



# Holy Family Catholic Primary School – Science Topic Overviews



| EYFS – Nursery and Reception  |  |   |  |  |  |
|---|--|---|--|--|--|
| Seasons - Autumn  | Seasons - Changes in weather & environments  | Investigating Ice   | Seasons – Spring Animals and their babies  | Observing mini-beasts and other animals and species  | Summer   |
| <b>Nursery</b>  |  |   |  |  |  |
| <p>Explore Autumn season using all their senses</p> <p>Notice some simple signs of autumn</p> | <p>Recognise and talk about the changes in seasons between Autumn and Winter.</p> <p>Explore different types of weathers</p> | <p>Participate in simple experiments to investigate what happens when ice melts.</p> <p>Talk about the changes that happen when something melts or freezes</p> <p>Find out about, and name, some of the animals that live in the Arctic</p> | <p>Recognise and talk about the changes in seasons between winter and spring.</p> <p>Recognise how spring is called new life and how baby animals are born.</p> <p>Match animals to their babies</p> | <p>Understand the differences between large animals &amp; mini-beasts</p> <p>Know about the lifecycle of a butterfly</p> <p>Care for simple mini-beasts in our Bug Hotel</p> <p>Know the name of some of the parts of a butterfly</p> <p>Compare the difference between spring and summer.</p> | <p>Begin to show an interest in exploring why things happen, e.g floating and sinking, using sand and water from the beach</p> |



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| <b>Reception</b>  |   |  |   |   |  |
| <p>Explore Autumn season using all their senses</p> <p>Talk about signs of autumn</p> <p>Explore natural Autumn materials with different properties (hard/soft)</p> | <p>Talk about and explore the changes between seasons, using key vocabulary.</p> <p>Investigate how the different types of weathers can be linked to the different seasons and environments</p> | <p>Participate in simple experiments to investigate what happens when ice melts - talk about and record why something melts or freezes and the change that happen</p> <p>Make observations of the animals that live in the Arctic &amp; talk about what makes them special</p> | <p>Talk about and explore the changes between seasons, using key vocabulary.</p> <p>Recognise how spring is called new life and how baby animals are born.</p> <p>Match animals to their babies, identifying key features and similarities.</p> <p>Identify animas from different parts of the world.</p> <p>Examine simple life cycles</p> | <p>Can talk about the life cycle of a frog using appropriate vocabulary</p> <p>Talk about how we can care for animals and mini-beasts where we live</p> <p>Know the names of parts of a frog</p> <p>Talk about the seasons change and how this impacts on when things grow</p> <p>Compare the difference between autumn, winter, spring and summer</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and Minibeasts</p> <p>Care for simple mini-beasts in our Bug Hotel</p> | <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</p> |



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| Cycle B – Key Stage 1 – Years 1 and 2  |  |  |  |   |
|--|--|--|--|---|
| Animals Including Humans   | Habitats   | Plants   | Seasonal Change  | Super Science   |
| <p>To identify, name, draw and label the basic parts of the human body</p> <p>To say which part of the body is associated with each sense</p> <p>To perform simple tests based on the senses</p> <p>To be able to identify and name a variety of common UK mammals</p> <p>To be able to identify and compare a variety of common UK birds and reptiles</p> <p>To identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> | <p>To explore and compare the difference between things that are living, dead, &amp; things that have never been alive</p> <p>To understand that living things need to live in suitable habitats</p> <p>To be able to explore and describe a micro-habitat.</p> <p>To explore simple food chains in a habitat</p> <p>To notice that animals, including humans, have offspring which grow into adults</p> | <p>To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>To identify and describe the basic structure of a variety of common flowering plants, including trees</p> <p>To know that flowering plants produce seeds which grow into new plants</p> <p>To describe what they observe as new plants grow</p> | <p>To observe changes across the four seasons</p> <p>To observe and describe weather associated with the seasons and how day length varies</p> | <p>Following child led enquiries including:<br/>To ask simple questions and recognise that they can be answered in different ways</p> <p>To observe closely, using simple equipment</p> <p>To perform simple tests</p> <p>To identify and classify</p> <p>To use their observations &amp; ideas to suggest answers to questions</p> <p>To gather and record data to help in answering questions</p> |



