Yewtree Curriculum Progression Map for Science 2021-2022

EYFS	**Communication and Language**	ELG: Listening, Attention and Understanding	• Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions; • Make comments about what they have heard and ask questions to clarify their understanding; • Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.
		ELG: Speaking	• Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; • Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate; • Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.
	Personal, Social and Emotional Development	ELG: Self-Regulation	• Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate • Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.
		ELG: Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge
		ELG: Building Relationships	• Work and play cooperatively and take turns with others
	Physical Development	ELG: Gross Motor Skills	• Negotiate space and obstacles safely, with consideration for themselves and others
		ELG: Fine Motor Skills	• Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases; • Use a range of small tools, including scissors, paint brushes and cutlery; • Begin to show accuracy and care when drawing
	Literacy	ELG: Comprehension	• Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role-play
		ELG: Word Reading	• Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words
		ELG: Writing	• Write recognisable letters, most of which are correctly formed; • Spell words by identifying sounds in them and representing the sounds with a letter or letters; • Write simple phrases and sentences that can be read by others
	Mathematics	ELG: Number	• Subitise (recognise quantities without counting) up to 5
		ELG: Numerical Patterns	• Verbally count beyond 20, recognising the pattern of the counting system; • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
	Understanding the World	ELG: Past and Present	• Talk about the lives of the people around them and their roles in society
		ELG: People, Culture and Communities	• Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps
		ELG: The Natural World	• Explore the natural world around them, making observations and drawing pictures of animals and plants; • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.
	Expressive Arts and Design	ELG: Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; • Share their creations, explaining the process they have used;

Year 1	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					
	Knowledge					
	Autumn 1 - Everyday Materials	Autumn 2 – Human Body	Spring 1 - Weather	Spring 2 – Seasons	Summer 1 - Animals	Summer 2 - Plants
	• Distinguish between and object and a material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. • Describe the simple physical properties of a variety of everyday materials • Compare and group together a variety of everyday materials on the basis of their simple physical properties.	• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	• Observe and describe weather associated with the seasons and how day length varies. • Observe changes across the four seasons	• Seasonal Changes focused on winter transitioning into spring.	• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of animals that are carnivores, herbivores and omnivores. • Describe and compare the structure • describe and compare the structure of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	• Identify and name a variety of common and wild garden plants including deciduous and evergreen trees. • Identify and describe the basic structure of a variety of common flowering plants including trees

	Vocabulary					
	Types of materials: wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, flour, butter, milk, soil Properties of materials: hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky Verbs associated with materials: crumble, squash, bend, stretch, twist Senses: touch, see, hear, smell and taste	Senses: touch, see, smell, taste, hear, Body Parts: fingers (skin), eyes, nose, ear and tongue	Hot, warm, mild, cold Sunny, cloudy, rain, sleet, snow, hail, thunder, lightning, rainbow Wet, damp, dry, windy, breezy, gust Temperature, degrees celsius Thermometer Weather vane Anemometer	Seasons; spring, summer, autumn, winter Year, months, days	Birds, fish, amphibians, reptiles, mammals and invertebrates Feathers, scales, gills, fins, hair, land, water, backbone, skeleton Carnivores, herbivores, omnivores Meat, plants Common parts/structures of animals such as tails, feathers, horns etc. Names of animals that can be found in the school grounds Names of animals that the children keep as pets	**Trees** - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc **Wild flowering plants** - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover etc. **Garden plants** – crocus, daffodil, bluebells, etc **Parts of plants** – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs

Year 2

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.

Knowledge

Autumn 1 - Animals including humans	Autumn 2 - Everyday materials	Spring 1 - Living things and their habitats	Spring 2 - Missed Learning Yr 1 – Animals including humans	Summer 1 - Environmental changes	Summer 2 - Plants
• 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, air). • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	• 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.	• 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 describe how different habitats provide for the basic needs of different kinds of animal 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.	• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of animals that are carnivores, herbivores and omnivores. • Describe and compare the structure describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	• Look closely at the natural and humanly-constructed world around them • Use simple scientific language to talk about what they have found out • Communicate ideas to a range of audiences in a variety of ways.	• 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.

