Coverage Overview
Curriculum Area: Science

Subject Lead: D Askey

	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Working Scientifically (Skills)	Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests 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 Observing closely, using simple equipment Performing simple tests 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 Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.	Asking relevant questions and using different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Report 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 Identify differences, similarities or changes related to simple	Asking relevant questions and using different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Report 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 Identify differences, similarities or changes related to simple	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Use test results to make predictions to set up further comparative and fair tests Report 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 Identify scientific evidence that has been used to support or refute ideas or arguments	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Use test results to make predictions to set up further comparative and fair tests Report 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 Identify scientific evidence that has been used to support or refute ideas or arguments

				scientific ideas and processes Use straightforward scientific evidence to answer questions or to support their findings.	scientific ideas and processes Use straightforward scientific evidence to answer questions or to support their findings.		

Scientific Knowledge and Conceptual Understanding **Collins Connect Units**	**Biology Animals and Plants** What does an earthworm do? Who has stripes? What is inside an egg? What am I made of? Is all of a plant green? Who are my parents? **Chemistry – Objects and Materials** Who lives here? Which hat is the best to wear today? What melts? What happens when you mix it? What does through? How do you make a good bubble? **Physics – light, space, electricity and movement** What happens at night? What is in the sky? What is the moon? What makes it move? How does my toy work? What floats?	**Using our Senses** Is everyone's body the same? What differences can our tongues taste? What can we hear using our sense of hearing? How can we explore the world using our sense of touch? Which smells do we love and hate? How do we use our senses to find out about the world around us? **Everyday Materials** What Material is this? Part 1 & 2 Is all paper the same? Is all fabric the same? What's it made of? Can the same object be made from different materials? What's it like? Does it bend or stretch? How wet can you get? What do our plates feel like?	**Growing Up** What do babies need? How have we changes? How do we change throughout our lives? Do older children have bigger heads? **Take Care** How can we sort this food? What food should we eat? How can we stay fit? How can we stay clean? **What is your habitat?** What is your habitat? What do different animals eat in their habitats? Where can I live? **Materials – Good Choices** Can you describe the object? What material is it made of? Is that a good choice of material? Which materials are good for a toddler's play dungarees? What fabric will make a bedroom dark? What shall we use to make a teabag? Which is the bounciest ball? What can you invent?	**How does your garden grow?** What do we know about plants? What do we know about leaves? What would happen f a plant lost its leaves? Are all roots the same? Where does the water go? Why do plants need stems? Where do new plants come from? What do flowers have in common? What do bees do? How are seeds dispersed? Can plants survive without leaves? Am I the perfect plant? **Amazing Bodies** What would you need to survive? What do we need to stay healthy? How does an adventurer stay healthy? Why do we have a skeleton? Can you design a new vertebrate species? How do muscles help us move? Do our bodies affect how well we can do things?	**Who am I?** Who are you? Who lives here? How are vertebrates grouped? How are invertebrates grouped? **Human Impact** What impact do humans have locally? How can we find out about litter? What types of litter are dropped locally? Why does cleaning litter matter? What happens when a food chain is broken? What is the impact of habitat destruction in other parts of the world? **Where does all that food go?** What do we know about food? Where does the food go inside your body? What sort of teeth do we have? Why do we have different types of teeth? How can we look after our teeth? What do animals eat? What do animals' teeth tell us? How is food broken down? How can we model the	**Circle of Life** What is a life cycle? What do we know about the life cycles of mammals? What do we know about the life cycle of amphibians? What do we know about the life cycle of insects? What do we know about the life cycle of birds? What makes a successful life cycle? How are humans helping endangered animals complete their life cycles? **Reproduction in Plants and Animals** How do flowering plants reproduce? Are all flowers on all plants the same? Do all plants reproduce by producing seeds? How do amphibians and insects reproduce? How do mammals and birds reproduce? How does the human life cycle compare to that of others? How do girls become women? How do boys become men? **Everyday Materials** Which materials are used in our	**Body Health** What does being healthy mean? How is food divided into different groups? What makes a healthy snack or drink? How have diets changed? How is pulse rate affected by exercise? What are the benefits of sports and exercise? How do drugs affect the body over time? How does smoking affect the body? Can you spread the healthy word? **Body Pump** What does my circulatory system do? What is a heart and what does it do? What is blood? What is in blood? What do valves and blood vessels do? What happens to water in our bodies? What does the road around our body look like? **The Nature Library** Can you sort this mess?

