

# Science Long Term Plan and Unit Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	<p><b>The Human Body Unit Overview</b> This unit teaches children to identify parts of the human body and understand the five senses through practical enquiry-based learning</p> <p><b>National Curriculum Objectives</b> 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><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use their observations and ideas to suggest answers to questions.</p>	<p><b>Animals' Needs for Survival Unit Overview</b> This unit develops children's understanding of what animals, including humans, need to stay alive. Pupils explore a range of animal groups and identify that all animals require air, food, water and shelter, while also recognising how different animals meet these needs in different ways.</p> <p><b>National Curriculum Objectives</b> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment.</p>	<p><b>Animals Including Humans (Skeletons) Overview</b> In this unit, children learn about the human skeleton and how it supports, protects and enables movement. They identify and name key bones, explore the functions of skeletons, and compare skeletons in a range of animals. Children also begin to group animals based on observable features of their skeletons and consider differences between animals with and without a spine.</p> <p><b>National Curriculum Objectives</b> Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p><b>Working Scientifically Objectives</b></p>	<p><b>Living Things and Their Habitats (Group and Classify Living Things) Overview</b> In this unit, children learn how living things can be grouped and classified based on their characteristics. They explore vertebrates and invertebrates, compare features of different animal groups, and use classification keys to identify living things. Children also apply these skills to plants, grouping them in different ways and using keys to support classification.</p> <p><b>National Curriculum Objectives</b> Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p>	<p><b>Forces Overview</b> In this unit, children learn about different types of forces, including friction, air resistance, water resistance and gravity. They explore how forces affect motion and investigate how variables such as surface area and shape influence resistance. Children plan, carry out and evaluate scientific experiments, and learn how mechanisms such as levers, pulleys and gears allow smaller forces to have greater effects.</p> <p><b>National Curriculum Objectives</b> Explain that unsupported objects fall towards the Earth because of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p>	<p><b>Living Things and Their Habitats Overview</b> In this unit, children learn how living things are classified into groups based on their characteristics. They explore how organisms can be grouped and identified, including plants, animals and microorganisms. Children use classification keys and develop their own to sort living things. They also study microorganisms and learn about the work of Carl Linnaeus, understanding how classification systems have developed over time.</p> <p><b>National Curriculum Objectives</b> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including</p>

# Science Long Term Plan and Unit Overview

	<p>Gather and record data to help in answering questions</p> <p><b>Why Are Children Learning This?</b> Children learn about the human body to: Understand themselves and others Develop awareness of how their bodies work Build scientific vocabulary to describe the world Begin to investigate using their senses This unit supports curiosity and helps children make sense of everyday experiences (seeing, hearing, touching, tasting, smelling).</p> <p><b>Why Now?</b> <b>Prior Learning (EYFS)</b> Naming basic body parts through songs, play and routines Early sensory exploration (messy play, sound, taste, textures)</p> <p><b>Current Learning Focus</b> Moving from informal knowledge to structured identification and labelling Beginning simple scientific enquiry (e.g., comparing foot size and age patterns) Understanding that each body part has a function</p> <p><b>Future Learning</b></p>	<p>Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about animals' needs for survival to: Understand that all living things have basic needs Recognise similarities and differences between animals Develop early classification skills based on needs rather than appearance Build awareness of how to care for animals and humans This supports children's understanding of life processes and encourages responsibility towards living things.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1)</b> Identifying and naming animals (mammals, birds, fish, amphibians, reptiles) Understanding animal features and basic classification Learning about human body parts and senses</p>	<p>Asking relevant questions and using different types of scientific enquiries to answer them. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Talking about criteria for grouping, sorting and classifying. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about skeletons to understand how their own bodies and other animals' bodies work. This unit helps them to recognise that bones and muscles are essential for movement, protection of vital organs and support of the body. It also develops their ability to group and classify animals scientifically, building early biological understanding.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> In earlier years, children learn to identify and name basic body parts and</p>	<p><b>Working Scientifically Objectives</b> Talking about criteria for grouping, sorting and classifying Asking relevant questions and using different types of scientific enquiries to answer them. