



Curriculum Overview
Subject: Science

<u>Year Group</u>	<u>Aut 1</u>	<u>Aut 2</u>	<u>Spg 1</u>	<u>Spg 2</u>	<u>Sum 1</u>	<u>Sum 2</u>
1	Key Learning: Observations of the local area	Key Learning: Everyday Materials <ul style="list-style-type: none"> ♣ distinguish between an object and the material from which it is made ♣ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ♣ describe the simple physical properties of a variety of everyday materials ♣ compare and group together a variety of everyday materials on the basis of their simple physical properties. 	Key Learning: Plants <ul style="list-style-type: none"> ♣ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees ♣ identify and describe the basic structure of a variety of common flowering plants, including trees. 	Key Learning: Animals <ul style="list-style-type: none"> ♣ identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals ♣ identify and name a variety of common animals that are carnivores, herbivores and omnivores ♣ describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) 	Key Learning: The Human Body <ul style="list-style-type: none"> ♣ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	Key Learning: Seasons <ul style="list-style-type: none"> ♣ observe changes across the four seasons ♣ observe and describe weather associated with the seasons and how day length varies.
	Key Vocab:	Key Vocab: Wood Plastic Metal Glass Water Rock Hard Soft	Key Vocab: Deciduous Evergreen Leaves Stem Roots Flower Seed	Key Vocab: Fish Amphibian Reptile Bird Mammal Carnivores Herbivores Omnivores	Key Vocab: Head Body Arms Legs Eyes Ears Mouth Tongue Hear See Taste	Key Vocab: Spring Summer Autumn Winter Hot Cold Rain Dry Sunny Cloudy Rain Snow Hail Windy
2	Key Learning: Animals including Humans		Key Learning: Living Things and their Habitats		Key Learning: Materials	Key Learning: Plants

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	<ul style="list-style-type: none"> ♣ notice that animals, including humans, have offspring which grow into adults ♣ find out about and describe the basic needs of animals, including humans, for survival (water, food and air) ♣ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 		<ul style="list-style-type: none"> ♣ 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 animals and plants, and how they depend on each other ♣ identify and name a variety of plants and animals in their habitats, including microhabitats ♣ describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 		<ul style="list-style-type: none"> ♣ 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. 	<ul style="list-style-type: none"> ♣ 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.
	<p>Key Vocab:</p> <p>Offspring Adult Baby Water Food Air Survive Exercise Diet Hygiene</p>		<p>Key Vocab:</p> <p>Living Dead Manmade Natural Habitat Food Food Chain</p>		<p>Key Vocab:</p> <p>Rock Paper Cardboard Compare Solid Squashing Bending Twisting Wood Metal Plastic Glass Brick Stretching</p>	<p>Key Vocab:</p> <p>Seed Bulb Grow Mature Water Light Temperature Healthy Plant Leaves Roots Flowers Stem</p>
3	<p>Key Learning:</p> <p>Light</p> <ul style="list-style-type: none"> ♣ 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 	<p>Key Learning:</p> <p>Forces and Magnets</p> <ul style="list-style-type: none"> ♣ compare how things move on different surfaces ♣ notice that some forces need contact between two objects, but magnetic forces can act at a distance ♣ observe how magnets attract or repel each other 	<p>Key Learning:</p> <p>Animals including Humans</p> <ul style="list-style-type: none"> ♣ 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 	<p>Key Learning:</p> <p>Plants</p> <ul style="list-style-type: none"> ♣ 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 	<p>Key Learning:</p> <p>Rocks</p> <ul style="list-style-type: none"> ♣ 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 	<p>Key Learning:</p>

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	<ul style="list-style-type: none"> ♣ 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 	<ul style="list-style-type: none"> and attract some materials and not others ♣ compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials ♣ describe magnets as having two poles ♣ predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<ul style="list-style-type: none"> support, protection and movement. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> organic matter. 	
	<p>Key Vocab: Light Dark Reflect Opaque Translucent Transparent Shadows Source</p>	<p>Key Vocab: Attract Repel Magnetic North Pole South Pole Metallic Force</p>	<p>Key Vocab: Nutrition Skeletons Bones Muscles Support Protect Movement</p>	<p>Key Vocab: Stem Root Leaves Flower Ait Light Water Transport Pollination Seed Dispersal Seed Formation Life Cycle Nutrients</p>	<p>Key Vocab: Rock Fossils Metamorphic Sedimentary Igneous Organic Matter Soil Properties Compare</p>	<p>Key Vocab:</p>
4	<p>Key Learning: Living Things and their habitats</p> <ul style="list-style-type: none"> ♣ recognise that living things can be grouped in a variety of ways ♣ explore and use classification keys to help 	<p>Key Learning: Animals including Humans</p> <ul style="list-style-type: none"> ♣ 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. 		<p>Key Learning: Electricity</p> <ul style="list-style-type: none"> ♣ identify common appliances that run on electricity ♣ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, 	<p>Key Learning: Sound</p> <ul style="list-style-type: none"> ♣ identify how sounds are made, associating some of them with something vibrating ♣ recognise that vibrations from sounds travel through a medium to the ear 	<p>Key Learning: States of Matter</p> <ul style="list-style-type: none"> ♣ compare and group materials together, according to whether they are solids, liquids or gases ♣ observe that some materials change state when they are heated or