	Our changing world: The local environment What is happening to the trees? (Spring, Summer, Autumn, Winter) What is the weather like today? (Summer) What can I grow for my dinner?	**Plant Detectives** What garden plants can we find around our school? What wild plants can we find around our school? What is the same and different about the flowers around us? What is happening underground beneath our plants? What makes a tree a tree? **Our changing world – Plants** How do leaves change across the year? Do all trees lose their leaves in winter and grow new ones in Spring? What flower can we find during different seasons? How do plants grow and change over time? What can we make with the food that we grow? **Looking at Animals** Who's who in the animal world?	**Materials – Shaping Up** How can I make different shapes? How can I change the shape of an object? What property allows a material to be changed? Which material should I choose? Which elastic should we use for a catapult? What shall we use to make a catapult? **The Apprentice Gardener** What will seeds grow into? What do gardeners need to know? How should we plant the seed? What is happening to our seed? How tall will they grow? How can we care for our plants? What happens when a seed germinates? Does it matter how we plant the seed? How expert are we? What do plants need to grow and be healthy? **Our Changing World** What lives in a habitat? How does a habitat change through the year? How do the animals in a habitat depend on each other? How do animals change? What shall we plant for our soup?	How good are we at different activities? **Rock Detectives** What different types of rock are there? Which rock is which? How are rocks used around our school? Are all rocks as hard as one another? Are all rocks waterproof? How do rocks change over time? How is soil made? Why do some soils hold water? What is a fossil anyway? How are fossils formed? **Can you see me?** What do we need to see? Which is the shiniest? How can we make things easier to see at night? What do mirrors do? How can I make a shadow? Can you change the shape of a shadow? How can you change the size of a shadow? What makes the best sunglasses? Making sunglasses. **The Power of Forces** How can you make it start to move? What's making it move? How well can an object slide on different materials? Which materials are magnetic? What can magnets do? How strong are the magnets?	digestive system? **In a State** What are my properties? What happens to the ice hands? What makes a difference to how fast ice melts? What are melting and freezing? Are spaces really empty? What state am I? How can we get it dry? What is evaporation? What is boiling? Where did the water come from? Where does rain come from? What have we learned about changes of state? **Good Vibrations** What do we know about sounds? How are sounds made? How do sounds travel? How can we make a sound louder and quieter? How do sounds change as we move away from the source? How can we change the pitch of a plucked note? How can we use air to make music? **Switched On** What makes it work? Can you light the bulb? How does a circuit work? Why doesn't it work? What does a switch do? What can we use instead of wires? What types of material conduct	school building? What for and why? Weighty Problem: Which is the best carrier bag? Which is the best type of plate to use? Cool Box Conundrum: Can the same container keep cold things cold and hot things hot? Mystery Material: What will happen if we add water to the material? Nappy Ending: What's the best brand of nappy? **Get Sorted** How can we compare and group materials? Is a solid always hard? Is a liquid always runny? Are all metals the same? Are all plastics the same? To bounce or not to bounce: Why are sport balls all so different? **Marvellous Mixtures** How can we separate mixtures? What happens when we mix liquids and solids? What makes a difference to how fast sugar or salt dissolves? How can we get drinkable water from seawater? How can we purify materials? **All Change** Are the changes that happen around us reversible or non-reversible? How much gas can be produced by non-reversible change? How long does it take for iron nails to rust?	Can you face the garden centre challenge? How are vertebrates grouped together? How are invertebrates grouped together? Where do things fit? What else is living besides plants and animals? How can you grow your own micro-organism? Was it always this way? What happens when scientists disagree? What should we call it? **Our Changing World** How do animals behave at different times of the year? How can we observe animals when we are not there? How can we observe the life cycles of specific animals more closely? How does the number, type, and behaviour of birds found around our school change during the year? What happens to invertebrates during the year? **Everything Changes** Why do living things vary? Can you breed a dog for a specific purpose? How can we make our food better? How does the environment affect plants? How do environmental variables affect plants? How do living things survive? Why do living things become

		How are animals' bodies different? Do fish have fingers? What's so special about birds? How do different animals move? Whose food is this? Which animals are busy at night? **Our changing world: Animal Antics** Which animals live around our school? How many birds visit our bird feeding station? How do snails change over time? How should we care for our pets? **Our changing world – Sensing Seasons** How do the changing seasons affect me? What can we see and hear that shows us the seasons are changing? Part 1 & 2 How does the weather change across the seasons? What do different kinds of weather look and	How do plants grow and change over time?	How do magnets affect each other? **Our Changing World** How do leaves change through the year? What seeds can we find through the year? How do flowers change through the year? What colour are berries? How often do insects visit plants? What plants grow in the school grounds during the year? How do sunflower seeds ad plants grown and change over time? Part 1 & 2	electricity? How are electrical conductors and insulators used? What do we know now about electricity? **Our Changing World** How can we classify trees by looking at their leaves? How can we classify and identify deciduous trees in winter? How can we classify plants by looking at their flowers?	What happens when a candle burns? How long does it take for things to rust? **The Earth ad Beyond** What's in space? What is a year? What is a day? How does the sun help us to measure time? What time is it around the world? Why do we have seasons? What are our conclusions about sunrise and sunset times? Why does the moon change shape? **Feel the Force** How can we measure forces? Why does an object fall? What makes things move? How can we slow down falling objects? Does the shape of an object effect its movement in a liquid? Do all heavy things sink? How far can you stretch? How can we use levers to help us? How can we lift a heavy load? Can a wheel with teeth make work easier? **Our Changing World** What signs of plant reproduction can we observe around school? How can we grow more plants, without using seeds? Which plants are best to plant in our growing space? How can we ensure that plants in our growing space yield as many	extinct? What does it take to survive? What evidence is there that living things have changed over time? How does natural selection work? **Light Up Your world** What is light and what does it do? Can you see more than just your face in a mirror? Can light go round corners? Can you make a camera with a box, paper and pin? How can you measure a shadow? What do we know about changing shadow sizes? Can light change direction without a mirror? How many ways can you make a rainbow? How much do you know about light? **Danger! Low Voltage** How many simple circuits can you make? What does a switch do? How strong is your resistance? Do you know your circuit diagrams and can you construct working circuits for them? Will the lights stay on? Part 1 & 2