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn classification to understand how scientists organise and make sense of the living world. This unit helps them recognise similarities and differences between living things and develop logical thinking skills. It also builds their ability to ask questions, identify patterns and use evidence to group organisms scientifically.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b></p>	<p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p> <p><b>Working Scientifically Objectives</b> Planning different types of scientific enquiries and recognising and controlling variables. [ Taking measurements using a range of scientific equipment with increasing accuracy and precision. Recording findings using scientific language and diagrams. Reporting and presenting findings, including conclusions and explanations. Using scientific evidence to support or refute ideas and arguments.</p> <p><b>Why are children learning this?</b> Children learn about forces to understand how objects move and interact in the world around them. This unit helps them explain everyday phenomena such as falling objects, moving vehicles and how machines work. It also develops their experimental skills and</p>	<p>microorganisms, plants and animals.</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence that has been used to support or refute ideas or arguments. Using and developing classification keys to identify living things. Reporting and presenting findings from enquiries, including conclusions and explanations.</p> <p><b>Why are children learning this?</b> Children learn about classification to understand how scientists organise and make sense of the natural world. This unit helps them recognise similarities and differences between organisms and develop skills in grouping and identifying living things. It also introduces them to how scientific ideas evolve over time.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have grouped and classified living things in Year 4]</p>
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# Science Long Term Plan and Unit Overview

	<p>Year 2: Animals and habitats (survival needs, environments)          Year 3: Skeletons and muscles (structure and function)          KS2: Nutrition, digestion, circulatory system          This unit provides essential foundational knowledge for biology progression.</p> <p><b>Vocabulary</b>          hair, eyes, face, nose, ears, teeth, mouth, head, neck, arm, elbow, hand, leg, knee, foot light, dark hear, loud, quiet, noisy smell, scent, sniff, stench sweet, salty, sour, bitter, savoury, skin, rough, smooth, hard, soft animal, mammal, pet, bird, wings, beak, feathers, tail measure, observe, compare, measurement, growth draw, label, record, sort, group, identify, pattern, predict, test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>	<p><b>Current Learning Focus</b>          Moving from identifying animals to understanding how they survive          Recognising that all animals need air, water, food and shelter          Grouping animals based on needs rather than physical features          Exploring similarities across animal groups</p> <p><b>Future Learning</b>          Year 2 later: Habitats (how environments meet animals' needs)          Year 3: Nutrition and skeletons          KS2: Ecosystems, food chains and adaptation          This unit builds the foundation for understanding interdependence and survival, which underpins all later biology learning.</p> <p><b>Vocabulary</b>  <b>Animal Groups and Features</b>          animal, mammal, bird, fish, amphibian, reptile, fur, feathers, wings, beak, fins, scales, gills  <b>Diet and Feeding</b>          carnivore, herbivore, omnivore, insectivore  <b>Survival and Needs</b>          air, water, food, shelter adult, baby  <b>Examples of Animals</b></p>	<p>explore animals and their basic needs.  <b>Current learning</b>          This unit builds on that knowledge by introducing internal structures (skeletons and muscles) and their functions.  <b>Future learning</b>          This learning prepares children for later study where they will:          Classify animals as vertebrates and invertebrates (Year 4).          Study more complex body systems such as digestion and circulation (Years 4–6).          Develop more advanced classification and scientific reasoning skills.</p> <p><b>Key Vocabulary</b>          Animals including humans skeleton, skull, ribcage, pelvis, femur, spine, joint, hinge joint, ball-and-socket joint, muscle, biceps, triceps, contract, relax antennae, exoskeleton mammal, bird, fish, amphibian, reptile</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation, classify, classification key</p>	<p>Children have identified animals and plants and learned about their basic needs.          They have explored habitats and simple grouping in Key Stage 1.          They have learned about animal groups (mammals, birds, fish, reptiles, amphibians).  <b>Current learning</b>          Children learn to classify living things more precisely using scientific criteria.          They distinguish between vertebrates and invertebrates.          They use and create classification keys for animals and plants.          They apply grouping skills to both animals and plants.  <b>Future learning</b>          Children will develop more complex classification systems (e.g. classification using characteristics and kingdoms).          They will study ecosystems, food chains and interdependence.          They will build on data handling and enquiry skills in later scientific investigations.</p> <p><b>Key Vocabulary</b>  <b>Living things and habitats</b></p>	<p>ability to think scientifically.