St John of Jerusalem
Church of England Primary School

# SCIENCE YEAR PLANS

*2014-15*

| Year Group | **Autumn 1**<br>**8 weeks** | **Autumn 2**<br>**7 weeks** | **Spring 1**<br>**6 weeks** | **Spring 2**<br>**5 weeks** | **Summer 1**<br>**6 weeks** | **Summer 2**<br>**7 ½ weeks** |
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| YEAR 1 | ***Using Our Senses***<br>Exploring our sense of touch, taste, smell and sight and hearing. | ***Everyday Materials***<br>Exploring many different types of materials we use in everyday life. | ***Our Changing World: Animal Antics***<br>Investigating commonly found animals in our local environment. | ***Plant Detectives***<br>Learning about plants that are found locally. | ***Our Changing world: Sensing Seasons***<br>Finding out about the impact of seasons and the imp[act *of seasonally changes.* | ***Our Changing World: Plants***<br>Visiting specific trees across the seasons to document the changes that take place as the seasons change. |
| YEAR 2 | **Uses of Everyday Materials**<br>Children revise the names of some everyday materials and compare objects made from these, referring to the materials' properties. They investigate which fabric will be best for making a bedroom dark. | **What is in your Habitat?**<br>Children visit several different habitats locally and look at what makes up the habitat. This includes looking at living things things that once lived and things that have never been alive.<br>By the end of the lesson they are able to explain that habitats include rocks, soils, water and air and different types of animals and plants. | **Our Changing World**<br>In this series of lessons children look at and identify some of the animals and plants that live in a habitat.<br>By the end of the lessons they are able to talk about the types of animals and plants that live in different habitats. | **Animals including Humans**<br>Children learn about and describe the basic needs of animals, including humans, for survival.<br>Children learn about how we change as we grow nd also begin to understand that adults have offspring. | **Plants**<br>Children learn about the diffwernt parts anof plants and wha their jobs are. They look at the life cycle of a plant and describe what happens at each stage. Children learn what plants need to grow and investigate how lants grow best | **Creative Science**<br>Children investigate of science using a range of hands on and creative approaches. |
| **YEAR 3** | **Animals including humans**<br>Children will be able to prioritise a human being's basic needs, | **Forces and Magnets**<br>Children will begin to learn about forces by looking at the different ways | **Plants**<br>Children will be able to describe the different features of leaves and know that the leaf is | **Can you see me?**<br>Children will begin to understand that light is needed for us to see things and that some | **Rocks**<br>Children will be able to identify and name a variety of rocks, and describe and compare | **Creative science** |

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| | separating out those things that are necessary for immediate survival from those that are necessary for longer term, healthy living. Children will be introduced to the components of a balanced diet and understand what sorts of foods are the best sources for those components.<br><br>Children will know about the function of the skeleton for movement and protection. | objects can be made to start moving. Children will learn that a force alters the movement of an object, for example, starts something moving, slows it down, and that there are different types of forces.<br><br>Children will recognise that some but not all metals are magnetic and that all non-metals are not magnetic. | where the plant makes its food.<br><br>Children will know that water is transported in a plant and understand the function of the stem.<br><br>children will be able to name the stages in the life cycle of a flowering plant and the order in which they occur. | objects are easier to see than others.<br><br>Children will be able to use what they have seen to describe how light behaves. children will be able to describe the relationship between the shape of the object and the shape of the shadow. | their observable properties.<br><br>Children will be able to use a key to sort and identify a variety of rocks, in some cases identifying questions that they might ask to help them identify each rock from a selection.<br><br>Children will observe how rocks change over time, visiting a site or sites to experience first-hand the changes that take place. Children will be able to describe in simple terms what a fossil is, name a variety of fossil types and have researched some of these in more detail. | **Based upon overall pupil assessment** |
| **YEAR 4** | **Human Impact**<br>Children will consider the impact that humans have on the local environment. | **Where does all that food go?**<br>Children will be able to say where the food goes as it travels though the body. | **In a state**<br>They will be able to use key properties to distinguish between solids and liquids. | **Electricity**<br>Children will know that electrical items can be powered by mains electricity/ batteries and that | **Sound**<br>Children will be able to start to associate some sounds with vibrations. | |