		feel like?				crops as possible?	
	All units contain additional teacher materials and EL (Enrichment) tasks.						

Vocabulary List	**Biology Animals and Plants** soil segments saddle camouflage habitat hatchling human seed root leaf flower stem animal adult parent young male female **Chemistry – Objects and Materials** home materials material suitable heat melt mix wet dry	**Using our Senses** body, head, neck, arms, elbows, hands, fingers, legs, knees, feet, face, skin, ears, eyes, nose, nostrils, hair, mouth, teeth, tall, taller, short, shorter, big, bigger, small, smaller, louder, softer, loud, quiet, high, low, senses, taste, hearing, touch, smell, sight, bitter, sweet, sour, sharp, tingly, fizzy, milky, creamy, buzzer, doorbell, radio, tocker timer, bird song, wind blowing, car horn, traffic noise, loud/er, quiet/er, peaceful, silent, silence, noise, noisy, bang, crash, whistle, buzz, ring, squeak, creak, rattle, bang, knock, tick, chime, feel, touching, sensitive, sense, sensory, rub, pinch, prod, rough, smooth, bumpy, wrinkled, grooved, shiny,	**Growing Up** baby, need, want, living, alive, essential, food, milk, water, drink, eat, air, breathe, shelter, warmth, survival, depend, child, toddler, compare, change, differences, dependent, independent, move, care, learn, appearance, annotate, life cycle, life story, stages, order, pregnancy, birth, teenager, adult, parent, elderly person, grow, measure, compare, table, scatter graph, plot, pattern, evidence, observation, question, record **Take care** food, sort, classify, Venn diagram, Carroll diagram, healthy diet, dairy, fruits, vegetables, meat, fish, beans, fat, sugar, bread, potatoes, cereals, exercise, physical activity, hot, sweaty, heart beating, pulse, tired, aching, muscles, clean, hygiene, hygienic, wash, bath, shower, brush, comb,	**How Does Your Garden Grow?** plant, roots, stem, trunk, leaf/leaves, flower, leaflet, stalk, veins, surface, edge, lobes, tip, food, root hair, nutrients, anchor, support, seed, germination, seedling, growth, mature plant, flowering, pollination, seed formation, bud, petal, sepal, carpel, stamen, pollen, reproduce, nectar, seed, fruit, dispersal, animal, wind, water, self-dispersal, explosion, sprinkling, competition, air, light, stigma, style, ovary, anther, filament, observe, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions **Amazing Bodies** stay alive, survive, food, balanced diet, nutrition, nutrients, fruit and vegetables, carbohydrates, protein, roughage, fibre, sugar, fat, dairy, skeleton, bones, protect, support, move, muscles, joints, ribs, heart, skull, brain,	**Who Am I?** features, sequence, key, distinguish, similarities, differences, vertebrate, fish, amphibian, reptile, bird, mammal, backbone, hair, scales, feathers, eggs, wings, beak, lungs, gills, cold blooded, warm blooded, suckle, head, thorax, abdomen, wing, segment, antennae, insects, arachnids (spiders), crustaceans, myriapods, molluscs, worms, observations, sort, group, classify, identify **Human Impact** environment, impact, positive, negative, litter, pollution, waste, biodiversity, habitat, derelict, graffiti, traffic, destroy, create, location, food chain, producer, consumer, human impact , global issue, destruction, deforestation, rainforest, climate, climate change, zoo, endangered, breed, wild, natural, predator, prey, conservation, categories, tally chart, pictogram, bar chart, axes, scale, opinion,	**Circle of Life** life cycle, birth, growth, reproduction, metamorphosis, aging, death, animal, mammal, amphibian, insect, bird, elephant, toad, bumblebee, blue tit, hedgehog, bat, polar bear, mountain gorilla, cubs, pups, hibernate, nocturnal, marsupial, toad, newt, salamander, tree frog, metamorphosis, tadpole, larva, frog, toad, gills, cold blooded, ladybird, butterfly, dragonfly, head, thorax, abdomen, antennae, egg, pupa, cocoon, adult, thrush, peregrine falcon, ostrich, emperor penguin, breeding cycle, clutch, brood, hatch, fledge, prey, predator, reproduce, habitat, environment, humpback whale, blue whale, swift, osprey, wildebeest, caribou, monarch butterfly, migrate, migration, navigate, genetic, endangered, threatened, extinct, extinction, evolution, giant panda, black rhino, peregrine falcon, bumblebee, salamander, osprey, koala bear	**Body Health** alcohol, asthma, athlete, balanced diet, beats per minute (bpm), benefits, breathing, caffeine, calories, cancer, carbohydrates (including sugars), cheating, cigarettes, clinical trial, consequences, dairy, diet, doping, drugs, eat well plate, energy, exercise, fat, fibre, heart, heart rate, intensity, illegal, impact, James Lind, legal, lifestyle, long-term effect, lungs, medicine, mental benefits, mineral, motivation, norm, nutrition, oxygen, passive smoking, peer pressure, performance enhancing, persuade, physical benefits, protein, pulse rate, RDA (recommended daily allowance), recovery rate, resting rate, rickets, roughage, saturated fat, scurvy, short-term effect, smoking, sodium, solvents, steroids, tobacco, training, unsaturated fat, vitamin