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b></p> <p>Children have explored forces such as pushes, pulls and friction in Key Stage 1 and lower KS2          They have observed how objects move and interact with surfaces.  <b>Current learning</b>          Children learn about friction, air resistance and water resistance.          They investigate how surface area and shape affect movement.          They explore gravity and understand why objects fall.          They learn how mechanisms (levers, pulleys, gears) make tasks easier.  <b>Future learning</b>          Children will study more complex physics concepts such as forces in motion and energy transfer.          They will develop deeper understanding of scientific models and calculations.          They will apply enquiry skills to more advanced investigations.</p>	<p>They have studied life cycles and habitats in Year 5.</p> <p><b>Current learning</b>          Children learn how to group organisms based on characteristics.          They use and create classification keys.          They classify animals, plants and microorganisms.          They explore how scientific classification systems have developed over time.  <b>Future learning</b>          Children will study evolution and inheritance.          They will develop deeper understanding of biological classification systems.          They will apply scientific reasoning to more complex biological concepts.</p> <p><b>Key Vocabulary</b>  <b>Living things and habitats</b>          organism, classification, characteristics vertebrate, invertebrate microorganism, bacteria, virus, fungi classification key Carl Linnaeus</p> <p><b>Working Scientifically Vocabulary</b></p>
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# Science Long Term Plan and Unit Overview

	<ul style="list-style-type: none"> <li>Equality and Diversity</li> </ul>	<p>frog, toad, newt</p> <p><b>Working Scientifically Vocabulary (Year 2)</b> observe, compare, classify, identify group, sort, pattern predict, test, record</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>	<p>draw, label, record, sort, group, identify, pattern, table, tally, diagram, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>	<p>mammal, bird, fish, amphibian, reptile, vertebrate, invertebrate, exoskeleton, insect, spider, soft-bodied invertebrate classification, classification key flowering plant, non-flowering plant, stamen, pistil, pollination, fern, moss</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation group, classify, identify, record, diagram, results, investigate</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>	<p><b>Key Vocabulary Forces</b> force, contact force, non-contact force, friction air resistance, water resistance, gravity streamlined, surface area, motion lever, pulley, gear, mechanism</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable record, results, investigate, explain, precision, repeatability</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>	<p>measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

<p>Autumn</p>	<p><b>Seasonal Changes (Autumn)</b> <b>Unit Overview</b> This unit focuses on observing and understanding changes that occur during autumn, including weather, daylight,</p> <p><b>National Curriculum Objectives</b> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions</p> <p><b>Why Are Children Learning This?</b></p>	<p><b>Humans</b> <b>Unit Overview</b> This unit focuses on how humans can keep their bodies healthy. Children explore the importance of exercise, a balanced diet, hygiene and dental care, and how these contribute to overall health and wellbeing.</p> <p><b>National Curriculum Objectives</b> Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p>	<p><b>Including Humans (Movement)</b> <b>Overview</b> In this unit, children build on their understanding of the skeleton by learning how movement occurs. They explore joints and how they connect bones, identify different types of joints, and understand how muscles work in pairs to create movement. Children learn that the skeleton, joints and muscles work together as a system.</p> <p><b>National Curriculum Objectives</b> Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p><b>Working Scientifically Objectives</b> Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations. Communicate their findings in ways that are</p>	<p><b>Living Things and Their Habitats (Data Collection A)</b> <b>Overview</b> In this unit, children carry out a scientific enquiry over time by collecting data about living things in their local area. They observe and identify plants and animals, record their findings, and analyse how this changes across the year. Children develop skills in recording, presenting and interpreting data, while linking their observations to seasonal changes.</p> <p><b>National Curriculum Objectives</b> Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p><b>Working Scientifically Objectives</b> Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p>	<p><b>Space</b> <b>Overview</b> In this unit, children learn about the Solar System and the movement of celestial bodies. They explore the Sun, Earth, Moon and planets, and understand how gravity influences their motion. Children investigate day and night, the seasons and the phases of the Moon. They also learn how scientific ideas about space have changed over time and develop their understanding through modelling and enquiry.</p> <p><b>National Curriculum Objectives</b> Describe the movement of the Earth and other planets relative to the Sun in the Solar System Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent</p>	<p><b>Electricity</b> <b>Overview</b> In this unit, children build on their knowledge of simple circuits from Year 4 and develop a deeper understanding of electricity. They construct and draw series circuits using recognised symbols, explore complete and incomplete circuits and investigate how changes affect the brightness of bulbs and loudness of buzzers. Children plan and carry out a fair test to investigate how voltage impacts a circuit and evaluate their results using scientific reasoning.</p> <p><b>National Curriculum Objectives</b> Use recognised symbols when representing a simple circuit in a diagram. Compare and give reasons for variations in how components function, including brightness of bulbs and loudness of buzzers. Associate the brightness of a lamp or the volume of a buzzer with the number</p>
