



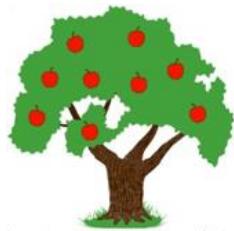
Science Long Term Plan 2019-2020

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Group						
Year 1	<p>'Who am I?' Animals, including humans</p> <p><i>'The children will learn about the basic parts of the human body and explore their five senses using a wide range of activities.'</i></p>	<p>'Celebrations' Animals, including humans</p> <p><i>'Using the theme of celebrations to explore a number of curriculum areas, including everyday materials, plants and light. There are a number of activities to choose from, all offering opportunities for cross-curricular work.'</i></p>	<p>'Polar places' Animals, including humans; Everyday materials</p> <p><i>'Children plan an expedition to the polar regions, learning about properties of different materials, and a range of living things in the polar regions.'</i></p>	<p>'Plants and animals' Habitats</p> <p><i>'Children explore their local environment (school grounds or local park) to find out about the plants and animals that live in their locality. Many of the activities could also be carried out in a local botanic garden or arboretum, which has a section on local plants. Children will learn to name and identify common wild and garden plants, including trees, so they are familiar with common names and able to use these in Year 2 and beyond.'</i></p>	<p>'On safari' Plants, Animals, including humans; Everyday materials</p> <p><i>'Children go on safari to explore invertebrates and other plants and animals in the local area.'</i></p>	<p>'Holiday' Animals, including humans; Everyday materials.</p> <p><i>'Children will plan what they need to pack for a holiday, and explore the different animals they might encounter at the seaside and the human impact on the environment.'</i></p>



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Year 2	<p>'Healthy me' Animals, including humans</p> <p><i>'Children explore the importance of exercise, diet and good hygiene, building on the Who am I? in Year 1'</i></p>	<p>'Materials monster' Uses of everyday materials</p> <p><i>'Explores the properties and uses of everyday materials, set in the context of meeting, talking to and feeding the Materials Monster.'</i></p>	<p>'Squash, Bend, Twist and Stretch'</p> <p><i>'Children explore how the shapes of objects can be changed by squashing, bending, twisting and stretching. In doing this they raise questions, perform simple tests, and gather and record data.'</i></p>	<p>'Our Local Environment'</p> <p><i>Living things and their Habitats, Plants</i></p> <p><i>'Brings together study of living things, habitats and growing plants and is strongly focussed on outdoor learning and investigations.'</i></p>	<p>'Young Gardeners' Year 1 Topic 4 Plants and animals where we live Year 3 Topic 4 How does your garden grow Year 5 Topic 3 Circle of Life Year 6 Topic 1 Classifying Living Things</p> <p><i>'Brings together study of living things and habitats and is strongly focussed on outdoor learning and investigations.'</i></p>	<p>'Little Masterchefs' Animals, including humans</p> <p><i>'Explores food, including making healthy food choices, and cooking various different foods.'</i></p>



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Year 3	<p>'Rocks, soils and fossils' Rocks <i>'Children work scientifically on a variety of quick investigations and longer tasks to learn about rocks. This covers the properties and uses of rocks, the rock family, soils and finally fossils.'</i></p>	<p>'Food and our bodies' Animals, including humans <i>'Children work scientifically on a variety of quick challenges and longer tasks to learn about food and their bodies. This topic looks at where animals get food from and why it is important, and skeletons, muscles and joints.'</i></p>	<p>'Light and shadows' Light <i>'Children work scientifically on a variety of quick challenges and longer tasks to learn about the wonders of light, including reflections and shadows.'</i></p>	<p>'How does your garden grow?' Plants <i>'Children work scientifically on a variety of quick challenges and longer tasks to learn about plants. They learn about the different parts of plants, what plants need to live, water transportation in plants and pollination.'</i></p>	<p>'Forces and Magnets' Forces and magnets <i>'Exploring magnets and their uses, and what makes magnetic poles special, along with the idea that some forces such as magnetic force can act without contact – unlike pushes and pulls, which require direct contact'</i></p>	<p>'The nappy challenge' Cross-curricular <i>'Exploring disposable nappies and provides opportunities for children to ask their own questions and make decisions on how to answer their questions using different scientific enquiry activities.'</i></p>