	sieve separate grains mixture **Physics – light, space, electricity and movement** dark light the Sun the Moon stars fly fall sky the Moon space astronaut rocket move push pull twist float sink **Our changing world: The local environment** autumn season winter deciduous leaves fruit spring season deciduous buds blossom winter insect summer	smooth, soft, hard, crunchy, slippery, slimy, fragrance, scent, pong, flowery, fruity, sour, bitter, sharp, strong, gentle, smelly, delicate, sensitive, fabric, material, layers, thick, thin, thicker, thinner, soft, hard, clock, window, door, floorboards, kettle, fire, chicken, sheep, cow, cluck, baa, moo **Everyday Materials** materials, wood, wooden, plastic, metal, glass, water, rock, brick, paper, writing, wrapping, shiny, drawing, display, greaseproof, kitchen towel, handkerchief, wallpaper, sand paper, fabric, wool, nylon, silk, fleece fibre, properties, hard, soft, fluffy, rough, smooth, shiny, dull, light, heavy, transparent (see-through), opaque (can't see-through), translucent (see something through), harder, lighter, rougher, stretch, stretchy, elastic, stiff, bend, bendy, not bendy, press, squash, twist, shape, waterproof,	toothbrush, toothpaste, soap, water, shampoo **What is your habitat?** habitat, alive, living, once-lived, dead, never-lived, plants, animals, decay, rocks, soil, air, water, food chain, plants, animals, herbivores (eat plants and parts of plants), carnivores (eat other animals), omnivores (eat plants/parts of plants and other animals), direction, source of food, suited, habitat, features, names of habitats, living things and animal body parts **Materials – Good Choices** material, wood, property, metal, plastic, glass, rock, brick, paper, cardboard, fabric, smooth, rough, soft, hard, bendy, squashy, stiff, rigid, shiny, dull, see through, cold, warm, breaks, fold, crease, waterproof, absorb, absorbent, wet, sunglasses, lenses, light, block, transparent, opaque, translucent, strength, strong, weak, tear, teabag, tea leaves, chair, legs, arms, seat, backrest, cushion, tent, stretchy, tent cover, frame, flexible, measure, record	backbone, spine, spinal column, vertebrate, footprint, trail, vitamins, minerals, question, classify, investigation, survey, measure, pattern, evidence, draw conclusions **Rock Detectives** sandstone, granite, chalk, limestone, marble, pumice, rough, smooth, hard, soft, rock, stone, pebble, texture, particle, crystal, granule, properties, soil, clay, sandy, loam, peat, organic material, weather, weathering, frost, beach, cliff, trilobite, starfish, sea urchin, ammonite, fossil, fossilise, remains **Can You See Me?** light, dark, shadow, mirror, bright, dim, reflect, eye, opaque, transparent, translucent, ultraviolet, ray, beam, absorb, luminous, non-luminous, infrared, question, investigation, fair test, change, measure, predict, prediction, explain, explanation, observations, draw conclusions **The Power of Forces** push, pull, twist, force, air, turns, fast, slow, slows down, material, surface, magnet, attracts, magnetic material, magnetism, acts at a distance, non-magnetic material, metal,	point of view, argument, viewpoint, debate **Where Does all that Food Go?** mouth, oesophagus, stomach, small intestine, large intestine, rectum, anus, digestive system, digestion, carbohydrate, fat, sugar, protein, roughage, dairy, fruit, vegetables, vitamins, minerals, balanced diet, healthy, mechanical process, chemical process, absorb, nutrients, water, saliva, chemicals, enzyme, teeth, canine, incisor, premolar, molar, jaw, cutting, tearing, grinding , dental hygiene, decay, dentist, brushing, toothpaste, floss, mouthwash, food, plants, animals, food chain, food web, producer, consumer, predator, prey, herbivore, omnivore, carnivore **In a State** solid, liquid, hard, soft, pour, flow, pile, pool, surface, horizontal, runny, viscous, sticky, grain, powder, ice, water, temperature, cool, cooling, warm, warming, hot, degree Celsius, melt, melting, freeze, freezing, solidify, solidifying, heating, states of matter, change of state, melting point, freezing point,	**Reproduction in Plants and Animals** reproduction, reproduce, flower, organ, carpel, stamen, pollen, seeds, seed head, berry, fruit, pollinator, pollination, fertilisation, reproduction, reproduce, propagate, stem, leaf and root cuttings, runners, tubers, bulbs, rhizomes, gender, male, female, sex, sexual, asexual, metamorphosis, mate, sperm, pregnant, give birth, young, pup, calf, foal, chick, hatch, fledge, fledgling **Everyday Materials** properties, material, building, construction, structure, organic, natural, manufactured, man-made, weathering, decay, decompose, break down, brittle, fragile, metal, plastic, wood, ceramic, concrete, compare, contrast, group, organise, criteria, strong, strength, weakness, durability, wear, tear, stretch, flexible, flexibility, hardness, light, heavy, durable, durability, waterproof, washable, stain resistant, reusable, bicycle, suspension, brakes, tyre tread, saddle, weight, mass, criteria, ovenproof, heat, temperature, room temperature, thermal conductor, thermal insulator, insulate, insulation, viscosity, viscous, sticky, stickiness, tackiness, adhesive, glue, saturated, powder, particle,	**Body Pump** aorta, artery, atrium, blood, blood vessel, body temperature, capillaries, carbon dioxide, cells, chamber, chest cavity, circulation, circulatory system, deoxygenated blood, digestive system, digestive tract, health, heart, heart valves, humans, hydration, lubricant, lungs, muscular system, nutrients, nutrition, oxygen, oxygenated blood, plasma, platelets, pump, red blood cell, skeletal, system, transport, valve, vein, vena cava, ventricle, vessel, waste, waste gases, white blood cells **The Nature Library** **General terms:** identify, identification, classify, classification, division, family, genus, species, reason, common characteristics, distinguishing characteristics, leaves, shape, size, colour, backbone, wings, jointed legs, cased, transparent, antennae, shell, segments, explain, group, small, harmful, beneficial (helpful), colony, colonies, mould, multiply, historically, grouping, Aristotle, Carl Linnaeus, kingdom, Phillip Miller, John Ray, botany, conventions **Kingdoms of living things:** Animalia, Plantae, Fungi,

