinator, vulnerable, anchor, sapling, formation</p> <p>(Su2) natural, artificial, source, light, reflect, ultraviolet rays, sunburn, vitamin D, protection, exposure, high visibility, reflective, surface, materials, fluorescent, sundial, ray, block, shadow, opaque, opposite, position, direction, cast, length, size, puppet, shape, closer, further</p>

Year 4 Autumn	
Theme	(A1) Living Things and their Habitats (A2) Animals Inc. Humans
Knowledge	(A1) Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in the local and wider environment. (A2) 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, predators and prey.
Skills	(A1) Identifying differences, similarities or changes related to simple scientific ideas and processes. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. (A2) Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Making systematic and careful observations. Reporting on findings from enquiries, including oral and written explanations. Setting up simple practical enquiries and comparative and fair tests. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Vocabulary	(A1) habitat, adapted , conditions, camouflage , microhabitat, coastal, grassland, climate , exposure, environment, species , invertebrate, classify , vertebrate, characteristics, classification key , organism, identify, criteria, sub-group, region, blubber, colouring, features, non-flowering plant, flowering plant, pond dipping, oxygenised, ecosystem (A2) small intestine, digestive system, large intestine, oesophagus, stomach , gall bladder, absorb, saliva , liver, peristalsis, jaw, gum, molars, canines, incisors , plaque, enamel, tooth decay , cavity, fluoride, consumer, predator , ecosystem, prey, producer , tundra, threatened, interdependence, hide, food web
Year 4 Spring	
Theme	(Sp1) States of matter (Sp2) Sound
Knowledge	(Sp1) 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 happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Sp2) Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Find patterns between the pitch of a sound and features of the object that produced it. Recognise that sounds get fainter as the distance from the sound source increases.
Skills	(Sp1) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using straightforward scientific evidence to answer questions or to support their findings Enquiry Skills and A. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. (Sp2) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identifying differences, similarities or changes related to simple scientific ideas and processes. Setting up simple practical enquiries and comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
Vocabulary	(Sp1) gas, matter, liquid , volume, solid, particle , arranged, bond, heated, cooled, melting , melting point, temperature, thermometer, reverse, sublimation, deposition, freezing, boiling, condensation, water vapour , process, absorb, evaporation, water cycle, precipitation , transpiration, surface run off, groundwater (Sp2) eardrum , signals, vibration , medium, waves , source, vacuum, particles, echo, energy, materials, absorb, defenders, insulate, reflect, volume , decibel meter, decibels , amplitude, power, pitch , low pitch, high pitch, instruments, orchestra, sound source, fade, energy, travel
Year 4 Summer	
Theme	(Su1) Electricity (Su2) Living Things and their Habitats – Conservation
Knowledge	(Su1) Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery. Recognise some common conductors and insulators and associate metals with being good conductors. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. (Su2) Recognise that environments can change and that this can sometimes pose dangers to living things.
Skills	(Su1) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using straightforward scientific evidence to answer questions or to support their findings. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Setting up simple practical enquiries and comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers. Asking relevant questions and using different types of scientific enquiries to answer them. (Su2) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using straightforward scientific evidence to answer questions or to support their findings. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units. Using a range of equipment, including thermometers and data loggers.

Vocabulary

(Su1) electricity, mains electricity, appliance, socket, batteries, series circuit, voltage, cell, circuit, component, power, current, bulb, wire, conductor, insulator, metal, copper, rubber, control, current, complete circuit, incomplete circuit, switch, non-renewable energy, wind turbines, solar panels, hydropower, renewable energy

(Su2) ecosystem, migrate, Southern Hemisphere, monsoon, Northern Hemisphere, recycling, biodiversity, drought, deforestation, rainforest, greenhouse gases, fossil fuels, emissions, pollution, climate change, sewage, chemicals, pesticides, water treatment plant, contaminate, freshwater, pure, drought, conserve, water butt, endangered, conservation areas, protect, marine sanctuaries

