

Core Subject: Science Coverage Cycle A:

2022-2024: Lower KS2 (Year 3/4)

Key Components of knowledge

	Forces and Magnets <i>Magnetic Fun and Games</i>	Living things and their habitats <i>A world of living habitats</i>	States of Matter <i>What's the Matter?</i>	Animals including Humans <i>Fit for Success</i>	Plants <i>Feast of flowers, fruits and seeds</i>	Sound <i>Sounds Spectacular!</i>
Key Vocab	Friction, gravity, air resistance, levers, pulleys, gears	Dinosaur, indigenous, woodland, ponds, sea, rainforest, desert, species, microhabitats	Water vapour, condensation, precipitation, evaporation, matter, substance, lava, solid, liquid, gas	Nutrition, skeleton, muscles, diet, joint, pelvis, cartilage, rib cage, tendon, spine	Roots, stem, nutrients, pollination, seed dispersal, fertiliser, seed formation, stigma, anther, soil	Vibrating, pitch, volume, insulation, outer, middle and inner ear, cochlea, auditory, frequency, hammer
National Curriculum	<p><b>Forces and Magnets (YEAR 3)</b></p> <ul style="list-style-type: none"> <li>→compare how things move on different surfaces</li> <li>→notice that some forces need contact between two objects, but magnetic forces can act at a distance</li> <li>→observe how magnets attract or repel each other and attract some materials and not others</li> <li>→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</li> <li>→describe magnets as having two poles</li> <li>→predict whether two magnets will attract or repel each other, depending on which poles are facing</li> </ul>	<p><b>Living things and their habitats (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→recognise that living things can be grouped in a variety of ways</li> <li>→explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> </ul>	<p><b>States of Matter (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→compare and group materials together, according to whether they are solids, liquids or gases</li> <li>→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)</li> <li>→identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>	<p><b>Animals including Humans (YEAR 3)</b></p> <ul style="list-style-type: none"> <li>→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</li> <li>→Identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>	<p><b>Plants (lifecycles) (YEAR 3)</b></p> <ul style="list-style-type: none"> <li>→ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>→explore the part that flowers play in the life cycle of flowering plants</li> <li>→explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul>	<p><b>Sound (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→identify how sounds are made, associating some of them with something vibrating</li> <li>→recognise that vibrations from sounds travel through a medium to the ear</li> <li>→find patterns between the pitch of a sound and features of the object that produced it</li> <li>→find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>→recognise that sounds get fainter as the distance from the sound source increases</li> </ul>
Working Scientifically	<ul style="list-style-type: none"> <li>→asking relevant questions and using different types of scientific enquiries to answer them</li> <li>→setting up simple practical enquiries, comparative and fair tests</li> <li>→making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, (not-using a range of equipment, including thermometers and data loggers)</li> <li>→gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>→recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>→reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>→using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>→identifying differences, similarities or 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Core Subject: Science Coverage Cycle B:

2022-2024: Lower KS2 (Year 3/4)



Key Components of knowledge

	Rocks	Living things and their habitats	Animals including humans	Light	Plants	Electricity
	<i>This planet rocks</i>	<i>Habitat helpers</i>	<i>The cycle of life</i>	<i>Shining the light</i>	<i>Greatly Green Growers</i>	<i>Electric personalities</i>
Key Vocab	Fossil, soil, crystals, sedimentary, metamorphic, igneous, magnetic pole, organise matter, attract and repel	Predator, changes, dangerous, environment, habitats, classification, fungi, bacteria	Pancreas, oesophagus, intestine, organ, molars, canine, food chain, predators, prey, salivary gland	Reflection, shadows, light source, opaque, refraction, periscope, nocturnal, orbits, convex, concave	Roots, stem, nutrients, pollination, seed dispersal, fertiliser, seed formation, stigma, anther, soil	Circuit, buzzers, conductor, battery, cells, switch, socket, appliance, appliance series circuit, insulator
National Curriculum	<p><b>Rocks and Fossils (YEAR 3)</b></p> <ul style="list-style-type: none"> <li>→compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>→describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>→recognise that soils are made from rocks and organic matter</li> </ul>	<p><b>Living things and their habitats (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul>	<p><b>Animals including Humans (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→describe the simple functions of the basic parts of the digestive system in humans</li> <li>→identify the different types of teeth in humans and their simple functions</li> <li>→construct and interpret a variety of food chains, identifying producers, predators and prey</li> </ul>	<p><b>Light (Year 3)</b></p> <ul style="list-style-type: none"> <li>→recognise that they need light in order to see things and that dark is the absence of light</li> <li>→notice that light is reflected from surfaces</li> <li>→recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>→recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>→find patterns in the way that the size of shadows change</li> </ul>	<p><b>Plants (lifecycles) (Year 3)</b></p> <ul style="list-style-type: none"> <li>→identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>→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</li> <li>→investigate the way in which water is transported within plants</li> <li>→explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul>	<p><b>Electricity (YEAR 4)</b></p> <ul style="list-style-type: none"> <li>→identify common appliances that run on electricity</li> <li>→construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>→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</li> <li>→recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>→recognise some common conductors and insulators, and associate metals with being good conductors</li> </ul>
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