	flowers fruit winter weather temperature summer shadow plant seed stem leaf root flower vegetable	absorb, absorbent, soak up, mop up; frozen, freeze, melt, salt, tissue paper, button, glass bead, marble, pebble, pasta **Plant Detectives** pansy, geranium, busy Lizzie, petunia, begonia, daisy, snapdragon, fuchsia, lily, daffodil, tulip, buddleia, weed, buttercup, thistle, nettle, foxglove, poppy, dandelion, daisy, cornflower, periwinkle, bluebell, leaf, stem, flower, bud, root, root system, tap root, fibrous roots, tree, trunk, branch, twig, tall, short, taller, shorter, tallest, shortest, similar, different, compare, group, measure **Our Changing World Plants** plant (verb and noun), leaf, leaves, bud, twig, branch, tree, roots, stem, shoot, bud, flower, leaf, rough, smooth, shiny, glossy, wrinkled, crinkled, crunchy, crisp, soft, green, olive, brown,	**Materials: Shaping Up** twist, squash, bend, stretch, squashing, bending, twisting, stretching, push, pull, pushing, pulling, roll, pinch, press, smooth, flexible, rigid, stretchy, squashy, elastic, stiff, properties, suitable, stretchiness, weight, catapult, frame, missile, strong, table, column, Venn diagram, set, sort, label, measure, record, bar chart **The Apprentice Gardner** seeds, plant (verb and noun), apprentice, gardener, bulb, grow, observe, observations, describe, identify, expert, question, predict, prediction, water, compare, answer, investigate, bean, soil, surface, test, bury, light, dark, water, germinate, fair, same, plan, suitable, radicle, root, shoot, leaves, change, evidence, height, tallest, shortest, bar chart, scale, pattern, question, connection, measure, seedling, mature plant, wilting, healthy, unhealthy, warmth, care, die, block, agree, disagree, alive, food store, fi rst, next, later, after…days, order, conclusion, because	non-metal, strength, north pole, south pole, repel, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions **Our Changing World** push, pull, twist, force, air, turns, fast, slow, slows down, material, surface, magnet, attracts, magnetic material, magnetism, acts at a distance, non-magnetic material, metal, non-metal, strength, north pole, south pole, repel, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions	process, gas, air, carbon dioxide, helium, oxygen, bubbles, empty, particle, weight, compress, squash, shape, volume, dry, evaporate, evaporation, water vapour, boil, boiling, boiling point, steam, thermometer, data logger, sensor, droplets, condense, condensation, water, droplets, cycle, model, snow, expand, scale, calibrate, heat sensitive, sensor, observe, measure, fair test, variable, collect, present, interpret, data, axis, scale, interval, control, keep the same, evidence, annotate, accuracy, describe, explain, evaluate, reliable, repeatable **Good Vibrations** solid, liquid, hard, soft, pour, flow, pile, pool, surface, horizontal, runny, viscous, sticky, grain, powder, ice, water, temperature, cool, cooling, warm, warming, hot, degree Celsius, melt, melting, freeze, freezing, solidify, solidifying, heating, states of matter, change of state, melting point, freezing point, process, gas, air, carbon dioxide, helium, oxygen, bubbles, empty, particle, weight, compress, squash, shape, volume, dry, evaporate, evaporation, water vapour, boil, boiling, boiling point,	polymer, volume, quantity **Get Sorted** properties, material, solid, liquid, gas, compare, contrast, group, organise, criteria, hardness, soluble, insoluble, transparent, transparency, opaque, hardness, strength, rigidity, flexibility, elastic, elasticity, ductile, electrical conductor/insulator, thermal conductor/insulator, magnetic, non-magnetic, attract, repel, viscosity, viscous, thick, thicker, types of plastic – polyester, nylon, polythene, PVC, polystyrene acrylic – recycle, reuse, biodegradable, environmentally friendly **Marvellous Mixtures** material, compare, contrast, separate, mixture, sieve, filter, evaporate, solid, liquid, gas, powder, particle, dissolve, soluble, solution, contamination, contaminate, contaminated, impurity, pure, purity, suspension, saturated, saturation, reversible, non-reversible, microbes, bacteria, types of oil, liquid, solid, detergent, sticky, filter, mechanical, boom, residue, environment, biological, marine life, purify, drinkable, sterilise	Protista, and Monera **Plant kingdom:** flowering plants, conifers, ferns, mosses and algae **Animal kingdom:** vertebrates, fish, amphibians, mammals, birds, reptiles, invertebrates, molluscs, annelids, arachnids, insects, arthropods **Micro-organisms:** (3 kingdoms: Fungi, Monera, Protista), micro-organisms (microbes) bacteria **Our Changing World** mammal, amphibian, insect, bird, metamorphosis, tadpole, nymph, pupae, chrysalis, caterpillar, migrate, hibernate, courtship, plumage, habitat, adaptation, behaviour, young, chick, life cycle, egg, pupae, adult, butterfly, nectar, death rate, nest, brood, fledgling, juvenile, diet, migration, resident, invertebrate, mollusc, worm, snail, woodlouse, centipede, millipede, beetle, aphid, adaptation, predator, prey, survival, habitat, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions, justify, analyse

