



### Science at Shotley Bridge Primary School

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Reception</b>	<b>Theme</b> Marvellous Me	Celebrating Diversity	Polar Regions	People Who Help Us	The Farm	Our Wonderful World
	<p><b><u>Nursery Rhymes</u></b></p> <ul style="list-style-type: none"> <li>• Twinkle Twinkle</li> <li>• Incy Wincy Spider</li> </ul> <p><b><u>Enthusiastic Enquirers</u></b></p> <ul style="list-style-type: none"> <li>• Plan Bulbs to Flower in the Spring</li> <li>• Seasonal Changes: Autumn</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• Draw Pictures Of People In Their Family</li> <li>• Make Transient Art Using Natural Autumnal Resources To Explore Different Textures</li> </ul> <p><b><u>Imaginative Innovators (Imagination and Expression)</u></b></p> <ul style="list-style-type: none"> <li>• Engage In Imaginative Role Play In The Home Corner</li> </ul>	<p><b><u>Nursery Rhymes</u></b></p> <ul style="list-style-type: none"> <li>• Baa, Baa, Black Sheep</li> <li>• Elephants Have Wrinkles</li> <li>• Five Little Ducks</li> </ul> <p><b><u>PSHE themes</u></b></p> <ul style="list-style-type: none"> <li>• Individual Differences</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• Use Scissors To Create Paper Snowflakes</li> </ul> <p><b><u>Imaginative Innovators (Imagination and Expression)</u></b></p> <ul style="list-style-type: none"> <li>• Take On Roles In The School Role Play Area</li> </ul>	<p><b><u>Nursery Rhymes</u></b></p> <ul style="list-style-type: none"> <li>• 1, 2, 3, 4, 5 Once I Caught A Fish Alive</li> <li>• Five Little Speckled Frogs</li> </ul> <p><b><u>PSHE themes</u></b></p> <ul style="list-style-type: none"> <li>• Solving Problems</li> </ul> <p><b><u>Enthusiastic Enquirers</u></b></p> <ul style="list-style-type: none"> <li>• Polar Regions - Climate and Animals</li> <li>• Using a globe - Find The UK, The Arctic and Antarctica</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• Use Masking Tape To Join Materials To Create Models</li> <li>• Use Pencils To Draw Penguins</li> <li>• Use Scissors To Cut Icebergs</li> </ul> <p><b><u>Imaginative Innovators (Imagination and Expression)</u></b></p> <ul style="list-style-type: none"> <li>• Take On Roles In The Home Corner</li> </ul>	<p><b><u>Nursery Rhymes</u></b></p> <ul style="list-style-type: none"> <li>• I Had A Little Turtle</li> </ul> <p><b><u>PSHE themes</u></b></p> <ul style="list-style-type: none"> <li>• Oral Hygiene</li> <li>• Neurodiversity Awareness</li> </ul> <p><b><u>Enthusiastic Enquirers</u></b></p> <ul style="list-style-type: none"> <li>• Seasonal Changes: Spring</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• To Create Observational Drawings Of Flowers</li> </ul> <p><b><u>Imaginative Innovators (Imagination and Expression)</u></b></p> <ul style="list-style-type: none"> <li>• Take On Roles In A Doctors Surgery Role Play</li> </ul>	<p><b><u>Nursery Rhymes</u></b></p> <ul style="list-style-type: none"> <li>• Old McDonald Had A Farm</li> </ul> <p><b><u>Significant dates and celebrations</u></b></p> <ul style="list-style-type: none"> <li>• Earth Day</li> </ul> <p><b><u>PSHE themes</u></b></p> <ul style="list-style-type: none"> <li>• Wobbly Teeth</li> <li>• Healthy Eating</li> <li>• Keeping Active</li> </ul> <p><b><u>Enthusiastic Enquirers</u></b></p> <ul style="list-style-type: none"> <li>• Visit Hall Hill Farm</li> <li>• Where Food Comes From</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• Use Collage To Create Farm Animals And Landscape Scenery Out Of Different Materials</li> <li>• Plan And Makes Vegetable Soup</li> </ul> <p><b><u>Imaginative Innovators (Imagination and Expression)</u></b></p> <ul style="list-style-type: none"> <li>• Create Sound Patterns With Musical Instruments</li> </ul>	<p><b><u>Significant dates and celebrations</u></b></p> <ul style="list-style-type: none"> <li>• World Ocean Day</li> </ul> <p><b><u>PSHE themes</u></b></p> <ul style="list-style-type: none"> <li>• Looking After Our Environment</li> <li>• Looking After Ourselves In The Sun</li> </ul> <p><b><u>Enthusiastic Enquirers</u></b></p> <ul style="list-style-type: none"> <li>• Plant Cress Seeds</li> <li>• Observe The Growth Of Cress</li> <li>• Look For And Identify Butterflies And Minibeasts</li> </ul> <p><b><u>Imaginative Innovators (Materials)</u></b></p> <ul style="list-style-type: none"> <li>• Use Crayons To Create Leaf Rubbings</li> <li>• Make And Taste Cress Sandwiches</li> </ul>

