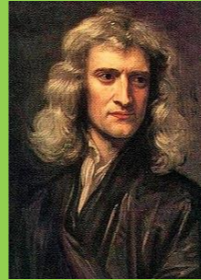




Brockwell Junior School Science Progression Map

Science - Gaining scientific knowledge and understand the implications of science today and in the future

'If I have seen further than others, it is by standing on the shoulders of giants' – Isaac Newton



We aim to deliver excellence in science learning. It is vital that children develop a love and respect for a subject that constantly seeks to discover the truth in its findings, and adapts and moulds as new evidence is uncovered, adding to or replacing older knowledge and wisdom. We want our children to develop a sense of curiosity and excitement as they take their own steps on this journey. We want our pupils to develop rigorous skills – make predictions based on prior knowledge, using these in a systematic way, and seeking an explanation for their results. We want our children to take these skills on to the next stage of their education (and beyond, into their adult life) so they are able to seek and identify truth, clarity and validity.

Year Group	Year 3			Year 4			Year 5			Year 6		
Term	Sep - Dec	Jan - Apr	May - July	Sep - Dec	Jan - Apr	May - July	Sep - Dec	Jan - Apr	May - July	Sep - Dec	Jan - Apr	May - July
Module 1	<u>Amazing bodies</u> In this module children will build on their knowledge of the human body developed in Key Stage 1.	<u>The power of forces</u> During this topic children will explore how forces can make objects start to move, speed up, slow down or change direction.	<u>How does your garden grow?</u> In this module children will build on their experiences of identifying and growing plants in Key Stage 1.	<u>Where does all that food go?</u> In this module children will build on knowledge of the human body that they developed in Key Stage 1 and also during the Amazing Bodies unit in Year 3.	<u>In a state</u> This module introduces the concept of states of matter. Children will learn the characteristic properties of solids, liquids and gases, first through physically exploring typical materials and then by classifying examples, such as powders and very viscous liquids, which are harder to classify.	<u>Where does all that food go?</u> <u>Who am I?</u> In this module children will further develop the understanding of keys they gained in the Year 3 rocks module, using them to identify animals from a range of habitats.	<u>The Earth and beyond</u> In this module children develop their knowledge of the Earth's (and other planets') place in the solar system, and their relationships with other bodies in space, in particular with the Sun.	<u>Feel the force</u> In Year 3 children learned about how contact and non-contact forces make things start and stop moving. This module builds on these ideas and develops an understanding of how forces including gravitational attraction and drag forces – friction, air resistance, water resistance, and upthrust in water – affect movement.	<u>Reproduction in plants and animals</u> In this module children learn about reproduction in some types of plants and animals, including humans	<u>Everything changes</u> This is a challenging module in which children build on their knowledge of living things and how they are adapted to particular environments.	<u>Body pump</u> This module builds on learning about the human body from Key Stage 1, when they learned that humans and other animals need water, food and air in order to survive, and also during lower Key Stage 2, when they investigated the muscular, skeletal and digestive systems.	<u>The nature library</u> This is a challenging module in which children will build on their knowledge of living things from previous years and deepen their understanding of why and how organisms are classified.
Module 2	<u>Can you see me?</u> In this module children start their formal look at light, and whilst they will have some prior experience at home, this has not been covered in school before.	<u>How does your garden grow?</u> In this module children will build on their experiences of identifying and growing plants in Key Stage 1.	<u>Rock detectives</u> In this module children will work as 'Rock Detectives' establishing core knowledge and understanding of rocks, their relationship to soils and how fossils have formed over time.	<u>Good vibrations</u> In this module children will build on their understanding of hearing, which was covered in Year 1 during work around the senses.	<u>Switched on</u> In this module children will identify electrical appliances, distinguishing between those which are powered by mains and battery (including those with integral rechargeable batteries) and recognising that electricity can be used to produce light, sound, heat and movement. Children will explore the production of light, sound and movement by making simple series circuits with cells, wires, bulbs, buzzers and motors, learning the names of the components.	<u>Human impact</u> In this module children will learn about some of the positive and negative ways that humans change the environment, locally and globally, with a particular focus on how this affects other living things. <u>In a state</u>	<u>Get sorted</u> In this module children identify, compare and classify a variety of materials according to both their properties and their uses. <u>Everyday materials</u> In this module children further develop their knowledge and understanding of materials, achieving an in-depth knowledge of the properties of certain materials and how and why those specific properties make them suitable for particular uses	<u>Circle of life</u> In this module children build on earlier work from Key Stage 1 and from Year 3, where they learned about the life cycles of plants. <u>Reproduction in plants and animals</u> In this module children learn about reproduction in some types of plants and animals, including humans.	<u>Marvellous mixtures</u> In this module children further develop their conceptual knowledge and understanding of how different mixtures of solids and liquids might be separated. <u>Materials: All change!</u> In this module children develop their knowledge and understanding of changes to materials.	<u>Light up your world</u> In this module children build on the work that they have done in Year 3 where they learned about light sources, how light enables us to see by reflecting from objects and how different amounts of light and shadows	<u>Danger! low voltage</u> In this module children develop their understanding of electrical circuits and build on the work in the Year 4 module.	<u>Body health</u> In this module children learn about how to keep their bodies healthy and how their bodies might be damaged. The focus is on lifestyle choices that humans make, including diet, exercise and drug use, and how these are informed by scientific evidence.
Our Changing World modules	Lessons 1, 2 and 3 twice this term all together in one lesson Lesson 4 once this term Lesson 5 in early September	Lessons 1, 2 and 3 twice this term all together in one lesson Lesson 4 once this term Lesson 5 in early Spring	Lessons 1, 2 and 3 twice this term all together in one lesson Lesson 4 once this term Lesson 5 twice in Summer	Lesson 1	Lesson 2 Do in early January	Lesson 3			Lesson 1	Lessons 1 and 2 (more than once) Lesson 4 (more than once) Lesson 5 (more than once)	Lessons 1 and 2 (more than once) Lesson 4 (more than once) Lesson 5 (more than once)	Lessons 1 and 2 (more than once) Lesson 4 (more than once) Lesson 5 (more than once)