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# Science Long Term Plan and Unit Overview

	<p>Children learn about seasonal changes to: Understand how the environment changes over time Recognise patterns in weather and daylight Develop observation skills using real-life contexts Build awareness of the natural world and their local environment This learning helps children connect science to everyday experiences (weather, clothing, outdoor changes).</p> <p><b>Why Now?</b> Prior Learning (EYFS) Talking about weather and daily changes Exploring outdoors in different conditions Basic understanding of seasons through experience Current Learning Focus Introducing four seasons as a cycle Observing specific changes in autumn (leaf fall, cooler weather, shorter days) Beginning data collection over time (e.g. weather charts, rainfall)</p> <p><b>Future Learning</b> Later Year 1: seasonal changes (winter, spring, summer comparisons)</p>	<p><b>Why Are Children Learning This?</b> Children learn about human health to: Understand how to keep their bodies healthy Recognise the importance of exercise, diet and hygiene Develop independence and responsibility for their own wellbeing Make informed lifestyle choices This unit helps children apply science to their everyday lives and promotes healthy habits.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1)</b> Identifying and naming body parts Understanding basic functions of the human body Exploring senses and how the body works</p> <p><b>Current Learning Focus</b> Understanding how to maintain health rather than just identifying body parts Exploring links between exercise, diet and hygiene Developing awareness of cause and effect (e.g. poor hygiene leads to illness) Beginning simple investigations (e.g. heart</p>	<p>appropriate for different audiences.</p> <p><b>Why are children learning this?</b> Children learn about movement to understand how their bodies function in a coordinated way. This unit helps them see how bones, joints and muscles are interconnected and necessary for everyday actions. It also develops their ability to explain processes using scientific language and models.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have previously identified and named body parts. They have learned about the basic needs of animals. In the previous unit, they identified and named bones and understood the functions of the skeleton.</p> <p><b>Current learning</b> Children build on their knowledge of the skeleton by exploring joints. They learn about different types of joints and how they allow movement. They understand how muscles work in pairs to move bones.</p> <p><b>Future learning</b></p>	<p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</p> <p><b>Why are children learning this?</b> Children learn this unit to understand how scientists collect and use data to observe changes in the natural world. It helps them recognise patterns in living things over time and develop practical skills in data collection, recording and analysis.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned how to group and classify living things. They have identified plants and animals and their characteristics. They have used simple classification skills in previous units.</p> <p><b>Current learning</b> Children collect data about living things in their local environment. They use classification knowledge to identify organisms.</p>	<p>movement of the Sun across the sky.</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence that has been used to support or refute ideas or arguments Recording and presenting data using diagrams, tables and graphs. Reporting on findings from enquiries, including explanations and presentations.</p> <p><b>Why are children learning this?</b> Children learn about space to understand the universe beyond Earth and how celestial bodies interact. This unit helps them explain natural phenomena such as day and night, seasons and the appearance of the Moon. It also introduces them to how scientific knowledge develops over time.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have not formally studied space before. They have basic knowledge about Earth and simple scientific concepts.</p>	<p>and voltage of cells used in a circuit.</p> <p><b>Working Scientifically Objectives</b> Recording data using diagrams, tables and scientific symbols. Planning and carrying out fair tests, including identifying variables. Taking measurements with accuracy and precision Using results to draw conclusions and evaluate investigations.</p> <p><b>Why are children learning this?</b> Children learn about electricity to understand how circuits work and how electrical energy is used in everyday life. This unit helps them develop problem-solving skills by building, testing and improving circuits, and enhances their understanding of scientific investigation.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have built simple circuits in Year 4.] They have learned about basic components such as bulbs, wires and switches.</p> <p><b>Current learning</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Year 2: habitats and how environments change Year 5: Earth and space (day/night and seasonal patterns) This unit introduces children to longitudinal scientific observation across the year.