

Science Curriculum Map 2014-2015

	Year 4	Year 5	Year 6
Autumn 1	<p>What's That Sound? 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.</p>	<p>Out Of This World In this topic, children learn about space. Starting with the Solar System, they look next at how ideas about space have changed over time, before finally exploring what causes us to experience night and day on Earth.</p>	<p>Let It Shine The topic 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.</p>
Autumn 2	<p>Living Things This topic teaches the 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.</p>	<p>Material World In this topic, 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. Finally the children compare reversible and irreversible changes.</p>	<p>Electrifying This topic 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.</p>
Spring 1	<p>Looking at States This unit will teach the children 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.</p>	<p>Circle Of Life In this topic children look at life cycles of various species – including mammals, amphibians and birds. They also look at and describe the life process of reproduction in plants and animals.</p>	<p>Staying Alive This topic 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.</p>
Spring 2	<p>Teeth and Eating In this topic the 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.</p>	<p>Let's Get Moving In this topic children learn about forces and machines. Starting with the force of gravity, they then study friction forces, including air and water resistance, before investigating how simple machines work.</p> <p>Forces</p>	<p>Classifying Critters Children will already have learned that there are two main kingdoms and that the animal kingdom can be subdivided into vertebrates and invertebrates and what this means. There are five kingdoms of living things which will be explored during this unit. Here they will explore the kingdoms not yet encountered, such as fungi and microbes.</p>

<p>Summer 1</p>	<p>Power It Up This topic is all about electricity. The 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.</p>	<p>Growing Up and Growing Old In this topic children look at and describe the changes as humans develop to old age. Pupils draw a timeline to indicate stages in the growth and development of humans and learn about the changes experienced in puberty.</p>	<p>We're Evolving This topic is intended to look at how living things produce offspring that are similar in appearance, but identical to themselves, whether they are plants or animals. They should also consider how animals change over time as they adapt to their surroundings and this leads to longer term changes. Evidence of changes over long periods of time, will be built on the year 3 topic of rocks, looking at fossils.</p>
<p>Summer 2</p>	<p>Brilliant Bubbles We all enjoying blowing bubbles, but are they always spherical? Can we make square bubbles? What about different coloured bubbles or very tiny ones or ones that last for ages? This topic also looks at places we see bubbles other than when blowing them through soap mixtures, such as in food stuffs to produce lighter (less dense) products.</p>	<p>Super Scientists Children work scientifically on a variety of quick challenges and longer tasks to learn about the different ways in which scientists work in the real world. This topic looks at the discoveries of famous scientists, the methods forensic scientists use and the various ways scientists tell others about new discoveries.</p>	<p>We are Dinosaur Hunters During this topic the children will have a chance to study, research and present information, based on their own questions about dinosaurs. They are often fascinated by the period that dinosaurs lived and there are many programs and films made that will have provoked more curiosity, such as the 'Ice Age' series and the and Before Time' series. The entire topic is focused on developing 'children's' scientific enquiry skills.</p>