Key Vocabulary												
Module 1	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, backbone, spine, spinal column, vertebrate, footprint, trail, vitamins, minerals, question, classify, investigation, survey, measure, pattern, evidence, draw conclusions	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	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	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	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, 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	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	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 graph, measure, model, observations, plan, predict, prediction, presentation, question, record, review, scientific diagram, table	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	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	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	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	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, 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 Vocabulary for working scientifically: question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions, plan, do, review, risk

<p>Module 2</p>	<p>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, explanation, observations, draw conclusions</p>	<p>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</p>	<p>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</p>	<p>sound, loud, quiet, high, low, repeating, continuous, strike, blow, shake, pluck, vibration, vibrate, solid, gas, volume, strength of vibrations, sound source, fainter, distance, pitch, particles, question, investigation, fair test, change, measure, predict, prediction, explanation, observations, draw conclusions</p>	<p>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</p>	<p>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, point of view, argument, viewpoint, debate</p>	<p>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</p>	<p>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, hibernates, 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</p>	<p>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</p>	<p>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</p>	<p>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, current, circuit diagram, recognised symbols, generate, generator, coal, gas, oil, fossil fuels, nuclear, biomass fired power stations, wind turbine, wave hub, tidal flow, hydro-electric, grid, pylon, transmission, transformer, solar panels</p>	<p>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, eatwell 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</p>
<p>Our Changing World</p>	<p>leaf, deciduous, evergreen, seed, berry, fruit, flower, seedling, seed head, grow, growth, habitat, soil type, variation, season, seasonal change, pollen, pollinate, nectar, honey bee, bumblebee, butterfly – Large White, Tortoiseshell, Peacock, observe, record, present</p>	<p>stalk, simple and compound leaves, leaf edge, leaf shape, leaf arrangement, deciduous, evergreen, bud, twig, tree shape, leaf skeleton, vein pattern, seed, flower, blossom, petal, classification key, observe, record, classify, present</p>	<p>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</p>	<p>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</p>								

