

Curriculum Overview: Science Autumn 1 Autumn 2 Spring 2 Summer 2 Spring 1 Summer 1 Go Wild! What is the best material Let's Investigate! - My Roots and Shoots! The Changing Seasons: Autumn The Changing Seasons: for ...? Senses and Winter Spring and Summer In this unit. Year 1 will be In this unit, Year 1 will be exploring In this unit. Year 1 will be looking at different animals. the properties of different materials. In this unit. Year 1 will be using exploring the world of plants. In this unit. Year 1 will be In this unit. Year 1 will be They will be sorting all the and using their findings to determine They will be growing their own their investigation skills and observing the changes to the observing the changes to the world different animals into what they can be used to make or plants, and learning about what considering their senses world around them as we move around them as we move from build. a plant needs to grow and sight, sound, touch, taste and categories. survive. smell Identifying and naming from Autumn into Winter. Spring into Summer. Identifying a range of different animals. different materials includina fish. Identify. name and draw Observing and recording the Observing and recording the Distinguishing and amphibians, reptiles, • Identify and name a range the parts of the body object from the birds and mammals of wild and garden plants. relating to sense changes between the changes between the seasons material it is made including deciduous and Looking at the key Observe how their senses seasons of Autumn and of Spring and Summer from evergreen trees structural features of are affected by different Winter Observe and describe different Describing the simple different animals Identify and describe the stimuli ~ properties of materials basic structure of plants Year Observe and describe weather patterns and the Sorting animals into Explain and record their (e.a. hard/soft: and trees (roots, stem, different categories (e.g. findings different weather patterns change in the length of the rough/smooth: leaves. flowers) carnivores and and the change in the length transparent/opaque day herbivores) Topic Vocabulary: See, sight, Compare and classify Topic Vocabulary: wild, hear, hearing, touch, smell, of the day materials by property garden, roots, leaves, flowers, taste, tastebuds, senses Topic Vocabulary: fish, stems, petals, plants, trees Topic Vocabulary: mammals, birds, reptiles, Topic Vocabulary: Autumn, Winter, Spring, Working Scientifically: amphibians, carnivore, Topic Vocabulary: Natural, man-made, object, Working Scientifically: Summer, crops, weather, Observing, describing, herbivore, nocturnal, aquatic Autumn, Winter, Spring, material, wood, plastic, glass, pattern, daylight, sunny, Observing, describing, questioning, making Summer, crops, weather, metal, water, fabric, paper, shiny, rainy, snowy, cloudy, sun, comparing, drawing diagrams connections Names of key animals studied. pattern, davlight dull. sunrise, sunset, day length Scientist Focus: George Parts of the body linked to key Working Scientifically: Working Scientifically: Working Scientifically: Washington Carver animals (e.g wings, claws, Describing, noticing, describing, noticing, comparing, Describing, noticing, head, beak, talon) comparing, observing organising, sorting, making comparing, observing, iudgements recording, pattern seeking Working Scientifically: Sorting, comparing, organising, making connections. Scientist Focus: George Mottershead





	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Roots and Shoots!	My Body! – Muscles and Bones	Geology Rocks!	Let there be Light!	Forces and Magnets!	Let's Investigate- Forces and
Year 3	 In this unit, Year Three will continue to explore and develop their understanding of plants as living things. 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 Topic Vocabulary: fruit, compost, annual, flower, germinate, health, healthy, leaf/leaves, root, bulb, seed, seedling, soil, stem, vegetable, properties, materials, nutrients, trunk, life-cycle, pollination, pollinators, disperse, dispersal Working Scientifically: hypothesizing, verifying, making links, justifying, drawing diagrams Scientist Focus: Marie Clark-Taylor 	 In this unit, Year Three will continue to learn about the human body, finding out about the skeleton, and what muscles require to grow and function. 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 Topic Vocabulary: Nutrition, nutrients, energy, skeleton, bones, muscles, protect, support, exoskeleton, food chain Working Scientifically: conjecturing, observing, making links, drawing diagrams Scientist Focus: Antione Levoisier 	 In this unit, Year Three will become geologists! They will explore the different types of rocks, find out how they are formed, and classify them by property. 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 Topic Vocabulary: mineral, rock, stone, pebble, grain, crystal, layers, hard, soft, texture, absorb, soil, fossil marble, chalk, granite, sandstone, slate, peat, permeable, impermeable, ore, igneous, magma, sedimentary, paleontologist Working Scientifically: comparing, contrasting, organizing, classifying, describing, justifying Scientist Focus: Mary Anning 	 In this unit, Year Three will be developing their understanding of what light is and how it behaves. 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 Topic Vocabulary: light, source, dark, absence of light, transparent, translucent, opaque, shiny, matte, surface, shadow, reflect, mirror, sunlight, dangerous, Working Scientifically: predicting, applying, visualizing, being systematic, Scientist Focus: Ibn al-Haytham 	 In this unit, Year Three will be learning all about forces; they will look at how different objects behave when force is applied, and learn about magnetic forces. compare how things move on different surfaces notice that some forces need contact between 2 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 of whether they are attracted to a magnet, and identify some magnetic materials describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	Magnets In this unit, Year Three will be applying their investigative skills and further exploring forces and magnets. Topic Vocabulary: Force, push, pull, twist, contact force, non-contact force, magnet, strength, bar, magnet, ing magnet, button magnet, horseshoe magnet, attracattarpel, metal, iron, steel, poles, north pole, south pole Working Scientifically: conjecturing, testing, justifying, classifying, sorting, hypothesizing