Vocabulary

Classification - Birds, fish, amphibians, reptiles, mammals and invertebrates Classification - Carnivores, herbivores, omnivores	Types of materials: wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, flour, butter, milk, soil	Habitat, micro habitat Pond, meadow, log pile, woodland, river, lake, beach, cliff Organism – plant, animal Trees - deciduous, evergreen, ash, birch, beech,	Birds, fish, amphibians, reptiles, mammals and invertebrates Feathers, scales, gills, fins, hair, land, water, backbone, skeleton	Pollution, waste, recycling, climate, future, fuel,	Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow,

	Stages of growth of many insects – egg, larva, pupa, adult Names of some invertebrates – ladybirds, butterflies, dragonflies, etc Names of some amphibians – smooth newt, common frog, toad Stages of life –baby, toddler, child, teenager, adult Life processes – growth, nutrition (feeding), respiration (breathing is part of this) Hygiene – clean, wash, germs Foods – healthy, grow, strong, energy	Properties of materials: hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky Verbs associated with materials: crumble, squash, bend, stretch, twist Senses: touch, see, hear, smell and taste	rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. Garden plants – crocus, daffodil, bluebells, etc Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs Invertebrates – snail, slug, woodlouse, spider, beetle, fly, etc Pond animals – pond skater, water slater, ramshorn snail, pond snail, leech, common frog, smooth newt, etc	Carnivores, herbivores, omnivores Meat, plants Common parts/structures of animals such as tails, feathers, horns etc. Names of animals that can be found in the school grounds Names of animals that the children keep as pets	energy, natural, sources, environment, litter, etc.	sycamore, fir, pine , holly, etc Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self-heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. Garden plants – crocus, daffodil, bluebells, etc Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs Need of plants – water, light, heat, temperature

Year 3

Skills

- Asking relevant Q's, using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative, fair tests
- Making systematic, careful observations, taking accurate measurements using standard units, using a range of equipment, including thermometers, data loggers
- Gathering, recording, classifying, presenting data in a variety of ways
- Recording and report findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, tables, verbally, written explanations, displays or presentations
- Using results to draw simple conclusions, make predictions for new values, suggest improvements, raise further Q's
- Identifying differences, similarities or changes related to simple scientific ideas, processes
- Using straightforward scientific evidence to answer Q's or to support their findings.

Knowledge

Autumn 1 - Animals including humans	Autumn 2 - Forces and Magnets	Spring 1 - Rocks	Spring 2 - Missed Learning Year 2 Living things and their habitats	Summer 1 - Light	Summer 2 - Plants
• Identify animal 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.	• Compare how things move on different surfaces • Notice that some forces need contact between tow 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 on whether they are attracted to a magnet, and identify some magnetic materials. • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other depending on which poles are facing.	• 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	• 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 describe how different habitats provide for the basic needs of different kinds of animal 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.	• Recognise that they need light in order to see things and that dark is the absence of light. • Notice that light is reflected from surfaces. • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. • Find patterns in the way that the size of shadows change.	• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

	Vocabulary					
	Nutrition Diet Vitamins, minerals, fats, proteins and carbohydrates Functions of skeletons – protect, support and aid movement	Magnets – bar and horseshoe Attract, repel North and south poles Magnetic Magnetic field	Names of rocks – Chalk, limestone, granite, basalt, sandstone, flint, slate, shale, marble Types of rock – Sedimentary, metamorphic, igneous Types of minerals – Calcite, feldspar, topaz, diamond, talc, corundum Properties of rocks – Hard/soft, permeable/impermeable Processes – Heat, pressure, erosion, transportation, deposition, melt, solidify Size of rocks – Grain, pebbles Rock describing words – Crystals, layers Early areas of land – Gondwana, Pangea Land formations – Plates, volcanoes, mountains, valleys	Habitat, micro habitat Pond, meadow, log pile, woodland, river, lake, beach, cliff Organism – plant, animal Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. Garden plants – crocus, daffodil, bluebells, etc Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs Invertebrates – snail, slug, woodlouse, spider, beetle, fly, etc Pond animals – pond skater, water slater, ramshorn snail, pond snail, leech, common frog, smooth newt, etc	Simple comparisons: dark, dull, bright, very bright Comparative vocabulary: brighter, duller, and darker Superlative vocabulary: brightest, dullest, and darkest Opaque, translucent, transparent Shadow – block, absence of light Reflect – bounce, mirror, reflection See – light source Sun – sunset, sunrise, position	Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. Garden plants – crocus, daffodil, bluebells, etc Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs Parts of a flower – petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule) Processes – pollination, fertilisation, germination

Year 4

Skills

- Asking relevant Q's, using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative, fair tests
- Making systematic, careful observations, taking accurate measurements using standard units, using a range of equipment, including thermometers, data loggers
- Gathering, recording, classifying, presenting data in a variety of ways
- Recording and report findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, tables, verbally, written explanations, displays or presentations
- Using results to draw simple conclusions, make predictions for new values, suggest improvements, raise further Q's
- Identifying differences, similarities or changes related to simple scientific ideas, processes
- Using straightforward scientific evidence to answer Q's or to support their findings.