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| | Children will interpret data about waste and plan a litter survey.<br><br>Children will learn about the impact that different types of litter can have on wildlife.<br>Children will learn about what a food chain is and link changes in a food chain.<br><br>Children will consider the pros and cons of keeping animals in zoos, and begin to prepare arguments for a debate. | They will be able to identify and name the types of teeth that they have.<br>Children will learn about a range of ways to look after their teeth.<br><br>They will understand that a food chain shows what different animals eat in a habitat and that the arrows show the flow of energy. | Children will have planned a fair test and will know that melting and freezing are changes of state.<br><br>Children will be able to describe the effect of temperature, shape and size on how fast ice blocks melt.<br>Children will know that there are three states of matter and be able to recognise the characteristics of each of them.<br><br>Children will know that different materials melt at different temperatures and will be able to define melting and freezing.<br><br>Children will develop their understanding of evaporation to explain their findings. | electricity can be used to produce light, sound, heat and movement<br><br>Children will be able to make and draw complete circuits.<br><br>Children will know that a switch is a controlled break which stops electricity f owing to all parts of the circuit.<br><br>Children will test materials to see whether they are electrical conductors or insulators.<br><br>Children will know that some materials are better electrical conductors than others and be able to choose suitable | They will be able to explain what makes a sound louder or quieter.<br>Children will carry out an investigation to explore how sounds get fainter as you move away from the source of the sound.<br><br>Children will understand that the pitch of the note is affected by the length, thickness and tautness of the string/band.<br><br>Children will explore how air can be used to make sounds with different pitches.<br><br>Children will learn about echoes and how these are used by animals. | |

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| | | | They will be able to recognise where condensation is occurring and annotate a drawing to show changes of state. | materials to make the different parts of a switch. | | |
| **YEAR 5** | <u>Circle Of Life.</u><br>Children are introduced to the life cycles of four significant types of animals: mammals, amphibians, insects and birds.<br><br>They look at what makes a successful life cycle and how humans are helping endangered animals complete their life cycles.<br>The children will then use animation software to show the life cycle of a butterfly. | <u>Earth in Space.</u><br>The children will consider what is in space and learn about different planets and stars.<br><br>They will also consider days, years and seasons and understand why this differs around the world.<br><br>They they will then do a study of the moon looking at the cycle and why it changes shape. | <u>Properties and changes of materials.</u><br>The children will complete a project to look at the best building materials considering the properties and uses of different materials. | <u>Feel the Force.</u><br>The children will consider how we measure force and how we can speed up or slow it down.<br><br>They will look at wheels and levers and investigate how these can be used to lift heavy objects. | <u>Our Changing World:</u><br>The children will observe plant reproduction in the school and learn how to ensure the schools growing space can yield the most crops. | <u>Marvellous Mixtures</u>.<br>This unit will look at separating, dissolving and mixing liquids and solids.<br><br>The children will learn how to purify liquids and what will happen if we add salt to a combination of liquids. |
| **YEAR 6** | **Living Things and their Habitats**<br>Pupils learn how to classify living things. Pupils look at major levels of classification and explain through verbal, diagraphic and | **Animals including Humans.**<br>Pupils identify the main parts of the human body.<br>Learn about the structure of the skeleton | **Light**<br>Investigate how light travels. Review the relationship between light and shape/shadows**.**<br>Pupils conduct experiments and link | **Electricity**<br>Look at symbols for circuits. Draw and label. Make circuits and change components to investigate and | **Evolution and Inheritance**<br>Scientific history of evolution<br>Cross curricular link Geography – islands Madagascar & the Gallapagos | **Evolution and Inheritance**<br>Evolution through the eyes of different faiths – Christianity/Islam etc.<br>Create a family tree – research and make. |

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| | written words their classifications.<br>Explore habitats and the interdependence of others on their habitats. | and the function of particular bones.<br>Link with impact of diet/drugs and lifestyle.<br>How animals adapt to their environment. | their learning across to maths where they measure the amount of sunlight the UK has across the year. (Use charts to record their findings). | predict the outcome. | *Why was Charles Darwin the most dangerous man in England in 1859?*<br>Biography in a bag Darwin. | |