# Holy Family Catholic Primary School – Science Topic Overviews



## Cycle B – Lower Key Stage 2 – Years 3 and 4

| Ourselves and Other Animals  | Light  | States of Matter   | Sound  | Habitats  | Super Science   |
|--|--|--|--|---|---|
| <p>To identify that humans get the nutrition they need from what they eat</p> <p>To identify that a balanced diet is needed in order to stay healthy</p> <p>To investigate which foods different animals eat</p> <p>To explore human and animal skeletons</p> <p>To find out about how the skeleton supports and protects the body and to investigate how invertebrates are supported</p> <p>To find out what muscles are and how skeletal muscles help us to move</p> | <p>To recognise that we need light in order to see &amp; that darkness is the absence of light</p> <p>To explore the Sun as a light source and recognise that there are ways to protect our eyes</p> <p>To recognise that shadows are formed when light from a light source is blocked by a solid object</p> <p>To investigate how shadows behave</p> <p>To investigate how the size of shadows change throughout the day</p> <p>To explore how light is reflected from surfaces</p> | <p>To identify and explore the properties of solids, liquids and gases</p> <p>To observe that materials change state when they are heated or cooled</p> <p>To research the temperature in degrees Celsius (°C) at which materials change state</p> <p>To understand the process of evaporation and condensation</p> <p>To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</p> | <p>To find out that sounds are made when objects and materials vibrate</p> <p>To investigate whether sounds can travel through different materials</p> <p>To find out that some materials are effective in preventing vibrations from sound sources reaching the ear</p> <p>To investigate how sounds can be different pitches and volumes</p> <p>To explore the relationship between distance &amp; volume - Recognising that sounds gets fainter as the distance from the sound source increases</p> | <p>To be able to identify a variety of habitats and explore why organisms live in different habitats</p> <p>To be able to use a classification key to identify animals</p> <p>To be able to group organisms according to their characteristics</p> <p>To be able to classify animals into specific groups according to their characteristics</p> <p>To be able to identify and classify a variety of British plants</p> <p>To explore the human impact on habitats and environments, both positive and negative</p> | <p>Following child led enquiries including:<br/>To ask relevant questions and use different types of scientific enquiry to answer them</p> <p>To set up simple practical enquiries</p> <p>To record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and labels</p> <p>To report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>To use straightforward scientific evidence to answer questions or to support their findings</p> |



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## Cycle B – Upper Key Stage 2 - Years 5 and 6

| Living Things – Classification   | Light   | Changes of Materials  | Living Things & Their Habitats   | Evolution & Inheritance   | Super Science   |
|--|---|---|--|---|---|
| <p>To classify animals &amp; plants based on specific characteristics, giving reasons for choices</p> <p>To classify animals into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</p> | <p>To recognise that light appears to travel in straight lines</p> <p>To 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>To 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>To 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>To investigate shadows using knowledge of transparent, translucent and opaque materials</p> | <p>To explain the difference between melting and dissolving and identify materials which will dissolve in water</p> <p>To investigate the rate of dissolving</p> <p>To identify different ways materials can be mixed together and know when to use which processes to separate mixtures</p> <p>To describe how to recover a substance from a solution by separating different mixtures</p> <p>To carry out a variety of investigations involving reversible and irreversible changes</p> | <p>To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>To describe the life process of reproduction in some plants &amp; animals</p> | <p>To 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>To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>To identify how animals and plants are adapted to suit their environment in different ways and that adaption may lead to evolution</p> | <p>Following child led enquiries including: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Recording data and results of increasing complexity using scientific diagrams and label, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Using test results to make predictions to set up further comparative and fair tests</p> <p>Reporting or presenting findings from enquiries inc conclusions, casual relationships &amp; explanations of degree of trust in results, in oral and written forms such as display and presentations</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments</p> |