Knowledge

Autumn 1 - Sound	Autumn 2 - Electricity	Spring 1 - Animals, including humans	Spring 2 - Missed Learning Year 3 Light	Summer 1 - States of matter	Summer 2 - Living things and their habitats
• Identify how sounds are made, associating some of them with something vibrating • Recognise that vibrations from sounds travel through a medium to their ear. • Find patterns between the pitch of a sound and features of the object which produced it. • Find patterns between a 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.	• Identify common appliances that run on electricity. • Construct a simples series electrical circuit, identify 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 lamplight in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors.	• 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.	• Recognise that they need light in order to see things and that dark is the absence of light. • Notice that light is reflected from surfaces. • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. • Find patterns in the way that the size of shadows change.	• Compare and group materials together, according to whether they are solids, liquids or gasses. • 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 • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	• 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 from their local and wider environment. • Recognise that environments can change and this can sometimes pose dangers to living things.

Vocabulary

Ways to create sound – bang, blow, shake, and pluck Loudness – quiet, quieter, quietest, loud, louder and loudest	Appliances: fridge, freezer, TV, computer, iron, kettle, etc Series circuit Components: battery, bulb (lamp), bulb (lamp) holder,	Digestive system –, oesophagus, stomach, acid, small intestine Protein, vitamin, mineral, carbohydrate, fats, energy, growth, repair. Saliva	Simple comparisons: dark, dull, bright, very bright Comparative vocabulary: brighter, duller, and darker	States of matter - Solid, liquid and gas Examples of gases (at room temperature and pressure) – Oxygen, hydrogen, helium, carbon dioxide, methane	Habitat, micro habitat Pond, meadow, log pile, woodland, river, lake, beach, cliff Organism – plant, animal

	Pitch - low, lower, lowest, high, higher, and highest Vibrations Source	buzzer, crocodile clip, leads, wires, switch Describing words: brighter, duller, slow, fast, quiet, loud Conductor, insulator Effects of electricity: Light, sound, movement, heat Switches – open, close	Teeth – Incisors, canines, premolars, molars Function Foodchain – producer, consumer, predator, prey	Superlative vocabulary: brightest, dullest, and darkest Opaque, translucent, transparent Shadow – block, absence of light Reflect – bounce, mirror, reflection See – light source Sun – sunset, sunrise, position	Examples of liquids (at room temperature and pressure) – Water, milk, juice, petrol, oil Examples of solids (at room temperature and pressure) – Wood, rocks, metal, plastic, glass, wool, leather, etc Processes – Melting, condensation, evaporation, solidifying, freezing Water cycle Water vapour Steam Heating Cooling	Trees - deciduous, evergreen, ash, birch, beech, rowan, common lime, oak, sweet chestnut, horse chestnut, apple, willow, sycamore, fir, pine , holly, etc Wild flowering plants - cleavers, coltsfoot, daisy, dandelion, garlic mustard, mallow, mugwort, plantain, red clover, self-heal, shepherd's purse, sorrel, spear thistle, white campion, white deadnettle and yarrow. Garden plants – crocus, daffodil, bluebells, etc Parts of plants – roots, branch, trunk, stalk, leaf, flower, petal, seeds, bulbs and twigs Invertebrates – snail, slug, woodlouse, spider, beetle, fly, etc Pond animals – pond skater, water slater, ramshorn snail, pond snail, leech, common frog, smooth newt, etc

Year 5

Skills

- 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, explanations and degree of trust in results, in forms such as displays and other presentations
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

Knowledge

Autumn 1 - Properties and changes of materials	Autumn 2 - Earth and Space	Spring 1 - Living Things and Their Habitats	Spring 2 - Missed Learning Year 4 States of matter	Summer 1 - Animals including humans	Summer 2 - Forces
• Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), response to magnets. • To know the some materials will dissolve in liquid to forma solution, and describe how to recover a substance from a solution. • Use knowledge of solids, liquids and gases to describe 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 not usually reversible, including changes associated with burning and the action of acid on bar carbonate of soda	• 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 approximate 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.	• Describe the differences in the life cycles in a mammal, an amphibian, an insect and a bird. • Describe the life process of reproduction in some plants and animals.	• Compare and group materials together, according to whether they are solids, liquids or gasses. • 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 • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	• Describe the changes as humans develop into old age	• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and falling object. • Identify the effects of air resistance, water resistance and friction that act between moving surfaces.