		orange, red, yellow, rust, flower, blossom, petals, stem, stalk, small, little, big, large, single, lots, deciduous, evergreen, plug plant, soil, compost, manure, dig, prepare, water, watering, vegetable, fruit, names of vegetables and fruits, salad, wash, clean, peel, cut, chop, grate, mix, sprinkle, combine **Looking at Animals** fish, amphibian, reptile, bird, mammal, goldfish, tropical fish, budgerigar, parrot, rabbit, gerbil, hamster, mouse, chinchilla, lizard, snake, dog, cat, tail, paws, legs, feet, nose, ears, eyes, feather, fur, scales, fins, fish, tail, gills, scales, eyes, mouth, bill, beak, head, eye, legs, claws, wings, feather, down quill, webbed feet, legs, smooth skin, big eyes and mouth, nose, scaly skin, claws on feet, long tongue, big teeth, mackerel, trout, hake, sea bass, whitebait, flat fish, plaice, robin, blackbird, blue tit,	**Our Changing World** egg, offspring, baby, adult, grow, change, habitat, food chain, tally chart, pattern, chick, calf, cub, kid and other baby animal terms, seeds, bulbs, plant, root, stem, leaf, fruit, shoot(s), bud, flower, soil, compost, manure, dig, prepare, water, watering, vegetable, herbs, names of vegetables and herbs, wash, clean, peel, cut, chop, blend, smooth, puree, heat, boil, simmer, fry		steam, thermometer, data logger, sensor, droplets, condense, condensation, water, droplets, cycle, model, snow, expand, scale, calibrate, heat sensitive, sensor, observe, measure, fair test, variable, collect, present, interpret, data, axis, scale, interval, control, keep the same, evidence, annotate, accuracy, describe, explain, evaluate, reliable, repeatable **Switched On** electricity, electrical, mains, plugged in, battery, power, rechargeable, solar, wind up, sound, light, heat, movement, cell, wire, bulb, bulb holder, buzzer, motor, component, circuit, complete circuit, short circuit, flow, break, make, metal, connect, disconnect, terminal, positive, negative, switch, press switch, toggle switch, tilt switch, pendulum switch, property, electrical conductor, electrical insulator, electron, filament, sets, Venn diagram, Carroll diagram, table, conclusion, evidence, annotate **Our Changing World** stalk, simple and compound leaves, leaf edge, leaf shape, leaf arrangement, deciduous, evergreen, bud, twig, tree	**All Change** material, change, compare, contrast, solid, liquid, gas, change of state, dissolve, melt, reversible, non-reversible, mixture, powder, particle, tablet, bubbles, carbon dioxide, change, reaction, inflate, rust, oxidise, oxygen, corrode, tarnish; types of metal: iron, steel, chromium, tin, zinc; boil, vapour, fuel, heat, burn, burning, flammable, flame, melts, solidifies, candle, wick, wax **The Earth and Beyond** Aldebaran, Arctic, Antarctic, British Summer Time, Earth, Greenwich Meridian, International Date Line, Jupiter, Mars, Mercury, Milky Way, Moon, North Pole, Saturn, South Pole, Sun, Neptune, Universe, Uranus, Venus, asteroid, autumn, axis, compass, crescent, dawn, degrees, dusk, equator, equinox, fixed stars, Full Moon, galaxy, gibbous, hemisphere, horizon, illuminate, leap year, longitude, lunar month, meridian, nebula, New Moon, northern, orbit, planet, reflect, rotate, rotation, solar system, solstice, southern, spin, spring, star, summer, sunrise, sunset, telescope, temperature, tilt, time zone, waning, waxing, winter, year, change, compare, draw conclusions, explain, explanation, investigation, line	**Everything Changes** population, variation, environment, inheritance, adaptation, selective breeding, generation, survival, natural selection, evolution, fossils, genes, genetics, DNA, extinct, extinction, speciation, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions **Light up your World** light, dark, shadow, mirror, bright, dim, reflect, eye, opaque, transparent, translucent, ultra violet, ray, beam, refraction, periscope, spectrum, dispersion, inverted, medium, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions **Danger! Low Voltage** cell, battery, lamp, wire, buzzer, motor, circuit, current, filament, electrical insulator, electrical conductor, mains electricity, terminal, switch, toggle switch, push switch, slide switch, tilt switch, trembler switch, pressure switch, reed switch, series circuit, resistance, resistor,

