



**Overview: Long term Science Year A**

**Class / Year groups: Class 3 Year 3/4**

**Year A**

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Subject</b>	Biology	Biology	Chemistry	Physics	Physics	
<b>Theme / Topic</b>	Animals including humans <i>Nutrition skeletons, muscles</i>	Animals, including Humans <i>Digestive system and food chains</i>	States of matter <i>Materials, states of matter</i> <i>(link to Topic)</i>	Forces and magnets <i>Friction and magnetism</i>	Light <i>Reflection and shadows</i>	
<b>Main Enquiry</b>	How can Usain Bolt run so fast?	What happens to the food we eat?	How would we survive without water?	How does my fridge magnet stick to my fridge?	How far can you throw your shadow?	
<b>Coverage</b>	<ul style="list-style-type: none"> <li>• Skeleton</li> <li>• Muscles</li> <li>• Exercise</li> <li>• Health</li> </ul>	<ul style="list-style-type: none"> <li>• Digestive system</li> <li>• Teeth</li> </ul>	<ul style="list-style-type: none"> <li>• Solids</li> <li>• Liquids</li> <li>• Gases</li> <li>• The water cycle</li> </ul>	<ul style="list-style-type: none"> <li>• Different forces</li> <li>• Magnets</li> </ul>	<ul style="list-style-type: none"> <li>• Reflections</li> <li>• Shadows</li> </ul>	
<b>Key Knowledge</b>	<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>	<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>	<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>	<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>	<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. Find patterns in the way that the size of shadows change.</li> </ul>	

**Revised: March 2023**



**Overview: Long term Year B**

**Class / Year groups: Class 3 Year 3/4**

**Year B**

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Subject</b>	Physics	Biology	Physics		Biology	Physics
<b>Theme / Topic</b>	Rocks <a href="#">(Link to topic)</a> Fossils and classifying rocks	Living things and their habitat <a href="#">(Link to topic)</a> Changing environments and classifying animals	Electricity Simple circuits and switches, conductors and insulators		Plants Functions of the parts of a plant, importance of flowers	Sound Vibrations and volume
<b>Main Enquiry</b>	What do rocks tell us about the way the earth was formed?	Why is the Sea Turtle an endangered animal?	How would you cope for a day without electricity?		Which plants thrive in our local environment?	Why is the sound made by Justin Bieber enjoyed by so many?
<b>Coverage</b>	<ul style="list-style-type: none"> <li>Fossil formation</li> <li>Compare and group rocks</li> <li>Soil</li> </ul>	<ul style="list-style-type: none"> <li>Classification of animals</li> </ul>	<ul style="list-style-type: none"> <li>Simple circuits and switches</li> <li>Conductors and insulators</li> </ul>		<ul style="list-style-type: none"> <li>Basic structure and functions</li> <li>Lifecycle and transportation of water</li> <li>Classification of plants</li> </ul>	<ul style="list-style-type: none"> <li>Sound vibrations</li> <li>Pitch and volume</li> </ul>
<b>Key Knowledge</b>	<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>	<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> <li>Recognise that environments can change and that this can sometimes pose dangers to living things.</li> </ul>	<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> <li>How to work safely with electricity.</li> </ul>		<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>	<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>

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