Year 5 Autumn	
Theme	(A1) Earth and Space (A2) Properties of Materials
Knowledge	(A1) Describe the Sun, Earth and Moon as approximately spherical bodies. Describe the movement of the Earth and other planets relative to the Sun in the solar system. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. Describe the movement of the Moon relative to the Earth. (A2) 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. Compare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heat. Be able to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. 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.
Skills	(A1) Identifying scientific evidence that has been used to support or refute ideas or arguments. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision and taking repeat readings when appropriate. 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. Using test results to make predictions to set up further comparative and fair tests. (A2) Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision and taking repeat readings when appropriate. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. 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. Using test results to make predictions to set up further comparative and fair tests.
Vocabulary	(A1) orbit, terrestrial planet, Solar System, spherical, gas giant planets, geocentric, heliocentric, dwarf planet, astronomy, poles, season, axis, hemisphere, shadow, time zone, sundial, dial, gnomon, phase, waxing, waning, eclipse, moon, rocky planet, gas planet (A2) magnetic, durable, transparent, versatile, conductive, thermal, degrees Celsius (°C), insulator, molecules, steel, stone, force, hardness, iron, solute, insoluble, solvent, dissolve, soluble, solution, substance, saturation, solvent, evaporation, filtering, sieving, mixture, pure substance
Year 5 Spring	
Theme	(Sp1) Changes of Materials (Sp2) Forces
Knowledge	(Sp1) Describe how to recover a substance from a solution. Demonstrate that dissolving, mixing and 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 associated with burning). Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible. Changes associated with the action of acid on bicarbonate of soda. (Sp2) 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.
Skills	(Sp1) Reporting and presenting findings from enquiries, including conclusions, in oral and written forms, causal relationships and explanations of and a degree of trust in results - in oral and written forms such as displays and other presentations. Planning different types of scientific enquiry to answer questions, including recognising and controlling variables where necessary. Identifying scientific evidence that has been used to support or refute ideas or arguments. Use experiment results to test a prediction and write a conclusion to show the best substances to make a fizzy rocket. Use measuring equipment to suggest ways to improve the accuracy of the observations made in the experiment (Sp2) Identifying scientific evidence that has been used to support or refute ideas or arguments. Taking measurements and using a range of scientific equipment with increasing accuracy and precision; taking repeat readings when appropriate. 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. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
Vocabulary	(Sp1) pure substance, solute, solvent, evaporate, solution, melting, reversible, mixture, physical change, evaporate, irreversible, effervescence, compare, chemical change, product, fair test, control variable, corrosion, rusting, variable, combustion, oxygen, fuel, extinguish, smother, carbon dioxide, acid, reaction, predict, bicarbonate of soda (Sp2) Sir Isaac Newton, gravity, astronomy, mass, weight, Galileo Galilei, opposing, air resistance, streamlined, parachute, up thrust, buoyant, water resistance, sink, streamlined, Newton meter, lubricant, Newton, friction, resistance, load, pulley, lever, pivot, fulcrum, gear, mesh, mechanism, rack and pinion, bevel gear
Year 5 Summer	
Theme	(Su1) Living things and their Habitats (Su2) Animals Inc. Humans
Knowledge	(Su1) Describe the life process of reproduction in some plants and animals. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Su2) Describe the changes as humans develop to old age.
Skills	(Su1) Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. 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. Identifying scientific evidence that has been used to support or refute ideas or arguments. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision and taking repeat readings when appropriate. (Su2) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. 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. Taking

	measurements using a range of scientific equipment and with increasing accuracy and precision; taking repeat readings when appropriate. Identifying scientific evidence that has been used to support or refute ideas or arguments.
Vocabulary	(Su1) genes, tuber, reproduction, asexual reproduction, fertilisation, placental mammal, monotreme mammal, mammary glands, pouch, marsupial, amphibian, metamorphosis, larva, caterpillar, pupa, egg, fledgling, egg tooth, embryo, hatch, primatologist, endangered, natural sciences, documentary, naturalist, life cycle, vertebrate, reproduction, warm-blooded, living organism (Su2) adolescent, reproduce, dependent, puberty, foetus, gestation, pregnant, breeding, extreme, duration, embryo, trimester, midwife, umbilical cord, womb, growth spurt, childhood, motor skills, milk teeth, constant, bloodstream, hormone, growth, appetite, cataract, memory, neurodegenerative, lifestyle, keratin

