Science Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**Biology – Animals including Humans**  **Under My Roof** Pets and animal care – what do all animals need to be healthy? Animals grow and change in many different ways.	**Physics – Earth Science**  **Biology – Living Things and their Habitats**  **Animal Magic** The season of Autumn, leaves changing colour and falling from trees, temperatures cooling. Animals begin to prepare for colder weather and hibernation e.g. squirrels bury nuts in the ground. Habitats – farm animals, jungle/safari animals, nocturnal animals, British woodland animals (fox, hedgehog, owl)	**Chemistry – Materials**  **Once Upon a Time** Observing changes – making magical fizzing potions (vinegar and bicarb)	**Biology – Animals including Humans**  **Biology – Plants**  **Biology – Living Things and their Habitats**  **Come Outside** The season of spring – planting and growing, temperatures warming. Life cycles – all animals have babies: some look like their parents but some do not. Recognise and use animal names e.g. cow/calf, chicken/chick. Plants need water and light to grow. Plan a journey to the local park or around the school grounds what would we see? What grows in our school, what grows in the park?	**Physics – Forces**  **Chemistry – States of Matter**  **Splish, Splash, Splosh** Floating / sinking – how much can my boat hold? Ocean / river habitats Looking after the ocean Plastic waste Ice changes from a solid to a liquid when it melts.	**Physics – Forces**  **On the Move** Making things move – push and pull. Speed – faster and slower. Direction.
Reception	**Biology – Animals including Humans**  **My Hero** Life cycles – how have I changed as I have grown? Guess the baby Parents and offspring.	**Physics – Earth Science**  **Chemistry – States of Matter**  **Light and Dark** Seasons of the year; Autumn and Winter. Deciduous and evergreen trees. Observing leaves using magnifying glasses, leaves changing colour. Transport in the winter; snow ploughs, gritting roads, snow tyres. Changing state of matter; frost and ice- looking closely at ice, what happens when it warms? Why can we see our breath when it is cold? Contrasting landscapes; what does a lunar landscape look like? What might we see if we walked on the moon? Our planet Earth, land and sea, plants and animals, weather, gravity. The moon, the sun, the planets in our solar system, space travel, astronauts.	**Biology – Animals including Humans**  **Look Inside** The human body: facial features, body parts, the senses Growing and changing; how people change as they grow. Being healthy, including dental care.	**Biology – Animals including Humans**  **Biology – Plants**  **Biology – Living Things and their Habitats**  **Into the Woods** Seasons of the year: Spring. The first signs of spring; snowdrops, cherry blossom, buds and flowers, birds nesting, bees, lighter evenings Plants: how they grow from seeds and bulbs. What plants need to grow. Identify parts of plants including roots, stem and leaves. Identify trees and plants growing locally on the school grounds or in local parks. Draw pictures of local plants. Life cycles of a butterfly and/or frog. Identify and draw the following animals and their babies including but not limited to: sheep and lamb, cows and calf, horse and foal, butterfly and caterpillar, frog and tadpole, dog and puppy, cat and kitten	**Biology – Animals including Humans**  **Food Glorious Food** Observing changes – toasting, baking, melting. Healthy foods.	**Physics – Forces**  **Physics – Earth Science**  **Chemistry – States of Matter**  **Around the World** Forces: push, pull, twist Air transport Water transport Seasons of the Year: Summer. How we stay safe in the sun; sunscreen, hats, sunglasses. Safety around water. Changing state of matter; Why do our ice lollies melt?