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Year 4	<p>'What's that sound?'</p> <p>Sound</p> <p><i>'Children will encounter how sounds are made on a variety of instruments and how they can be changed in volume, pitch and over distance. They will explore making sounds on a range of objects that aren't instruments, in order to investigate how sounds are created to make music.'</i></p>	<p>'Living things'</p> <p>Living things and their habitats</p> <p><i>'Children to recognise that living things can be grouped in a variety of ways. They explore and use keys to identify and name a variety of living things. Finally, they look at how changes to habitats can pose dangers to living things.'</i></p>	<p>'Looking at states'</p> <p>States of matter</p> <p><i>'Children will learn about states of matter. They will compare and group materials together, according to whether they are solids, liquids or gases. They will observe that some materials change state when heated or cooled, and they will identify the part played by evaporation and condensation in the water cycle.'</i></p>	<p>'Teeth and eating'</p> <p>Humans and other animals</p> <p><i>'Children learn about digestion and different types of teeth, before moving on to explore deadly predators and their prey, in their exploration of food chains. They work scientifically throughout the topic, using enquiry, practical experiments and hands-on research to answer questions and investigate how we eat, why we eat and what we eat.'</i></p>	<p>'Power it up'</p> <p>Electricity</p> <p><i>'Children revisit some uses of electricity and the importance of safety before constructing simple circuits. Understanding how to change a circuit by changing its components makes up the third part of this topic, leading in a final application of knowledge and skills when the children design and make an alarm using their knowledge of circuits.'</i></p>	<p>'The big build'</p> <p>Cross-curricular</p> <p><i>'Children learn about building towers and bridges, starting with constructing tall towers, then exploring bridges, next they look at animals as builders and finally engage in researching famous engineers and architects and the structures they built. They will use and develop working scientifically skills and understanding through comparative and fair tests, measuring, repeat readings and drawing and reading bar and line graphs.'</i></p>



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Year 5	<p>'Out of this world' Earth and space</p> <p><i>'Children learn about space. Starting with the Solar System, they look next at how ideas about space have changed over time before they explore what causes us to experience night and day on Earth.'</i></p>	<p>'Material world' Properties and changes of materials</p> <p><i>'The children learn about materials and how they change. First they test properties of materials before looking at how materials dissolve, what a solution is and evaporation. Compare reversible and irreversible changes.'</i></p>	<p>'Circle of life' All living things and their habitats</p> <p><i>'Children look at the life cycles of various species including mammals, amphibians, fish and birds. They also look at and describe the life process of reproduction in plants and animals.'</i></p>	<p>'Let's get moving' Forces</p> <p><i>'Children learn about forces and machines. They start with the force of gravity then study friction forces, including air and water resistance, before investigating how simple machines work.'</i></p>	<p>'Growing up and growing old' Animals, including humans.</p> <p><i>'Children look at and describe the changes as humans develop to old age.'</i></p>	<p>'Amazing changes' Properties and changes of materials</p> <p><i>'Children learn about materials, how they change and which changes are reversible and irreversible. The topic concludes by looking at how these properties are applied in the real world.'</i></p>



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Year 6	<p>'Classifying living things' Living things and their habitats</p> <p><i>'Children build on their learning about grouping living things in Year 4 by looking at the classification system in more detail. The topic is divided into two sections, children first revisit their knowledge of classification and creating keys, before developing their knowledge by looking at fungi and bacteria. Children also look at the work of Carl Linnaeus, the scientist who first made important the function of naming and classifying to 'identify' organisms.'</i></p>	<p>'Healthy bodies' Animals, including humans</p> <p><i>'Children build on learning from Years 3 and 4 about the main body parts and internal organs (skeletal, muscular and digestive system). It considers life processes that are internal to the body, such as the circulatory system. The impact of lifestyle on bodies, particularly of humans. Scientists are continually finding out what is good and bad for us, and their ideas do change as more research is carried out.'</i></p>	<p>'Evolution and inheritance'. Evolution and inheritance</p> <p><i>'Building on what they learned about fossils in Year 3, children find out more about how living things have changed over time. They are introduced to the idea that characteristics are passed from parent to their offspring, but that they are not exactly the same. Explore variation over time can make animals more or less likely to survive in particular environments Children explore evolution and Charles' Darwin's theory of natural selection, as well as palaeontologist Mary Anning's work with fossils.'</i></p>	<p>'Light' Light</p> <p><i>'Introduces the concept of light travelling in straight lines. It starts by looking at beams of light and how light travels to enable children to understand how we see things. This understanding is then applied to the production of shadows and starts to look at how light is reflected. The topic then takes the learning into the realm of coloured light and rainbows, using scientific skills to raise and answer questions. It builds on the work carried out in Year 3 on light, shadows and reflection.'</i></p>	<p>'Electricity' Electricity</p> <p><i>'Builds on the Year 4 work on electricity, taking it into the scientific use of symbols for components in a circuit, as well as considering the effect in more detail of changing components in a circuit. The children have the opportunity to apply their learning by creating an electronic game.'</i></p>	<p>'The Titanic' Working Scientifically Skills</p> <p><i>'Based around applying the working scientifically skills that they have learned so far in their science lessons, to explore some of the scientific concepts behind the Titanic, e.g. floating and sinking. It can be used as a good opportunity to embed, assess and observe working scientifically skills, as well as laying foundations for transition to KS3 science.'</i></p>



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