#### Key Stage 1

Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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

Year 1		<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
	Topic	<b>Autumn 1 - Seasonal changes</b>	<b>Spring 1 - Animals including humans - About me</b>	<b>Summer 1 - Uses of everyday materials - Building unit</b>
	Prior Learning			
	Key Vocabulary	winter, summer, spring, autumn, weather, seasons, day length, rainy, icy, frost, hail, cold, warm, sunrise, sunset, rainbow, hot, storm, thunder, lightning, sunny, sun, sunset, sunrise, temperature	head, body, eyes, ears, mouth, teeth, leg, foot, neck, arm, fingers, senses, iris, pupil, eyelash, eyelid, see, ears, hear, taste, tongue, taste buds, touch, feel, skin, nose, smell	structure, solid, strong, bendy, waterproof, properties, glass, see-through, not see-through, shiny, furniture, wood, plastic, fabric, stretchy, soft, natural, manmade
	Learning Intentions	To understand there are four seasons To understand the changes that take place in autumn To understand the changes that take place in winter To understand the changes that take place in spring To understand the changes that take place in summer To understand the differences across the different seasons	To discover the basic parts of the human body To learn about eyes and sight <b>and</b> To learn about ears and hearing (carousel) To explore the tongue and taste To explore the sense of touch To discover how your nose smells	To build a structure strong enough the withstand wind To build a waterproof structure To understand the properties of glass and its uses To understand that materials are used to create a variety of furniture To explore a variety of fabrics and understand their different properties
	Topic	<b>Autumn 2 - Animals including humans - About animals</b>	<b>Spring 2 - Exploring everyday materials</b>	<b>Summer 2 - Introduction to plants</b>
	Prior Learning			
	Key Vocabulary	Fish, amphibians, reptiles, birds, mammals, bird, mammal, tail, wing, feathers, beak, fur, paws, hooves, fish, amphibian, reptile, fin, scales, gills, lungs, carnivores, omnivores, herbivores, diet, predator, prey, characteristics, class, identify, group, differences	material, wood, plastic, glass, metal, brick, fabric, foil, card/cardboard, rubber, properties, hard, soft, stretchy, stiff, rough, smooth, dull, manmade, natural, heavy, light, hard, soft, waterproof, absorbent	Seed, leaf, petal, fruit, root, trunk, branch, stem, bark, stalk, bud, flower, environment, deciduous, evergreen, growth, flower, petal, stem, increase, decrease, leaves
Learning Intentions	To discover animal families To learn about the differences between mammals and birds To learn about the differences between amphibians, reptiles and fish To discover the types of food living things eat To explain the characteristics of an animal	To identify and name a variety of everyday materials To find the difference between an object and the material it is made from To describe the properties of everyday materials To identify objects that are natural and those that are manmade To predict and identify if an object will float or sink To explore which materials are best for different objects	To understand that seeds grow into plants (including fruit trees and vegetables) To identify the basic parts of a plant and tree To understand that different plants can grow in the same environment To know the difference between deciduous and evergreen trees To record the growth of a plant	

Year 2		<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
	Topic	<b>Autumn 1 - Living things and their habitats - Habitats from around the world</b>	<b>Spring 1 - Animals including humans - Growth</b>	<b>Summer 1 - Everyday materials</b>
	Prior Learning		Y1 - Identify and name carnivores, herbivores and omnivores.	Y1 - 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.
	Key Vocabulary	habitat, suited, suitable, needs, conditions, environment, climate, endangered, extinct, survive, pollution, rainforest, biodiversity, deforestation, ocean, ecosystem, suited, habitat	survival, essential, shelter, nutrition, oxygen, exercise, heartbeat, needs, wants, fruit, vegetable, grain, protein, dairy, nutrition, fatigue, strength, balance, coordination, flexible, hygiene, germs, bacteria (good and bad), virus, illness	properties, wood, plastic, glass, metal, brick, paper, cardboard, structure, flexible, rigid, shape, stretch, squash, bend, twist, fluorescent, waterproof, reflective, non-reflective, properties, bound, surface
Learning Intentions	To learn about habitats To appreciate that environments are constantly changing To explore the rainforest and its problems To describe life in the ocean To create a model of a habitat	To describe the needs of animals for survival To describe the needs of humans for survival To explore the importance of eating the right food To investigate the impact of exercise on our bodies To investigate the importance of hygiene	To identify different materials and their uses To understand how to select the right materials to build a bridge To explore and test the stretchiness of materials To understand that materials can change their shape by twisting, bending, squashing or stretching To find out about <b>Charles Macintosh</b> and explore how materials are suitable for different purposes To discover which materials change shape when making a road with <b>John McAdam</b>	