</p> <p><b>Vocabulary</b> <b>Seasonal and Weather Vocabulary</b> autumn, season, weather, rainfall sunny, cloudy, windy, rainy, snowy, frosty daylight, night%</p> <p><b>Equipment and Measurement</b> rain gauge</p> <p><b>Working Scientifically Vocabulary (Year 1)</b> measure, observe, compare, measurement Exposure vocabulary: record, tally, table, identify, pattern, predict, sort, group</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>rate changes, teeth patterns) Future Learning Year 2 later: Animals and habitats (needs for survival linked to humans) Year 3: Nutrition and skeletons KS2: Digestive system, circulatory system and healthy lifestyles This unit builds the foundation for understanding human biology and health, supporting both science and personal development.</p> <p><b>Vocabulary</b> Health and the Body heart, exercise physical health, mental health Diet and Food healthy diet, unhealthy diet fruit, vegetable, meat, sugar Hygiene germs, hygiene, disease, doctor Teeth and Dental Care teeth, plaque, gums, filling</p> <p><b>Working Scientifically Vocabulary (Year 2)</b> observe, compare, classify, identify, group, sort, pattern, predict, test, record</p>	<p>Children will develop a deeper understanding of the human body in later units, including nutrition and body systems. They will apply understanding of forces to explain movement in physics topics. They will build on scientific understanding of systems and processes in upper Key Stage 2.</p> <p><b>Key Vocabulary</b> Animals including humans joint, hinge joint, ball-and-socket joint, muscle, biceps, triceps, contract, relax, skeleton</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation draw, label, record, diagram, results, identify, model, investigate</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>	<p>They present and analyse their data using charts and diagrams. They identify patterns and make predictions about seasonal changes. <b>Future learning</b> Children will build on data handling and analysis skills in later enquiries. They will study habitats, food chains and ecosystems in greater depth. They will develop more advanced scientific reasoning and interpretation skills.</p> <p><b>Key Vocabulary</b> <b>Living things and habitats</b> vertebrate, invertebrate, flowering plant, non-flowering plant</p> <p><b>Working Scientifically Vocabulary</b> data, bar chart, pictogram, prediction measure, observe, compare, record, results, classify, analyse, investigate</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>	<p><b>Current learning</b> Children learn the structure of the Solar System. They explore planets and their characteristics. They understand how Earth rotates and orbits the Sun. They explain day, night and the seasons. They investigate how ideas about space have changed over time. <b>Future learning</b> Children will deepen their understanding of physics concepts such as gravity and forces. They will explore more complex scientific models and evidence-based reasoning. They will build further knowledge of Earth and space in secondary science.</p> <p><b>Key Vocabulary</b> <b>Space</b> solar system, planet, star, Sun, satellite, orbit, gravity, gravitational pull axis, rotation, day, night heliocentric, geocentric Moon, phases, spherical</p> <p><b>Working Scientifically Vocabulary</b></p>	<p>Children construct and draw series circuits using symbols. They explore complete and incomplete circuits. They investigate how adding components affects brightness and sound. They plan and carry out a voltage experiment. They evaluate their results and suggest improvements. <b>Future learning</b> Children will develop deeper understanding of electrical systems in secondary science. They will explore more complex circuits and energy transfer. They will apply enquiry skills to advanced scientific investigations.</p> <p><b>Key Vocabulary</b> <b>Electricity</b> series circuit, cell, battery current, voltage complete circuit, incomplete circuit switch, buzzer, bulb</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable</p>
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# Science Long Term Plan and Unit Overview

		<p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Equality and Diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Equality and Diversity</li> </ul>	<p>measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>record, investigate, explain, results, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

<p>Autumn</p>	<p><b>MATERIALS</b> <b>Unit Overview</b> This unit introduces children to everyday materials, their properties, and how they can be used and tested through practical investigations.</p> <p><b>National Curriculum Objectives</b> 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> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify.</p>	<p><b>Materials</b> <b>Unit Overview</b> This unit develops children’s understanding of everyday materials and their properties. Pupils explore a wide range of materials, compare their suitability for different purposes, and investigate how materials behave, including how their shape can be changed.</p> <p><b>National Curriculum Objectives</b> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify.</p>	<p><b>Animals Including Humans (Nutrition and Diet)</b> <b>Overview</b> In this unit, children learn that animals, including humans, need the right types and amounts of food to stay healthy. They explore the five food groups, understand their effects on the body, and learn about balanced diets. Children also compare different human diets and investigate the diets of different animals.