Year 6 Autumn	
Theme	(A1) Light (A2) Animals inc Humans
Knowledge	(A1) Use recognised symbols when representing a simple circuit in a diagram. Associate the brightness of a bulb 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 components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. (A2) Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood. Describe the ways in which nutrients and water are transported within animals, including humans. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.
Skills	(A1) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. 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. Using test results to make predictions to set up further comparative and fair tests. (A2) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. Taking measurements and using a range of scientific equipment, with increasing accuracy and precision; taking repeat readings when appropriate. Identifying scientific evidence that has been used to support or refute ideas or arguments. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. 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.
Vocabulary	(A1) symbol, light, eye, light source, scientific diagram, surface, bounce, direction, mirror, reflected, periscope, line of sight, angle, utilise, mirror, shadow, block, opaque, transparent, translucent, real-life problem, direction, rotate, plan, sun shade, phenomena, optical, disperse, spectrum, refraction (A2) ventricle, atrium, vessel, circulatory system, valves, capillary, microscope, artery, vein, blood, plasma, red blood cell, white blood cell, platelet, concentration, absorb, osmosis, diffusion, nutrient, pulse, diet, BPM, beats per minute, exercise, heart rate, hallucinogen, painkiller, drug, stimulant, depressant
Year 6 Spring	
Theme	(Sp1) Electricity (Sp2) Living Things and their habitats
Knowledge	(Sp1) Use recognised symbols when representing a simple circuit in a diagram. Associate the brightness of a bulb 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 components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. (Sp2) Give reasons for classifying plants and animals based on specific characteristics. Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
Skills	(Sp1) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. 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. Using test results to make predictions to set up further comparative and fair tests. (Sp2) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. Identifying scientific evidence that has been used to support or refute ideas or arguments. Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision and taking repeat readings when appropriate. 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.
Vocabulary	(Sp1) circuit, circuit diagram, symbol, battery, wires, voltage, voltmeter, brightness, electricity, current, blown, variable resistor, resistor, LED, dimmer switch, fair test, variable, output, systematically, control test, timer-based, sensor, synchronised, signal, traffic light, closed electric circuit, conductor, insulator, indicating (Sp2) conifer, classify, microorganism, fern, living organism, cell, Mrs Gren, unicellular, multicellular, kingdom, species, Carl Linnaeus, domain, Latin, classification, microorganism, virus, bacteria, fungi, protozoa, plant, microscopic, mycelium, ecosystem, fungi, microorganism, reproduction, habitat, living organism
Year 6 Summer	
Theme	(Su1) Evolution and Inheritance (Su2) Looking After the Environment
Knowledge	(Su1) 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. Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. (Su2) NC Skills
Skills	(Su1) 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. Identifying scientific evidence that has been used to support or refute ideas or arguments. (Su2) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. 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. Identifying scientific evidence that has been used to support or refute ideas or arguments. Using test results to make predictions to set up further comparative and fair tests.

Vocabulary

(Su1) characteristic, offspring, environmental, inherit, variation, nutrition, climate, adaptation, habitat, feature, predator, pollinate, nutrients, epiphytes, toxic, Mary Anning, ichthyosaurus, fossil, Jurassic Coast, palaeontologist, natural selection, extinct, Charles Darwin, evolve, theory, tool, Neanderthal, ancestor, homo sapiens, primate

(Su2) prevent, global warming, climate, climate change, weather, landfill, rubbish, council, biodegrade, recycle, emissions, renewable, non-renewable, greenhouse gases, net zero, combustion, fossil fuel, fuel, coal, industrial revolution, COP, sustainability, subsidy, pledge, conference, species, natural disaster, sensitive, habitat, vulnerable