

Block	Key NC Science Objectives
<p>Autumn 1 – Everyday Materials - Let's Build</p> <p>Explore different materials and sort them into groups. Consider what it would be like if the tables were made of jelly or the chairs were chocolate</p>	<p>Everyday materials</p> <ul style="list-style-type: none"> distinguish between an object and the material from which it is made. identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. describe the simple physical properties of a variety of everyday materials. compare and group together a variety of everyday materials on the basis of their simple physical properties. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways. observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions. gathering and recording data to help in answering questions
<p>Autumn 2 - Animals and Humans - Our Pets</p> <p>Look carefully at the behaviour and habitats of creatures. Learn about a variety of common animals with a particular focus on the pets we keep and how we keep them happy and healthy.</p>	<p>Animals, including Humans</p> <ul style="list-style-type: none"> identify and name a variety of common animals including fish, amphibians, reptiles, birds, and mammals. identify and name a variety of common animals that are carnivores, herbivores and omnivores. describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets, <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways. observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions. gathering and recording data to help in answering questions
<p>Spring 1 – Animals including Humans - Ourselves</p> <p>Learn fascinating things about our bodies and senses in this varied and creative block. Observe changes over time and think about the question how do we change as we get older? Collect data, look for patterns and carry out investigations.</p>	<p>Animals, including Humans</p> <ul style="list-style-type: none"> identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways. observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions. gathering and recording data to help in answering questions
<p>Spring 2 – Everyday Materials Marvellous Materials</p> <p>Explore a range of materials suitable for fixing a broken umbrella and test them using pipette to simulate raindrops. Working with play figures frozen in ice, devise an investigation to release them. Explore puddles and observe how they change. Think carefully about what is happening: can you explain why a puddle changes.</p>	<p>Everyday Materials</p> <ul style="list-style-type: none"> distinguish between an object and the material from which it is made. identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. describe the simple physical properties of a variety of everyday materials. compare and group together a variety of everyday materials based on their simple physical properties. <p>Working Scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways. observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions. gathering and recording data to help in answering questions.

<p>Summer 1 – Seasonal Changes - Wonderful Weather Consider what you already know about weather, look at weather forecasts; do weather observations and make collages about the seasons; have fun with shadows; make a class weather station that can measure rainfall, wind direction and temperature.</p>	<p>Seasonal Changes</p> <ul style="list-style-type: none"> observe changes across the four seasons. observe and describe weather associated with the seasons and how day length varies. <p>Working scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment. performing simple tests. identifying and classifying using their observations and ideas to suggest answers to questions
<p>Summer 2 – Plants What's Growing in our Gardens?</p> <p>Outdoor learning and a range of art and design activities will help you connect with the world of plants. From fruit and vegetables to flowers and trees, you will understand and observe them and grow your own seeds and keep them healthy.</p>	<p>Plants</p> <ul style="list-style-type: none"> identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Working scientifically</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways observing closely, using simple equipment. performing simple tests. identifying and classifying using their observations and ideas to suggest answers to questions

Types of Investigations

'Working Scientifically' is the continuous area of study in the National Curriculum for Science in England. This aims to ensure that children have greater exposure to a range of enquiry types and that they recognize when the various forms of enquiry are taking place. This is to enable them to decide for themselves which type to use to tackle the question they are investigating. The following types of enquiries are included in Hamilton Science planning.

Exploring:

Discovering what happens through play and exploration, e.g., what happens when you add water to fabric?

Observing over time:

Often linked to exploring but with a time variable included, e.g., using a thermometer to observe temperature changes of water.

Sorting, classifying, and identifying:

Putting things into groups based on their characteristics, e.g., in how many ways can you sort these materials?

Fair test:

Used when we can control all the variables except the one, we are changing, e.g., which 'towel' material will absorb the most water?

Pattern seeking:

Used when there are too many variables to control and so a true fair test is not possible, e.g., do some people have stronger muscles because they use them more?

Problem solving:

Using the science, we know to solve a problem, e.g. Using what you have learned about how sounds are made, and the loudness of sounds made by different materials, design an effective bird scarer that uses wind chimes or similar.

Researching and analysing secondary sources:

Using secondary sources to help answer scientific questions that cannot be answered through practical investigations, e.g., which materials are biodegradable?