

SCIENCE UNIT OVERVIEWS 2020-2021

Year group and unit	Working Scientifically	Science Content & Knowledge	Previous learning to recap	Key vocabulary
Year 3 Autumn 1 <i>How do sources of light effect everyday life?</i>	Can they record their findings using simple scientific drawings? Can they use scientific language to label diagrams? Can they begin to look for patterns e.g. when light source moves what happens to shadows? Can they make a prediction before testing an idea? Can they take accurate measurements? E.g. measuring the length of a shadow at different points of the day	Can they recognise that they need light in order to see things and that dark is the absence of light? Can they notice that light is reflected from surfaces? Can they recognise that light from the sun can be dangerous and that there are ways to protect their eyes? Can they recognise that shadows are formed when the light from a light source is blocked by an opaque object? Can they find patterns in the way that the size of shadows change?	New learning (builds on geography unit on climate in Y2)	Transparent Opaque Reflection Fluorescent UV rays Periscope Shadow Sun protection Shadow
Year 3 Autumn 2 <i>What is the relationship between forces and magnetism?</i>	Can they use results to draw simple conclusions? E.g. by testing different materials Can they use different ideas and suggest how to find something out? Can they begin to understand fair testing and use this to plan a simple fair test? Can they begin to identify similarities and differences related to scientific ideas and processes?	Can they compare how things move on different surfaces? Can they notice that some forces need contact between two objects, but magnetic forces can act at a distance? Can they observe how magnets attract or repel each other and attract some materials and not others? Can they 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? Can they describe magnets as having two poles? Can they predict whether two magnets will attract or repel each other, depending on which poles are facing?	Y1 Spring 2: Grouping everyday materials Y2 Autumn 2: how materials are used for different purposes	Horseshoe magnet Bar magnet Attract Repel Compass Poles Surface Magnetic force
Year 3 Spring 1 <i>How can we compare rocks? How are these different from fossils and soils?</i>	Can they make careful observations in the local environment e.g what soil type / rocks can be found in the school grounds and what properties do they have? Can they classify rocks and present information in different ways? Can they set up simple practical enquiries, comparative and fair tests? E.g. how permeable rocks are?	Can they compare and group together different kinds of rocks on the basis of their appearance and simple physical properties? Can they describe in simple terms how fossils are formed when things that have lived are trapped within rock? Can they recognise that soils are made from rocks and organic matter?	(Link with Geography) Y1 Spring 2: Grouping everyday materials Y2 Autumn 2: how materials are used for different purposes	Rock Igneous rock Sedimentary rock Metamorphic rock Soil Chalky Sandy Peaty Weathering Acid rain

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			Y3 Autumn 2: Forces & magnets – link with forces and fossils	Fossil
<p>Year 3 Spring 2 <i>How are other living things important to the life cycle of plants on Earth?</i></p>	<p>Can they make systematic and careful observations? E.g. how water is transported in plants or dissect a plant and look closely at their properties? Can they begin to ask relevant questions and use different types of scientific enquiries to answer them? E.g. the impact of fertiliser on plant growth. Can they record findings in a bar chart or table? Can they use drawings and labelled diagrams to record findings?</p>	<p>Can they identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers? Can they begin to understand the parts of the plant that play a role in pollination e.g. filament, stigma, anther? Can they 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? Can they investigate the way in which water is transported within plants? Can they explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal?</p>	<p>EY Spring 2: Observing plants grow</p> <p>Y1 Spring 1: How plants change over time and plants from local area</p> <p>Y2 Spring 2: How plants stay healthy and grow</p>	<p>Nutrient Transported Pollination Seed formation Seed dispersal Carbon dioxide Germination</p> <p>Petal Stigma Filament Anther Style</p>
<p>Year 3 Summer 2 <i>Why do different animals need various types and amounts of nutrition?</i></p>	<p>Can they group and classify? E.g. foods into different food types? Animals into different types (with a skeleton, without a skeleton) Can they use scientific evidence to support their findings? e.g. which food types we need most of and why</p>	<p>Can they identify that animals, including humans, need the right types and amount of nutrition? Can they understand that they cannot make their own food; they get nutrition from what they eat? Can they identify that humans and some other animals have skeletons and muscles for support, protection and movement? Can they understand what is meant by a 'balanced diet'? Can they describe simply how nutrients, water and oxygen are transported within animals and humans? (not detailed digestion – this comes in Y4)</p>	<p>(Link with PE & DT)</p> <p>EY: What animals and humans need to grow to stay healthy and safe</p> <p>Y1 Summer 2: Comparing animals</p> <p>Y2 Summer 2: Exercise and nutrition</p>	<p>Balanced diet Nutrition Muscles Protection Skeleton Carbohydrate Dairy Protein Voluntary muscles Involuntary muscles</p>