

## Science Long Term Plan

	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<b>Year 1</b>	<p>Identify and name parts of the body. Describe the structure of common skeletons of pets. Caring for pets</p>	<p>Links to Winter describe and observe seasonal weather. Observe changes of how the lengths of the days changes depending on the season</p>	<p>Focus on materials. Identify and name everyday materials and describe the properties. Compare and group materials based on their properties. Complete investigations on the best gloves/ cloak for a super hero.</p>	<p>Identify and classify a range of dinosaurs. Identify dinosaurs that are carnivores/ herbivores.</p>	<p>Identify and name a variety of common wild and garden plants including deciduous and evergreen trees Identify and describe the basic structure of common flowering plants including trees.</p>	<p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Animal life cycles and habitats.</p>
<b>Year 2</b>	<p>Describe the importance for humans of exercise eating the right amounts of different types of food and hygiene Find out about and describe the basic needs of humans for survival (water, food and air) Notice humans have off springs that grow into adults</p>	<p>Look at famous landmarks around the world. Identify and compare the different materials they are made of. Investigation write up of materials.</p>	<p>Focus on animals and plants that live in Africa. Investigate habitats and adaptations.</p>	<p>Identify and name a variety of plants and their habitats. Growing from seeds to bulbs. Observe and describe how seeds and bulbs grow into mature plants (plant investigation write up). Find out and describe how plants need water, light and a suitable temperature to grow.</p>	<p>Find out about and describe the basic needs of animals for survival (water, food and air) Notice animals have off springs that grow into adults Explore and compare the differences between things that are dead, living and things that have never been alive. Identify and name a variety of animals in their habitats including micro habitats. Look at different habitats and why animals need them to survive. Draw and create food chains using paper plates</p>	<p>Investigate how the shape of solids can be changed by squashing, bending, twisting and stretching. Write up an investigation for the best material to use to make a beach ball.</p>

### Science Long Term Plan

<p><b>Year 3</b></p>	<p style="text-align: center;"><b>Earth Rocks</b></p> <p>To explore different kinds of rocks and their properties To recognise that soil comes from rock To find out how fossils are formed</p>	<p style="text-align: center;"><b>Animals</b></p> <p>To learn about healthy and balanced diets To describe the basic parts of the skeletal system To look at joints, and how bones and muscles help us move</p>	<p style="text-align: center;"><b>Forces and Magnets</b></p> <p>To observe the forces that magnets produce</p>	<p style="text-align: center;"><b>Space</b></p> <p>To observe and draw the Moon from real life and secondary sources Use knowledge of materials and forces To describe what happened in the 'Space Race' in the 1960. To identify which foods are best to take into space and explain why To know what factors affect the design of a space suit.</p>	<p style="text-align: center;"><b>Plants</b></p> <p>To identify and describe the functions of the different parts of flowering plants To explore exactly what plants need to live and grow, and how these requirements vary from plant to plant To explore the role that flowers play in the life cycles of plants, from pollination to seed spreading</p>	<p style="text-align: center;"><b>Light</b></p> <p>To describe the reflections when light is reflected from surfaces To describe how shadows are formed To make a simple mirror and create a list of the key uses</p>
<p><b>Year 4</b></p>	<p style="text-align: center;"><b>Sound</b></p> <p>Identify how sounds are made, associating them with something vibrating 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. Recognise that vibrations from sounds</p>	<p style="text-align: center;"><b>States of Matter</b></p> <p>Compare and group materials together, according to whether they are solids, liquids or gases. Observe some materials change state when they are heated, and measure or research the temperature at which this happens in degrees Celcius. Identify the part played by evaporation and condensation in the water cycle, and</p>	<p style="text-align: center;"><b>Humans including animals</b></p> <p>Identify different types of teeth in humans and their simple functions Describe the simple functions of the basic parts of the digestive system in humans Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p style="text-align: center;"><b>Electricity</b></p> <p>Identify common appliances that run on electricity. Construct simple series circuits, identifying and naming 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.</p>	<p style="text-align: center;"><b>Living things &amp; habitats</b></p> <p>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.</p>	

### Science Long Term Plan

	<p>travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it.</p>	<p>associate the rate of evaporation with temperature.</p>		<p>Recognise some common conductors and insulators, and associate metals with being good conductors. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a series circuit.</p>	
<b>Year 5</b>	<p style="text-align: center;"><b>Materials</b></p> <p>Compare and group together everyday materials on the basis of their properties. Know that some materials will dissolve in liquid to form a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Explain that some changes result in the formation of new materials, and this kind of change is not usually reversible.</p>	<p style="text-align: center;"><b>Forces</b></p> <p>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 that act between moving surfaces. Identify the effects of friction that acts between moving surfaces. Identify the effects of water resistance that acts between moving surfaces. Recognise that some mechanisms, including</p>	<p style="text-align: center;"><b>Earth &amp; Space</b></p> <p>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. Use the idea of the Earth's rotation to explain day and night.</p>	<p style="text-align: center;"><b>Animals</b></p> <p>Describe the life processes of reproduction in some plants. Describe the differences in the life cycles of an insect and a frog. Describe the differences in the life cycles of a bird and a mammal. Describe the process of reproduction in some animals. Describe the changes humans develop to old age.</p>	<p style="text-align: center;"><b>Lights</b></p>

### Science Long Term Plan

		levers, pulleys and gears, allow a smaller force to have a greater effect.			
<b>Year 6</b>	<p style="text-align: center;"><b>Evolution and Inheritance</b></p> <p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>	<p style="text-align: center;"><b>Living Things and their Habitats</b></p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	<p style="text-align: center;"><b>Animals including Humans</b></p> <p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p style="text-align: center;"><b>Light</b></p> <p>Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p style="text-align: center;"><b>Electricity</b></p> <p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>