	<b>Topic</b>	<b>Autumn 2 - Living things and their habitats</b>	<b>Spring 2 - Animals including humans - Life Cycles</b>	<b>Summer 2 - Plants - Growth and care</b>
	<b>Prior Learning</b>		Y1 - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense./Describe and compare the structure of a variety of common animals	Y1 - Identify and name common, wild and garden plants. / Identify and describe the structure of flowering plants.
	<b>Key Vocabulary</b>	living, dead, movement, respiration, sensitivity, growth. excretion, reproduce, nutrition, microhabitat, shelter, habitat, suited, suitable, needs, conditions, survive, food chain, predator, prey, nutrient, scavenger, minerals. natural, source, processed, organic	life cycle, growth, baby, toddler, child, teenager, adult, elderly, offspring, inherit, differences, resemble, bird, life cycle, reproduce, hatchling, embryo, insect, chrysalis, caterpillar, metamorphosis, larva, amphibian, frogspawn, tadpole, froglet	seed, bulb, growth, germinate, shoot, seedling, control, predict, method, investigate, light, space, sunlight, temperature, carbon dioxide, photosynthesis, glucose, life cycle, germination, reproduction, seedling, pollination, environment, suitable, adapt, space, observe, record,
	<b>Learning Intentions</b>	To explore and compare the differences between things that are living, dead, and things that have never been alive To identify and name a variety of plants and animals in a microhabitat To design a suitable microhabitat where living things could survive To understand food chains To understand the journey food makes from the farm to the supermarket	To order the stages of the human life cycle To describe the stages of the human life cycle To identify offspring and parent of an animal To explore the life cycle of a chicken To describe the life cycle of a butterfly To explore the life cycle of a frog	To know the difference between seeds and bulbs To design an experiment to find out what plants need to grow To describe what plants need to grow and stay healthy To describe the life cycle of a plant To observe and record the growth of plants over time To understand that plants adapt to suit their environment

### Lower Key Stage 2

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, 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
- 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
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

<b>Year 3</b>		<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
	<b>Topic</b>	<b>Autumn 1 - Rocks</b>	<b>Spring 1 - Animals including humans - What makes us?</b>	<b>Summer 1 - Scientific Enquiry</b>
	<b>Prior Learning</b>		Y1 - Describe and compare the structure of a variety of common animals.	
	<b>Key Vocabulary</b>	Intrusive igneous, extrusive igneous, texture, magma, crystal, properties, sedimentary, metamorphic, sandstone, limestone, marble, slate, appearance, receding, erosion, weathering (chemical, physical, biological), acid rain, fossil, sediment, amber, imprint, embedded, types of soil (e.g. peaty, sandy, chalky, clay), decompose, fragments	nutrition, nutrients, carbohydrates, protein, vitamins and minerals, fats and oils, dairy, fibre, skeleton, vertebrate, invertebrate, exoskeleton, endoskeleton, hydrostatic skeleton, skeleton, bones, joints, support, protect, move, skull, ribs, spine, other major bones (humerus, fibular), spine, rib cage, skull, vertebrate, endoskeleton, muscle, bicep, tricep, diaphragm, contract	solar, renewable energy, plausible, prediction, record, results, data, table, graph, pH scale, acid, alkali, method, compare, evidence, conclusion, control experiment, variable, fair test
	<b>Learning Intentions</b>	To explore the formation and properties of igneous rocks To explore the formation and properties of sedimentary and metamorphic rocks To explore how water contributes to the weathering of rocks To understand how fossils are formed To explore different types of soil	To explore the 5 key food groups To learn about the nutrition in the food we eat To learn about the different types of skeletons To learn about the human skeleton To learn about animals and their skeletons To explore the role of muscles	To pose questions and write prediction To record and present results To write a method and carry out a practical test To write a conclusion To explore fair testing, controls and variables
	<b>Topic</b>	<b>Autumn 2 - Forces and magnets</b>	<b>Spring 2 - Light</b>	<b>Summer 2 - Plants - Life cycles</b>