Vocabulary

Thermal conductivity – thermal conductor, thermal insulator Electrical conductivity – electrical conductor, electrical insulator	Day and night - Earth, axis, rotate Solar system – Star = Sun, Planets = Mercury, Venus, Earth, Mars,	Animals – amphibians, reptiles, birds, mammals, insects, fish	Examples of liquids (at room temperature and pressure) – Water, milk, juice, petrol, oil	Gestation Fetus Fertilisation Species Baby	Types of forces: gravity, friction, air resistance, upthrust, weight

	Dissolving – Solvent, solution, solute, soluble, insoluble, solid, liquid, particles, suspensions Separating materials – Sieve, filter, evaporate, condense	Jupiter, Saturn, Uranus, Neptune (Pluto was classified as Dwarf planet in 2006) Phases of the Moon - full moon, gibbous moon, half moon, crescent moon, new moon, waxing ,waning Moon's orbit: 29.5 days, lunar month Orbit, planets, revolve, sphere	Animal development – egg, larva, pupa, nymph, adult, metamorphosis Parts of a flower – petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule) Processes – pollination, fertilisation, germination	Examples of solids (at room temperature and pressure) –Wood, rocks, metal, plastic, glass, wool, leather, etc Processes – Melting, condensation, evaporation, solidifying, freezing Water cycle Water vapour Steam Heating Cooling	Toddler Adolescent Adult Elderly person Puberty Hormones Pituitary gland Testosterone Estrogen	Measuring forces: Newton meter, Newtons (N) Particles Surface area Push, pull Balance Mass – grams and kilograms Mechanical devices – gears, levers, pulleys, springs

Year 6

Skills

- 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, explanations and degree of trust in results, in forms such as displays and other presentations
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

Knowledge

Autumn 1 Living Things and their habitats	Autumn 2 - Light	Spring 1 - Animals, including humans	Spring 2 - Missed Learning Year 5 Animals including humans	Summer 1 - Evolution and inheritance	Summer 2 - Electricity
• Describe how living things are classified in to broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. • Give reasons for classifying plants and animals based on specific characteristics.	• 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.	• 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 their way their bodies function. • Describe the ways in which nutrients and water are transported within animals, including humans.	• Describe the changes as humans develop into old age	• 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 off-spring of the same kind, but normally off-spring 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. • (Fossils, evolution of animals, adaptation)	• 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 on/off position of switches. • Use and recognise the symbols when representing a simple circuit in diagram •

	Vocabulary					
	Classification Vertebrate, invertebrate Kingdoms: animal, plant, 'micro-organism' Classes: amphibian, reptile, bird, mammal, Scales, feathers Flowering plant, non-flowering plant	Simple comparisons: dark, dull, bright, very bright Comparative vocabulary: brighter, duller, and darker Superlative vocabulary: brightest, dullest, and darkest Opaque, translucent, transparent Shadow – block, absence of light Reflect – bounce, mirror, reflection See – light source Sun – sunset, sunrise, position	Circulatory system – heart, blood, veins, arteries, pulse, clotting Diet – balanced, vitamins, minerals, proteins, carbohydrates, sugars, fats Drugs – caffeine, nicotine, alcohol, cannabis, cocaine, heroine Lifestyle – healthy	Toddler Adolescent Adult Elderly person Puberty Hormones Pituitary gland Testosterone Estrogen	Evolution, evolve Natural selection Survival Reproduction Offspring, parents, siblings Environment Variation Fossils; ammonites, belemnites, micrasters, etc	Electricity, Volts Series circuit Components: battery, bulb (lamp), bulb (lamp) holder, buzzer, crocodile clip, leads, wires, switch Describing words: brighter, duller, slow, fast, quiet, loud Conductor, insulator Resistance Effects of electricity: Light, sound, movement, heat