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	<p>group, identify and name a variety of living things in their local and wider environment</p> <ul style="list-style-type: none"> ♣ recognise that environments can change and that this can sometimes pose dangers to living things. 		<p>switches and buzzers</p> <ul style="list-style-type: none"> ♣ 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. 	<ul style="list-style-type: none"> ♣ find patterns between the pitch of a sound and features of the object that produced it ♣ find patterns between the volume of a sound and the strength of the vibrations that produced it ♣ recognise that sounds get fainter as the distance from the sound source increases. 	<p>cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</p> <ul style="list-style-type: none"> ♣ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
	<p>Key Vocab: Classification Vertebrates Invertebrates Mammals Reptiles Fish Amphibians Birds Extinction Ecosystem Habitat</p>	<p>Key Vocab: Digestion Oesophagus Trachea Stomach Large Intestine Small Intestine Colon Bowel Pancreas Liver Canine Pre molar Molar Incisor Dentin Decay Enamel Plaque Producer Consumer Predator Prey Primary Secondary Food chain</p>	<p>Key Vocab: Parallel Conductor Insulator Series Circuit Cell</p>	<p>Key Vocab: Vibration Oscillation Frequency Wavelength Amplitude Sound source Louder Quieter</p>	<p>Key Vocab: Solid Liquid Gas Heat Melting Liquidation Solidification Evaporation Condensation Particles State of matter Freezing point Boiling point Sublimation</p>

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		Food web				
5	<p>Key Learning: Changing Materials</p> <ul style="list-style-type: none"> ♣ compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets ♣ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution ♣ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating ♣ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic ♣ demonstrate that dissolving, mixing and changes of state are reversible changes ♣ explain that some changes result in the formation of new materials, and that this 	<p>Key Learning: Earth and Space</p> <ul style="list-style-type: none"> ♣ describe the movement of the Earth, and other planets, relative to the Sun in the solar system ♣ describe the movement of the Moon relative to the Earth ♣ describe the Sun, Earth and Moon as approximately spherical bodies ♣ use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<p>Key Learning: Animal Changes</p> <ul style="list-style-type: none"> ♣ describe the changes as humans develop to old age. 	<p>Key Learning: Forces</p> <ul style="list-style-type: none"> ♣ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object ♣ identify the effects of air resistance, water resistance and friction, that act between moving surfaces ♣ recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<p>Key Learning: Living Things and their Habitats</p> <ul style="list-style-type: none"> ♣ describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird ♣ describe the life process of reproduction in some plants and animals. 	<p>Key Learning:</p>

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	kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.					
	Key Vocab: Magnetic Hard Soluble Transparent Dissolve Substance Compound Reversible Irreversible Filter Burning Mixing	Key Vocab: Earth Sun Moon Planet Orbit Year Phase Waxing Waning Crescent Axis Tilt Spherical Rotation Day Night	Key Vocab: New born Infant Toddler Child Adolescent Adult Elderly Hormones Growth Puberty	Key Vocab: Force Gravity Fall Centre Air resistance Friction Upthrust Mechanism Lever Pulley Gear	Key Vocab: Larval Metamorphosis Germination Growth Flower formation Pollination Fertilisation Fruit formation Seed dispersal Wind Animal Anther Filament Stigma Stamen Carpel Ovary Style Pollen	Key Vocab:
6	Key Learning: Evolution and Inheritance <ul style="list-style-type: none"> ♣ recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago ♣ recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their 	Key Learning: How light travels <ul style="list-style-type: none"> ♣ 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 	Key Learning: Health and the Circulatory System <ul style="list-style-type: none"> ♣ identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ♣ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function ♣ describe the ways in 	Key Learning: Classification of Living Things <ul style="list-style-type: none"> ♣ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals ♣ give reasons for classifying plants and animals based on specific 	Key Learning:	Key Learning: Electricity <ul style="list-style-type: none"> ♣ associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit ♣ compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches ♣ use recognised symbols when representing a simple



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	<p>parents ♣ identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>	<p>eyes ♣ use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>which nutrients and water are transported within animals, including humans.</p>	<p>characteristics.</p>		<p>circuit in a diagram.</p>
	<p>Key Vocab: Prehistoric Fossil Sedimentation Layers Offspring Parent Variation Adaptation Environment Evolution Survival of the fittest</p>	<p>Key Vocab: Straight lines Source Iris Retina Lens Pupil Optical Shadows Opaque Translucent Transparent</p>	<p>Key Vocab: Heart Lungs Aorta Vena cava Arteries Veins Capillaries Pulse Oxygen Carbon dioxide Gas exchange Carbohydrates Protein Fat Vitamins Minerals Nutrient Nutrition Life style Obesity Malnutrition</p>	<p>Key Vocab: Kingdoms Plant Animal Flowering Nonflowering Micro-organisms Bacteria Classification Genus Species Linnaeus</p>	<p>Key Vocab:</p>	<p>Key Vocab: Voltage Cells Circuit Components Symbols Circuit diagram</p>