	<b>Prior Learning</b>			Y1 - Identify and name common, wild and garden plants/ Identify and describe the structure of flowering plants.
	<b>Key Vocabulary</b>	force, push, pull, contact force, non-contact force, friction, air resistance, friction, resistance, motion, tilt, surface, texture, north pole, south pole, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, magnetic force/magnetism, attract, repel, magnetic material, metal, iron, steel, push, pull, non-contact force, attract, repel	natural, artificial, source, sunlight, light, ultraviolet (UV) rays, sunburn, vitamin D, exposure, SPF, high visibility, fluorescent, reflect, materials, surface, shadow, absence of light, opaque, cast, length, direction, opposite, position	air, nutrients, minerals, soil, absorb, photosynthesis, chlorophyll, xylem, stomata, roots, stem, stomata, transpiration, phloem, transport, pollen, style, stigma, filament, anther, seed dispersal (wind dispersal, animal dispersal, water dispersal), variables, controlled, results, observation
	<b>Learning Intentions</b>	To explore contact and non-contact forces To compare how things move on different surfaces To explore different types of magnets To explore the properties of magnets and everyday objects that are magnetic To understand that magnetic forces can act at a distance	To identify the difference between light sources and non-light sources To explore the light that comes from the sun and how to stay safe To explore the materials which are reflective To discover how shadows are formed To investigate how shadows change throughout the day	To compare the effect of different factors on plant growth To identify and describe the functions of different parts of a flowering plan and how they are used in photosynthesis To investigate the way in which water is transported within a plant To explore the part that flowers play in the life cycle of flowering plants To understand the pollination process and the ways in which seeds are dispersed To compare the effect of different factors on plant growth

<b>Year 4</b>		<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
	<b>Topic</b>	<b>Autumn 1 - Electricity</b>	<b>Spring 1 - Animals including humans - Food and digestion</b>	<b>Summer 1 - Living things and their habitat - Conservation</b>
	<b>Prior Learning</b>		Y1 - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.  Y2 - Find out about and describe the basic needs of animals, including humans, for survival.  Y3 - 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.	Y2 - Identify that most living things live in habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
	<b>Key Vocabulary</b>	electricity, electrical appliance/device, mains, plug/socket, battery, series circuit, cell, component, voltage, bulb, wire, buzzer, symbol, positive, negative, complete circuit, incomplete circuit, power, current, conductor, insulator, metal, rubber, copper, metal, non-metal, complete circuit, incomplete circuit, power, current, switch, buzzer	digestive system, digestion, small intestine, large intestine, oesophagus, stomach, jaw, gum, molars, pre-molar, canines, incisors, carnivore, omnivore, herbivore, plaque, enamel, tooth decay, cavity, fluoride, prey, predator, consumer, producer, carnivore, omnivore, herbivore, ecosystem, food web, interdependence, ecosystem	ecosystem, migrate, Northern/Southern Hemisphere, monsoon, recycle, biodiversity, deforestation, human impact, environment, greenhouse gases, pollution (air), fossil fuels, emissions, climate change, sewage, pesticides, water treatment plant, contaminate, endangered, protect, conservation, marine sanctuaries
	<b>Learning Intentions</b>	To explore electrical appliances and electrical safety To learn about electrical components in a series circuit To investigate electrical circuits To explore conductors and insulators To learn about electrical switches	To identify the organs in the digestive system To describe the functions of the organs in the digestive system To identify the types of human teeth and their functions To investigate the effects of different liquids on the teeth To understand food chains To explore food webs	To describe ecosystems and how they are affected by the changes in the seasons To understand human impact on the environment through deforestation To explore air pollution To understand water pollution To understand that humans can have a positive impact on nature
	<b>Topic</b>	<b>Autumn 2 - States of matter</b>	<b>Spring 2 - Sound</b>	<b>Summer 2 - Living things and their habitat - Classifying</b>
	<b>Prior Learning</b>	Y1 - Describe physical properties of everyday materials. / Compare and group materials based on physical properties.  Y2 - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		Y2 - Identify that most living things live in habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
<b>Key Vocabulary</b>	matter, solid, liquid, gas, particle, arranged, heating, cooling, state change, melting, melting point, temperature, thermometer, freezing point, boiling point, reverse, evaporation, condensation,	vibrations, waves, source, eardrum, source, medium, vacuum, echo, insulate, absorb, faint, reflect, decibels, pitch (high, low), volume, amplitude, soundwaves, particles, source, fade, energy	habitat, adapt, conditions, microhabitat, coastal, grassland, rainforest, desert, climate, exposure, environment, species, classify, characteristics, vertebrate, invertebrate, organism, identify, criteria,	