		hawk, peacock, seagull, magpie, eagle, jump, hop, leap, climb, clamber, swing, pad, pace, prowl, pounce, spring, flap, fly, flutter, flop, splash, splosh, dive, swim, slither, slide, hedgehog, fox, bat, badger, night, nocturnal, senses, sight, smell, sonar, food, feeding, roost, sett, burrow, tunnel, nest, hospital, surgery, nurse, vet, patient, care, look after, treat, accident, injury, injured, illness, sick, medicine, bandage, stethoscope, gloves, face mask, overalls, cow, sheep, pig, horse, pony, goat, duck, chicken, cockerel, goose, harvest mouse, barn owl, rabbit, cat, dog, moo, baa, oink, neigh, bleat, quack, cluck, cock-a-doodle-do, honk, squeak, purr, miaow, woof, eat, healthy, meat, insects, fish, vegetables, plants, trees, grass, seeds, nuts, carnivore, herbivore, omnivore, goat, beard, hoof, hooves, horns, troll, ugly, big eyes, big			shape, leaf skeleton, vein pattern, seed, flower, blossom, petal, classification key, observe, record, classify, present	graph, measure, model, observations, plan, predict, prediction, presentation, question, record, review, scientific diagram, table **Feel the Force** air resistance, Aristotle, balanced, balanced forces, bevel gears, clockwork, cogs, compress, extend, effort, force arm, forces, force, friction, force arrow, fulcrum, gravity, Galileo, gear ratio, gears, gear trains, lever, lift, machine, mechanisms, movement, Newton, Newton meter, pinion, pivot, pulley, pull, push, rack, resistance, rotary motion, simple machines, speed, time, unbalanced force, upthrust, water resistance, weight arm, wheel **Our Changing World** flower, carpel, stamen, pollen, seed, seed head, berry, hip, fruit, pollinator, pollination, fertilise, fertilisation, seed dispersal, male, female, organs, sex, propagate, propagation, stem/leaf/root cutting, runner, tuber, rhizome, bulb, crop, cropping, produce, yield, glut, names of fruit and vegetables being grown	current, circuit diagram, recognised symbols, generate, generator, coal, gas, oil, fossil fuels, nuclear, biomassfired power stations, wind turbine, wave hub, tidal flow, hydro-electric, grid, pylon, transmission, transformer, solar panels