</p> <p><b>National Curriculum Objectives</b> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p><b>Working Scientifically Objectives</b> Talking about criteria for grouping, sorting and classifying. Using straightforward scientific evidence to answer questions or to support their findings. Reporting on findings from enquiries, including oral and written explanations,</p>	<p><b>States of Matter</b> <b>Overview</b> In this unit, children explore the three states of matter: solids, liquids and gases. They learn about the properties of each state and how materials can change state through heating and cooling. Children investigate processes such as melting, freezing, evaporation and condensation, and apply this knowledge to understand the water cycle. They also develop their scientific enquiry skills through planning, carrying out and evaluating investigations.</p> <p><b>National Curriculum Objectives</b> Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p><b>Sustainability (Global Warming)</b> <b>Overview</b> In this unit, children learn about global warming and climate change. They explore how human activities contribute to rising temperatures through the release of greenhouse gases. Children investigate the greenhouse effect and examine the impact of global warming on the environment, including plants, animals and humans. They also consider ways to reduce their carbon footprint and promote sustainable behaviours.</p> <p><b>National Curriculum Objectives (Statutory Content)</b> Recognising which secondary sources will be most useful to research ideas and begin to separate opinion from fact. Identifying scientific evidence that has been used to support or refute ideas or arguments</p> <p><b>Working Scientifically Objectives</b></p>	<p><b>Sustainability (Renewable Energy)</b> <b>Overview</b> In this unit, children learn about renewable and non-renewable energy sources. They explore how energy is generated using fossil fuels and renewable sources such as solar and wind power. Children investigate how different energy sources impact the environment and consider how renewable energy can help reduce global warming. They also explore how renewable energy is used in real life and design simple models such as wind turbines.</p> <p><b>National Curriculum Objectives</b> Identifying scientific evidence that has been used to support or refute ideas or arguments. Reporting and presenting findings from enquiries in oral and written forms.</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence to support or challenge ideas Reporting and presenting findings using scientific explanations.</p>
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# Science Long Term Plan and Unit Overview

	<p>Use their observations and ideas to suggest answers to questions Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about materials to: Understand the world around them and how objects are made Recognise that materials have different properties Begin to explain why materials are used for specific purposes Develop early investigative skills through hands-on exploration This unit builds curiosity and helps children make sense of everyday objects.</p> <p><b>Why Now?</b> <b>Prior Learning (EYFS)</b> Exploring textures and materials through play Describing objects using simple language (hard, soft, etc.) Sensory exploration of materials <b>Current Learning Focus</b> Moving from informal exploration to scientific classification</p>	<p>Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about materials to: Understand that materials have different properties Recognise that materials are chosen for specific purposes Develop early scientific thinking about testing and comparing Build awareness of sustainability and recycling This unit helps children make sense of the world around them, as materials are part of everyday life.</p> <p><b>Why Now?</b> <b>Prior Learning (Year 1)</b> Identifying and naming materials (wood, plastic, metal, glass) Describing simple properties (hard, soft, rough, smooth) Exploring how materials behave (floating, absorbing, melting) <b>Current Learning Focus</b> Moving from simple identification to</p>	<p>displays or presentations of results and conclusions. Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p><b>Why are children learning this?</b> Children learn about nutrition to understand how food affects their bodies and health. This unit helps them make informed choices about what they eat, recognise the importance of a balanced diet, and understand that different animals have different dietary needs. It also supports wider learning about health and wellbeing.</p> <p><b>Why now?</b> <b>Prior learning</b> Children have learned about basic needs of animals, including the need for food. They have identified and named body parts and explored simple similarities and differences between animals. They have learned about skeletons and movement in previous units. <b>Current learning</b></p>	<p><b>Working Scientifically Objectives</b> Talking about criteria for grouping, sorting and classifying. Identifying differences, similarities or changes related to simple scientific ideas. Asking relevant questions and using different types of scientific enquiries. Making systematic and careful observations and taking accurate measurements using standard units and equipment (e.g. thermometers, stopwatches). Setting up simple practical enquiries and fair tests. Gathering, recording and presenting data to answer questions. Using results to draw conclusions, make predictions, suggest improvements and raise further questions.</p> <p><b>Why are children learning this?</b> Children learn about states of matter to understand how materials behave and change in the world around them. This unit</p>	<p>Recognising useful secondary sources and distinguishing between fact and opinion Identifying scientific evidence to support or refute ideas.