	water vapour, water cycle, precipitation, transpiration, evaporation, condensation		sub-group, classification key, features, colouring, adaptation, region, classification, environment
<b>Learning Intentions</b>	To compare and group the 3 states of matter To explore how particles behave in solids, liquids and gases To investigate melting points To explore freezing and boiling points To explore evaporation and condensation To understand the water cycle	To identify how sounds are made To explore how vibrations from sounds travel through a medium to the ear To explore sound insulation To explore volume To explore pitch (carousel) To explore sounds from near and from far	To explore different habitats To research a habitat To explore how animals can be classified To create a classification key To explore adaptations and classifications within species

## Upper Key Stage 2

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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.
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Using test results to make predictions to set up further comparative and fair tests.
- 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.

<b>Year 5</b>		<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
	<b>Topic</b>	<b>Autumn 1 - Earth and space</b>	<b>Spring 1 - Living things and their habitats</b>	<b>Summer 1 - Changes of materials</b>
	<b>Prior Learning</b>		Y2 - Identify that most living things live in habitats that provide for the basic needs of different kinds of animals and plants, and how they depend on each other.  Y4 - 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 environment.	Y1 - Describe the simple physical properties of variety of everyday materials. / Compare and group together a variety of everyday materials on the basis of their simple physical properties.  Y2 - Identify and compare the suitability of a variety of everyday materials for particular uses.
	<b>Key Vocabulary</b>	Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit, terrestrial planet, spherical, geocentric, heliocentric, astronomy, poles, seasons, axis, hemisphere, shadow, time zone, phase, waxing, waning, eclipse, moon	force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears, mass, weight, Sir Issac Newton, Galileo Galilei, opposing, streamlined, upthrust, buoyant, , sink, Newton meter, load, lever, pivot, gear, mechanism	life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, cuttings, genes, placental mammal, monotreme mammal, mammary glands, pouch, marsupial, amphibian, larva, pupa, embryo, endangered, naturalist, vertebrate, reproduction, warm-blooded, living organism
	<b>Learning Intentions</b>	To explore the solar system and its planets To understand the heliocentric model of the solar system To explain the Earth's movement in space To explain the Earth's rotation and night and day To explain the movement of the moon	To understand the life processes of a plant To understand the life cycles of a mammal To compare the life cycle of insects and amphibians To understand the life cycle of birds and reptiles To know about the life and work of <b>Sir David Attenborough</b> To know about the life and work of <b>Dame Jane Goodall</b>	To use evaporation to recover the solute from a solution To recognise and describe reversible changes To observe chemical reactions and describe how we know new materials are made To investigate burning reactions To investigate chemical reactions - acids and bicarbonate of soda
	<b>Topic</b>	<b>Autumn 2 - Forces</b>	<b>Spring 2 - Animals including humans - Exploring life cycles</b>	<b>Summer 2 - Properties of materials</b>
	<b>Prior Learning</b>	Y3 - Compare how things move on different surfaces. / Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance.	Y1 - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.  Y2 - 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. / Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Y1 - Describe the simple physical properties of variety of everyday materials. / Compare and group together a variety of everyday materials on the basis of their simple physical properties.  Y2 - Identify and compare the suitability of a variety of everyday materials for particular uses.

		Y3 - Identify that humans and some other animals have skeletons and muscles for support, protection and movement.  Y4 - Identify the different types of teeth in humans and their simple functions.	
<b>Key Vocabulary</b>	puberty, life cycle, foetus, baby, child, adolescent, adult, reproduce, sexual, sperm, fertilises, egg, live young, gestation, pregnant, breeding, embryo, womb, childhood, growth, hormone, bloodstream	thermal insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material, solute, solvent, evaporate, melting, physical change, compare, chemical change, fair test, control variable, corrosion, combustion, oxygen, carbon dioxide, acid, reaction	Magnetic, durable, transparent, versatile, conduction, thermal, degrees Celsius, insulator, molecules, force, hardness, solute, insoluble, solute, dissolve, soluble, solution, substance, saturation, solvent, evaporation, filtering, sieving, mixture
<b>Learning Intentions</b>	To explore gravity and the life and work of <b>Isaac Newton</b> To examine the connection between air resistance and parachutes To explore factors which affect an objects ability to resist water To investigate the effects of friction on different surfaces To investigate mechanisms - levers and pulleys	To identify the key stages of a mammal's life cycle To explore gestation periods of mammals To learn about foetal development To investigate the hand span of different aged children To describe the changes humans may experience during adulthood and old age	To explore properties of materials To explore thermal conductors and thermal insulators To explore the hardness of materials To discover materials that become soluble in water To investigate the solubility of materials To explore how mixtures could be separated by filtering, sieving, evaporating or magnets

