

Our vision is for:

- A high quality Science education that inspires pupils to, and prepares them for, work in scientific industries.
- Synthesised knowledge that enables children to think critically about the world around them and solve problems that are yet to be discovered.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Super me	STEM Focus - Water	Bugs	How can I care for living things?	SE led - What bubbles can you make?	What can I find at the beach?
Scientific Enquiry	<ul style="list-style-type: none"> • To comment and ask questions about aspects of their familiar world, such as the place where they live or the natural world (30-50 months) • To talk about some of the things they have observed, such as plants, animals, natural and found objects (30-50 months) • To look closely at similarities, differences, patterns and change. (40-60 months) • To know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe (ELG) • To know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another (ELG) 					
EVFS	<p>To be able to identify similarities and differences between them and others.</p> <p>To be able to use the correct vocabulary to name body parts and senses.</p> <p>To be able to identify things that there body can do</p> <p>To know simple ways that they can look after their body and stay safe.</p> <p>To identify how they have changed over time.</p>	<p>This unit should be child-led in terms of its focus and led by local industry e.g a guest speaker from the local water plant/ fire brigade to look at how water is transported etc.</p> <p>Children should develop their knowledge of water in different forms e.g. ice, steam, waves.</p> <p>Children should explore toys/ mechanisms that are water powered/ altered and ask and answer questions about how they work e.g. floating and sinking linked to boats at the marina. Water wheels linked to real ones.</p> <p>To know that they share their school environment with other living things and be able to identify a range of habitats.</p> <p>To know the changes that happen in Autumn</p> <p>To know that decaying leaves are food and home for a variety of insects and be able to name some common ones.</p> <p>To notice the changes in some trees and plants at this time (and that some do not change)</p> <p>Children to ask and answer questions about animal habitats and make simple predictions about habitats e.g. where they may find insects based on what they know so far. Children could develop this by constructing a bug hotel to match these properties.</p>	<p>To know that they share their school environment with other living things and be able to identify a range of habitats.</p> <p>To know the changes that happen in Autumn</p> <p>To know that decaying leaves are food and home for a variety of insects and be able to name some common ones.</p> <p>To notice the changes in some trees and plants at this time (and that some do not change)</p> <p>Children to ask and answer questions about animal habitats and make simple predictions about habitats e.g. where they may find insects based on what they know so far. Children could develop this by constructing a bug hotel to match these properties.</p>	<p>Living eggs</p> <p>To be able to use scientific vocabulary to identify key stages in the life of a chicken.</p> <p>To make comparisons between the young of different animals and themselves as infants.</p> <p>To be able to identify some things that living things need in caring for the chicks.</p> <p>To describe and document change e.g. through photographs.</p>	<p>BSW bubble experiments pack.</p> <p>Children to explore how one small change and can have consequences. They should begin to explore how the decisions they make change what happens and use these to start making predictions and solve problems e.g. how could you make a bigger bubble? How could you change the shape? How could you make more bubbles</p>	<p>To show care and concern for living things and the environment (30-50 months)</p> <p>To be able to identify some of the different habitats found on the coast and describe them.</p> <p>To know the difference between sea water and fresh water</p> <p>To observe similarities and differences between farm animals and those found at the beach.</p> <p>To begin to use scientific vocabulary to discuss animal and to apply scientific vocabulary to describe plant features.</p>
Cycle A						