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer1	Summer 2
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Year 4	States of Matter In this unit, Year 4 will be classifying materials into solids, liquids and gases. They will start to learn about what particles are, and how they behave in different temperatures. - 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 cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) - identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature Fopic Vocabulary: solid, liquid, gas, state, change, melting, freezing point, poiling, evaporation, temperature, water cycle, particles, heat Working Scientifically: observing, comparing, conjecturing, hypothesizing, justifying Scientist Focus: Amedeo Avogrado	 What's that Sound? In this unit, Year 4 will be using their knowledge of particles (from the previous unit) to develop their understanding of what sound is and how it travels. identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear 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 Topic Vocabulary: sound, source, vibrate, vibration, travel pitch, high, low, faint, loud, insulation Working Scientifically: making connections, conjecturing, testing, observing Scientist Focus: Leonardo Da Vinci/ Galileo (sound waves) 	 You are what you eat! In this unit, Year 4 will be exploring the human digestive system, and will be comparing our dietary needs to those of other animals. 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 Topic Vocabulary: digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, large intestine, nutrients, rectum, anus, teeth, incisor, canine, molar, pre-molar, herbivore, carnivore, omnivore, producer, predator, prey, food, chain Working Scientifically: comparing, classifying, observing, recognising links Scientist Focus: Rachel Carson/ Dr Uchenna Okoye 	 Help our Habitats! In this unit, Year 4 will be making use of the local environment to find out about living things in their natural habitat. 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 recognise that environments can change and that this can sometimes pose dangers to living things Topic Vocabulary: environment, classify, basic needs, adaptation, features, variety, variation, human impact, positive, negative, migration, migrate Working Scientifically: observing, questioning, organizing, classifying Scientist Focus: Libby Hyman 	It's Electric! In this unit, Year 4 will be exploring electricity, learning about circuits, power sources, conductors and insulators. - 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 Topic Vocabulary: electricity, electric, current, appliance, device, mains plug, circuit, complete, component, cell, battery, positive, negative, connect, loose, short circuit, wire, bulb, switch, buzzer, motor, conductor, insulator, mental, non-metal, symbol Working Scientifically ; testing, conjecturing, predicting, explaining, justifying	Let's Investigate – Will Robots Take Over the World? In this unit, Year 4 will be applying their understanding of circuits and electricity to build their very own robots! Topic Vocabulary: electricity, electric, current, appliance, device, mains plug, circuit, complete, component, cell, battery, positive, negative, connect, loose, short circuit, wire, bulb, switch, buzzer, motor, conductor, insulator, mental, non-metal, symbol Working Scientifically: conjecturing, testing, justifying, applying, explaining Scientist Focus: Joseph Engelberger/Marvin Minsky
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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	Space! The Final Frontier	Fantastic Forces!	The Circle of Life!	The Art of Living!	Changing Materials	Let's Investigate! Finding Solutions!
Year 5	In this unit, Year 5 will be learning all about the wonders of space. They will look at the planets in the solar system, and will develop their understanding of the movement of celestial bodies in relation to Earth. - 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 Topic Vocabulary: Earth, sun, moon, Mercury, Jupiter, Saturn, Mars, Venus, Uranus, Neptune, Pluto, rotates, axis, orbit, star, planets, exoplanets Working Scientifically: observing over time, conjecturing, extrapolating, interpolating, making connections, classifying Scientist Focus: Mae Jemison, Neil deGrasse Tyson, Gladys West and Stephen Hawking	 In this unit, Year 5 will be building on their understanding of Earth and Space to explore the nature of different forces! 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 Topic Vocabulary: Force, gravity, Earth air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears Working Scientifically: observing, testing, conjecturing, predicting, extrapolating, interpolating, recording findings, drawing scientific diagrams Scientist Focus: James Blyth 	In this unit, Year 5 will be exploring life cycles in different classes of living things. They will look at reproduction in animals, as well as in humans. - 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 Topic Vocabulary: Puberty Vocabulary to describe sexual characteristics. Working Scientifically: observing, describing, justifying, predicting, classifying, comparing Scientist Focus: David Attenborough	In this unit, Year 5 will be learning how to draw scientifically accurate diagrams, and will be learning about human lifecycles, comparing them to those of animals. They will also learn about different growth stages in humans, including puberty. - Describe the changes as humans develop to old age - Describe the changes that occur in the body during puberty Topic Vocabulary: Life Cycle, reproduce, sexual, asexual sperm, fertilise, live young, metamorphosis, plantlets, runners, bulbs, cuttings Working Scientifically: conjecturing, explaining, observing, predicting Scientist Focus: Charles Darwin (scientific drawing)	 In this unit, Year 5 will be taking a closer look at the changes that can occur in materials 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 kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda Topic Vocabulary: thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible, non-reversible, burning, rusting Working Scientifically: observing, justifying, explaining, conjecturing, extrapolating, interpolating, recording data Scientist Focus: Stephanie Kwolek 	In this unit, Year 5 will be applying their understanding of changes in materials and using their investigative skills! Examples Include: - Making water filters to separate materials - Choosing and using materials to suit a purpose (e.g. a warm coat, blackout curtains) - Exploring changes in state that are reversible (e.g. melting, freezing) and irreversible (cooking, burning, breaking) Topic Vocabulary: thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible, non- reversible, burning, rusting Working Scientifically: observing, predicting, justifying, testing Scientist Focus: Spencer Silver and Ruth Benerito