	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
<b>Topic</b>	<b>Autumn 1 - Living things and their habitats</b>	<b>Spring 1 - Evolution and inheritance</b>	<b>Summer 1 - Animals including humans - Blood and transportation</b>
<b>Prior Learning</b>	Y2 - Identify that most living things live in habitats that provide for the basic needs of different kinds of animals and plants, and how they depend on each other.  Y4 - 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 environment.  Y5 - Describe the differences in the life cycles of a mammal, and amphibian, an insect and a bird.		Y1 - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Y2 - Find out about and describe the basic needs of animals, including humans, for survival. / Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. /  Y3 - 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.  Y4 - Describe the simple functions of the basic parts of the digestive system in humans.  Y5 - Describe the changes as humans develop too old age.
<b>Key Vocabulary</b>	vertebrates, fish, amphibians, reptiles, birds, mammals, warm-blooded, cold-blooded, invertebrates, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers, classify, microorganism, living organism, cell, unicellular, multicellular, kingdom, species, domain, virus, bacteria, fungi, plant, ecosystem, habitat, living organism	straight lines, light rays, eye, light source, surface, bounce, direction, mirror, reflected, periscope, line of sight, angle, shadow, opaque, transparent, translucent, rotate, optical, disperse, spectrum, refraction	offspring, sexual reproduction, vary, characteristics, adapted, inherited, species, evolve, evolution, variation, nutrition, climate, habitat, feature, predator, pollinate, nutrients, fossil, palaeontologist, natural selection, extinct, neanderthal, ancestor, homo sapiens, primate
<b>Learning Intentions</b>	To classify living things To explore the kingdoms of life To classify living things using the Linnaean system To identify characteristics of different types of microorganisms To explore asexual reproduction through spore dispersal	To understand how offspring vary To explain how adaptations help animals and plants survive To explain what fossils can tell us To explore the theory of evolution by natural selection To explore human evolution	To understand the function of the heart and its role in the circulatory system To identify and compare blood vessels To explore blood To learn how the body transports water and nutrients To investigate what affects your heart rate To learn about the impact of drugs and alcohol on the body
<b>Topic</b>	<b>Autumn 2 - Light</b>	<b>Spring 2 - Electricity</b>	<b>Summer 2 - Scientific Enquiry</b>

Year 6

	<b>Prior Learning</b>	Y3 - Recognise that they need light in order to see things and that dark is the absence of light. / Notice that light is reflected from surfaces. / Recognise that 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.	Y4 - 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 conductors and insulators, and associate metals with being good conductors.	
	<b>Key Vocabulary</b>	circuit diagram, circuit symbol, voltage, battery, wires, voltmeter, electricity, current, resistor, fair test, variable, output, control test, sensor, signal, closed electric circuit conductor, insulator, resistor	heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, cycle, circulatory system, diet, drugs, lifestyle, ventricle, atrium, valves, vein, capillary, microscope, artery, plasma, red blood cell, white blood cell, platelet, absorb, osmosis, diffusion, nutrient, pulse, BPM - beats per minute, exercise, heart rate,	global warming, climate, climate change, weather, landfill, rubbish, biodegrade, recycle, emissions, renewable, non-renewable, greenhouse gases, net zero, combustion, fossil fuel, fuel, coal, COP, sustainability, subsidy, species, natural disaster, habitat, vulnerable
	<b>Learning Intentions</b>	To explore how light travels To explore reflection To investigate how shadows can change To investigate how we can show why shadows have the same shape as the object that casts them To explore light phenomena	To describe the parts of an electrical circuit To explore voltage and its effect on an electrical circuit To apply knowledge to identify and correct problems in a circuit To investigate what affects the output of a circuit To create a set of traffic lights	To learn about climate change To explore ways to reduce how much rubbish is sent to landfill To explore ways to reduce energy consumption To explore what happens when fuels are burnt To explore the outcomes of the COP26