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	What happens during harvest?	Where does the snow go?	SE led - How can I stay dry?	Rubbish	Where does my food come from?	STEM focus – Wind
Scientific Enquiry	<ul style="list-style-type: none"> • To comment and ask questions about aspects of their familiar world, such as the place where they live or the natural world (30-50 months) • To talk about some of the things they have observed, such as plants, animals, natural and found objects (30-50 months) • To look closely at similarities, differences, patterns and change. (40-60 months) • To know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe (ELG) • To know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another (ELG) 					
Cycle B EYFS	<ul style="list-style-type: none"> • To know/recall some of the crops grown locally. • To know the changes in plant growth from seed to fully grown plant. • To know the different ways harvests are collected. E.g. children can explore farm machinery as well as looking at how seeds can be harvested from plants (adult poppies are great for this) and how crops such as cranberries are harvested by flooding the field. • To explore where in the world different crops are grown and to know that crops are harvested at different times. • To be able to name different foods that are made from harvested crops. 	<p>Draw on knowledge of forms of water to explore those around them: sleet, snow, ice, hail, fog etc.</p> <p>To use appropriate scientific vocabulary to describe material properties e.g. freezing, melting, slippery</p> <p>To relate their own experiences to scientific problems e.g. how to free Lego men trapped in ice to helping the school caretaker grit the playground.</p>	<p>How can we keep teddy dry?</p> <p>Children to explore different materials that clothes are made out of and begin to relate them to their uses e.g. stretch leotards, high-vis jackets.</p> <p>Children to formulate their own ideas and test them. Through this process, children to be exposed to the idea of simple tests to explore their ideas and identifying conclusions.</p> <p>Vocab: waterproof, water resistant, absorbent, stretchy, tough, warm etc.</p>	<p>Through exploring 'rubbish', children can explore the properties of materials and use associated scientific vocabulary to describe them (texture, floating, sinking, magnetic etc).</p> <p>To know what happens to our rubbish including recycling and composting. For example, children can make their own paper from old paper to learn about recycling.</p> <p>To be able to apply simple knowledge of properties to identify what objects are made from and sort materials.</p> <p>To be able to relate their activities to wider-world activities e.g. exploring magnets in the setting and seeing how magnets are used to separate rubbish.</p>	<p>To be able to use scientific vocabulary e.g. bulb, seed, stem, leaf, petal, root.</p> <p>To know what plants need to grow.</p> <p>To observe how plants change as they grow, including fruit and vegetables.</p> <p>To identify fruit and vegetables that grow in their area (EY setting, agricultural crops).</p> <p>To know that we need a varied diet (food groups covered in KS1)</p>	<p>This unit should be child-led in terms of its focus and led by local industry e.g. the local wind turbines and wind mill</p> <p>Children should develop their knowledge of wind through exploring wind powered toys and mechanisms.</p> <p>Children should explore toys/ mechanisms that are wind powered/ altered and ask and answer questions about how they work e.g. sails on boats, hand held windmills and balloon cars.</p>

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					Plants and growing		Archaeology/ Paleontology Unit – Links to Binchester Archaeology Unit/St Hild’s Archaeology team
	Topic	Towers, Turrets and Tunnels <i>FE college –building Durham Castle</i>	Paws, Claws and Whiskers	Superheroes	Memory Box	Dinosaur Planet	Land Ahoy Significant Individual: Mary Anning
	Scientific Enquiry	<p>To be able to ask simple questions and recognise that they can be answered in different ways To be able to observe closely, using simple equipment To perform simple tests To be able to identify and classify To be able to use their observations and ideas to suggest answers to questions To be able to gather and record data to help in answering questions.</p> <p><i>Daily temperature</i> observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies.</p>					
Cycle A	Year 1	<p>distinguish between an object and the material from which it is made</p> <p>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>describe the simple physical properties of a variety of everyday materials</p> <p>compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p>	<p>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>	<p>identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p>observe and describe how seeds and bulbs grow into mature plants</p> <p>find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p> <p>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p>	<p>identify and name a variety of common animals that are carnivores, herbivores and omnivores (dinosaurs)</p> <p>describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<p>Work of a real scientist – Mary Anning</p> <p>How can we measure the weather?</p>

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	Year 1	<p>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>identify and name a variety of plants and animals in their habitats, including microhabitats</p>	<p>Making weather stations to collect data and comparing with data loggers.</p> <p>observe changes across the four seasons</p> <p>observe and describe weather associated with the seasons and how day length varies.</p>	<p>notice that animals, including humans, have offspring which grow into adults</p> <p>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>identify and name a variety of plants and animals in their habitats, including microhabitats</p>	<p>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	<p>identify and name a variety of plants and animals in their habitats, including microhabitats – designing habitats using knowledge from working scientifically.</p>
	Year 2	<p>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>explore and compare the differences between things that are living, dead, and things that have never been alive</p>	<p>Making weather stations to collect data and comparing with data loggers.</p> <p>observe changes across the four seasons</p> <p>observe and describe weather associated with the seasons and how day length varies.</p>	<p>notice that animals, including humans, have offspring which grow into adults</p> <p>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>identify and name a variety of plants and animals in their habitats, including microhabitats</p>	<p>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p>	<p>explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</p>

Programme of study is not differentiated where year groups will only meet a subject matter once.