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Year 1	**Physics – Earth Science**  **Seasonal Changes** Four seasons, changes in autumn, changes in winter, changes in spring, changes in summer, measuring rainfall	**Biology – Animals including Humans**  **Animals, Including Humans 1** All about me – basic parts of the human body, eyes and sight, ears and hearing, tongue and taste, sense of touch, how our noses smell	**Chemistry – Materials**  **Exploring Everyday Materials 1** Identifying and naming, objects and materials they are made from, properties, natural and manmade, floating and sinking	**Chemistry – Materials**  **Exploring Everyday Materials 2 - Building** Building windproof and waterproof structures, properties and uses of glass, materials for furniture, fabrics	**Biology – Plants**  **Plants** Seeds growing into plants, basic parts of plants including trees, environments for growth, deciduous and evergreen trees, fruit and vegetables	**Biology – Animals including Humans**  **Animals, Including Humans 2** All about animals – animal families, mammals and birds, amphibians, reptiles and fish, food, wild animals and pets, characteristics
Year 2	**Chemistry – Materials**  **Uses of Everyday Materials** Different materials and their uses, building a bridge, testing stretchiness, changing shape, Charles Macintosh, John McAdam	**Biology – Living Things and their Habitats**  **Living Things and their Habitats 1** Living, dead and never been alive, microhabitats, what animals eat, food chains, the journey of food	**Biology – Living Things and their Habitats**  **Living Things and their Habitats 2** Habitats from around the world – changing environments, the rainforest, ocean life, Arctic and Antarctic habitats, creating models	**Biology – Animals including Humans**  **Animals Including Humans 1** Growth – animal survival, needs of humans, eating the right food, healthy balanced diets, exercise, hygiene	**Biology – Animals including Humans**  **Animals Including Humans 2** Life cycles – the human life cycle, matching offspring to their parents, life cycle of a chicken, lifecycle of a butterfly, life cycle of a frog	**Biology – Plants**  **Plants** Differences between seeds and bulbs, what plants need to grow and stay healthy, the life cycle of a plant, how plants adapt to suit their environments
Year 3	**Combination**  **Scientific Enquiry** Solar ovens: posing questions, writing predictions, recording and presenting results, cleaning coins: writing a method, carrying out a practical test, writing a conclusion, making a cake: fair testing, controls and variables	**Biology – Animals including Humans**  **Animals Including Humans** Five key food groups, nutrition in food, types of skeletons, the human skeleton, animals and their skeletons, the role of muscles	**Chemistry – Materials**  **Rocks** Formation and properties of igneous, sedimentary and metamorphic rocks, weathering and water, the suitability of rocks for different purposes, fossils, types of soil	**Physics – Forces**  **Forces and Magnets** Contact and non-contact forces, how things move on different surfaces, types of magnets, magnetic and non-magnetic objects, magnetic forces and distance	**Biology – Plants**  **Plants** The effect of different factors on plant growth, functions of different parts of a plant, photosynthesis, water transportation, parts that flowers play in the life cycle of flowering plants, pollination, seed dispersal	**Physics – Energy**  **Light** Light sources and non light sources, sunlight and how to stay safe, reflective materials, how shadows are formed and change throughout the day
Year 4	**Biology – Animals including Humans**  **Animals Including Humans** Organs in the digestive system and their functions, types of human teeth, effects of liquids on teeth, food chains, food webs	**Biology – Living Things and their Habitats**  **Living Things and their Habitats 1** Classification of animals, classification keys, adaptations and classification within species, pond plants	**Biology – Living Things and their Habitats**  **Living Things and their Habitats 2** Conservation – ecosystems and the effects of changing seasons, human impact and deforestation, air pollution, water pollution, conserving water	**Chemistry – States of Matter**  **States of Matter** Comparing and grouping the 3 states of matter, how particles behave in each, melting points, freezing and boiling points, evaporation and condensation, the water cycle	**Physics – Energy**  **Sound** How vibrations travel through a medium to the ear, sound insulation, volume, pitch, sounds from near and far	**Physics – Energy**  **Electricity** Electrical appliances and electrical safety, components in a series circuit, conductors and insulators, electrical switches, how components can change within a circuit

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Year 5	**Physics – Forces**  **Forces** Gravity and Isaac Newton, air resistance and parachutes, water resistance, friction, mechanisms – levers, pulleys and gears	**Chemistry – Materials**  **Properties of Materials** Thermal conductors and insulators, the hardness of materials, soluble materials, separating mixtures	**Chemistry – Materials**  **Changes of Materials** Recovering solutes from solutions, reversible changes, chemical reactions, rusting reactions, burning reactions, acids and bicarbonate of soda	**Biology – Animals including Humans**  **Animals Including Humans** Mammal life cycles, gestation periods, foetal development, changes in puberty, changes during old age	**Physics – Earth Science**  **Earth and Space** The solar system and its planets, the heliocentric model, Earth's movement in space, Earth's rotation, the movement of the moon	**Biology – Living Things and their Habitats**  **Living Things and their Habitats** Life processes of plants, life cycles of mammals, comparing life cycles of insects and amphibians, birds and reptiles, the work of Jane Goodall and David Attenborough
Year 6	**Physics – Energy**  **Electricity** Parts of an electrical circuit, voltage and its effect on current, identifying and correcting problems in circuits, outputs of circuits, conductors and insulators	**Physics – Energy**  **Light** How light travels, reflection and how it helps us see, how shadows change, exploring light phenomena	**Biology – Animals including Humans**  **Animals Including Humans** The heart and the circulatory system, comparing blood vessels, blood, how the body transports water and nutrients, what affects your heart rate, impact of drugs and alcohol on the body	**Biology – Living Things and their Habitats**  **Living Things and their Habitats** Classifying living organisms, kingdoms of life, the Linnaean system, microorganisms, asexual reproduction and spore dispersal	**Biology – Animals including Humans**  **Evolution and Inheritance** How offspring vary, animal adaptations, plant adaptations, what we can learn from fossils, theory of evolution and natural selection, human evolution	**Biology – Living Things and their Habitats**  **Looking After Our Environment** Climate change, reducing rubbish that goes to landfill, reducing energy consumption, burning fuels, COP meetings and outcomes, data associated with weather