		pointed ears, big nose, big mouth with sharp teeth, small, medium, big, smallest, biggest, dinner, meal, meat, lamb, beef, ham, chicken, vegetables, plants, trees, bushes, grass, menu, hamper, appetite **Our Changing World: Animal Antics** butterfly, fly, wasp, bee, frog, spider, woodlice, worm, ant, ladybird, fly, squirrel, fox, dog, puppy, cat, kitten, hedgehog, bird, blackbird, house sparrow, starling, pigeon, seagull, robin, thrush, wagtail, blue tit, chaffinch, great tit, collared dove, magpie, wood pigeon, bird table, feeder, nuts, seed, types of seed, fat ball, snail, shell, foot, slime, slimy, striped, stripy, ridged, spiral, terrarium, dandelion, feed, food, leaves, lettuce, paws, claws, fur, whiskers, tail, furry, fluffy, silky, smooth, rough, thick, thin, long, short, big, small, brush, comb, lead, collar, toys, biscuits, chews					

		Sensing Seasons seasons, autumn, winter, spring, summer, evidence, similar, different, group, compare, change, names of the months of the year, temperature, hot, warm, cold, cool, freezing, frosty, wet, dry, sunny, cloudy, showery, stormy, windy, breeze, gale, rainy, sunny, snow, shower, drizzle, puddle, breeze, gale, thunder, lightning, sleet, fog, mist, hat, gloves, mittens, scarf, muffler, ear muffs, boots, coat, umbrella, wellies, kite, windmill, sunglasses, thick, thin, woolly, furry, warm, waterproof					

EYFS / National Curriculum Links	**Physical development:** Moving and handling **Expressive arts and design:** Observational drawing **Expressive arts and design:** Exploring and using media and	**Animals including humans** **NC Objectives** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common	**Living things and their habitats** **NC Objectives** Explore and compare the differences between things that are living, dead, and things that have never been alive Identify that most living things live in habitats to which they are suited and	**Plants** **NC Objectives** 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	**Living things and their habitats** **NC Objectives** 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 their local and wider	**Living things and their habitats** **NC Objectives** Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals **Animals including humans** **NC Objectives**	**Living things and their habitats** **NC Objectives** 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

	materials **Understanding the world / Literacy:** Reading **Physical development**: Health and self-care **Personal, social and emotional development:** Making relationships / Role play **Understanding the world / Literacy / Communication and language:** The world / writing **Communication and language / Understanding the world:** Understanding / The world **Mathematics**: Shape, space and measures – What shapes can fit together? **Communication and language** **Mathematics:** Speaking / Listening and attention / Numbers **Mathematics:** Data	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 and say which part of the body is associated with each sense **Everyday Materials** **NC Objectives** 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 **Plants** **National Curriculum**	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 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 **Plants** **NC Objectives** 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 **Animals Including Humans** **NC Objectives** 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	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 **Animals Including Humans** **NC Curriculum Objectives** 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 **Rocks** **NC Objectives** Compare and group together different kinds of rocks on the basis of their 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 **Light** **NC Objectives** Recognise that they need light in order to see things and that	environment Recognise that environments can change and that this can sometimes pose dangers to living things **Animals including humans** **NC Objectives** 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 **States of matter** **NC Objectives** 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 **Sound**	Describe the changes as humans develop to old age **Properties and changes of materials** **NC Objectives** 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 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	Give reasons for classifying plants and animals based on specific characteristics **Animals including humans** **NC Objectives** 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 **Evolution and inheritance** **NC Objectives** 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

	handling **Expressive arts and design:** Painting **Mathematics**: Capacity Mathematics **Understanding the world:** Shape, space and measures **Understanding the world:** The world / Technology **Expressive arts and design:** Colour mixing **Understanding the world:** People and communities / The world	**Links** 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 **Seasonal Change** **NC Objectives** Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies	**Use of Everyday Materials** **NC Objectives** 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	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 an opaque object Find patterns in the way that the size of shadows change **Forces and Magnets** **NC Objectives** Compare how things move on different surfaces Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance Observe how magnets attract or repel each other and attract some materials and not others Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials Describe magnets as having 2 poles Predict whether 2 magnets will attract or repel each other, depending on which poles are facing	**NC Objectives** 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 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 **Electricity** **NC Objectives** 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 that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit Recognise some common	not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda **Earth and Space** **NC Objectives** 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 **Forces** **NC Objectives** 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	**Light** **NC Objectives** 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 **Electricity** **NC Objectives** 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 components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Use recognised symbols when representing a simple circuit in a diagram

					conductors and insulators, and associate metals with being good conductors	force to have a greater effect	