Curriculum statement												
Module 1	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.	Notice that some forces need contact between two objects, but magnetic forces can act at a distance.	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.	Identify that animals, including humans, need the right type and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat (Year 3).	Compare and group materials together according to whether they are solids, liquids or gases.	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	Describe the movement of the Earth, and other planets, relative to the Sun in the Solar System.	Identify the effects of air resistance, water resistance and friction, which act between moving surfaces.	Describe the life process of reproduction in some plants and animals.	Recognise that living things produce offspring of the same kind, but that offspring normally varies and are not identical to their parents.	Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood.	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.
	Identify that humans and some animals have skeletons and muscles for support, protection and movement.	Compare how things move on different surfaces.	Investigate the way in which water is transported within plants.	Describe the simple functions of the basic parts of the digestive system in humans.	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.	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	Use the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	Describe the changes as humans develop to old age.	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Describe the ways in which nutrients and water are transported within animals, including humans.	Give reasons for classifying plants and animals based on specific characteristics.
Module 2	Recognise that we need light in order to see things and that dark is the absence of light.	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	Identify how sounds are made, associating some of them with something vibrating.	Identify common appliances that run on electricity.	Recognise that environments can change and that these changes can sometimes pose dangers to living things.	Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets.	Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	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 recognised symbols when representing a simple circuit in a diagram.	Recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function.
	Notice that light is reflected from surfaces.	Investigate the way in which water is transported within plants.	Recognise that soils are made from rocks and organic material.	Recognise that vibrations from sounds travel through a medium to the ear.	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wire, bulbs, switches and buzzers.	Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic.	Explain the life process of reproduction in some plants and animals.	Describe the life process of reproduction in some plants and animals.	Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.	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.	Compare the functions of different components, giving reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off positions of switches.	
Our Changing World	Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object.	Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	Describe in simple terms how fossils are formed when things that have lived are trapped within rock	Find patterns between the volume of a sound and the strength of the vibrations that produced it.	Identify whether or not a lamp will light in a simple series circuit, based on whether a lamp is part of a complete loop with a battery.	Recognise that sounds get fainter as the distance from the sound source increases.	Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic.	Describe the changes as humans develop to old age.	Demonstrate that dissolving, mixing and changes of state are reversible changes.	Recognise that light appears to travel in straight lines.	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, and use recognised symbols when representing a simple circuit in a diagram.	
	Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.			Recognise that sounds get fainter as the distance from the sound source increases.	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 conductors and insulators and associate metals with being good conductors.			Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.		
	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.			Describe the life process of reproduction in some plants and animals.	Describe the life process of reproduction in some plants and animals.	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.		
	Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.								Recognise that living things produce offspring of the same kind, but that offspring normally varies and are not identical to their parents.			
									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.			

STEM Opportunities / Enrichment

Ozobot (colour)	K'Nex Science Week		Ozobot (coding) Crumble	K'Nex Science Week		'Slitch in Time' with Warwick University Crumble	K'Nex Science Week Investigating Towers		Tying Pattern Project with University of Sheffield	K'Nex Science Week	
									3D Printing Microbit		

Cultural Capital

Amazing Bodies – STEM Ambassador email sent 18/6/21	Rockets and Balloons workshop – Magna trip		Sound workshop – Magna trip	Solids, Liquids and Gases - 12 th January LD (BOC) – Gases All Around workshop		Stars and Planets – Magna trip Everyday materials - CB workshop	Feel the force - CB workshop		Everything Changes – STEM Ambassador email sent 18/6/21		Juicy Fruit – Magna trip
---	--	--	-----------------------------	---	--	--	------------------------------	--	---	--	--------------------------

BEING SCIENTIFIC



1. Ask relevant questions and use scientific enquiry to answer them.
2. Carry out simple practical enquiries, comparative and fair tests.
3. Observe systematically and carefully; where appropriate take measurements using standard units
4. Identify differences, similarities or changes related to simple scientific ideas or processes
5. Gather, record, classify and present data to answer questions.
6. Report on findings of investigations.
7. Use scientific evidence to answer questions, draw simple conclusions, make predictions, suggests improvements and raise further questions.
8. Y6 -Use test results to make predictions and to set up further comparative and fair tests.