</p> <p><b>Why are children learning this?</b> Children learn about global warming to understand how human actions affect the Earth. This unit helps them recognise the causes and consequences of climate change and encourages them to take responsibility for protecting the environment. It also promotes sustainable thinking and informed decision-making.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about Earth, space and environmental changes. They have explored materials, gases and energy in earlier units. <b>Current learning</b> Children learn what global warming is and how it occurs. They understand the greenhouse effect and the role of fossil fuels.</p>	<p><b>Why are children learning this?</b> Children learn about renewable energy to understand how energy production affects the environment. This unit helps them recognise the importance of sustainable energy choices and how renewable sources can reduce global warming. It also encourages them to think about real-world solutions to environmental challenges.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied electricity and energy in earlier years. They have explored global warming and environmental issues in Year 5. <b>Current learning</b> Children learn the difference between renewable and non-renewable energy. They explore solar and wind power. They investigate how energy choices impact the environment. They consider how renewable energy can be used in everyday life. <b>Future learning</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Understanding the difference between objects and materials ]          Testing materials and identifying simple properties and behaviours (e.g. float/sink, absorb)  <b>Future Learning</b>          Year 2: Uses of materials and suitability          Year 4: States of matter          Year 5+: properties and changes of materials          This unit provides essential foundations for chemistry and materials science progression.</p> <p><b>Vocabulary</b>  <b>Materials and Properties</b>          material, object wood, metal, plastic, glass, rock shiny, dull rough, smooth, hard, soft heavy, light  <b>States and Changes</b>          solid, liquid melt, freeze ice  <b>Material Behaviour</b>          float, sink          absorb  <b>Light Properties</b>          transparent, opaque  <b>Working Scientifically Vocabulary</b>          measure, observe, compare, measurement  <b>Exposure vocabulary:</b>          record, table, tally, sort, group, identify, pattern, predict, test</p>	<p>comparing suitability of materials          Developing understanding of why materials are used for different purposes          Testing materials systematically          Exploring how materials change shape  <b>Future Learning</b>          Year 3+: Rocks and soils, magnets and forces          Year 4: States of matter          Year 5+: Properties and changes of materials          This unit builds the foundation for understanding material properties, testing and scientific investigation.</p> <p><b>Vocabulary</b>  <b>Materials</b>          material, natural material, human-made material, recycle, wood, metal, plastic, glass, brick, rock, paper, cardboard  <b>Properties</b>          smooth, rough, flexible, rigid, hard, soft, shiny, dull transparent, translucent, opaque, brittle, strong, lightweight  <b>Changing Materials</b>          bend, squash, twist, stretch          Additional Vocabulary          fabric, waterproof</p>	<p>Children learn about the five food groups and their functions.          They understand what a balanced diet is and why it is important.          They compare different diets and explore how humans and animals obtain nutrition.  <b>Future learning</b>          Children will study digestion and teeth in more detail in later years.          They will develop a deeper understanding of nutrients and body systems.          They will apply this knowledge to more complex scientific ideas about health and biological processes.</p> <p><b>Key Vocabulary</b>          Animals including humans carbohydrates, proteins, dairy products, fats, fruit and vegetables, balanced diet, balanced meal, nutrition, Eatwell Guide, vegan diet, vegetarian diet, pescatarian diet, omnivorous diet diet, herbivore, carnivore, omnivore</p> <p><b>Working Scientifically Vocabulary</b></p>	<p>helps them explain everyday phenomena such as melting ice, boiling water and how the water cycle works. It also strengthens their scientific enquiry skills through practical investigations.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have explored materials and their properties (e.g. hard, soft, transparent).          They have identified and compared materials in earlier science units.          They have carried out simple observations and investigations.  <b>Current learning</b>          Children learn the properties of solids, liquids and gases.          They understand how materials change state through heating and cooling.          They investigate melting and evaporation through fair tests.          They explore the water cycle and how water changes state in nature.  <b>Future learning</b>          Children will study more complex properties of matter in upper Key Stage 2.</p>	<p>They explore how global warming affects living things and habitats.          They investigate ways to reduce their carbon footprint.</p> <p><b>Future learning</b>          Children will explore environmental issues such as sustainability and conservation in greater depth.          They will develop a deeper understanding of climate systems and global change.          They will apply scientific knowledge to real-world environmental challenges.</p> <p><b>Key Vocabulary</b>  <b>Sustainability / Earth</b>          global warming, greenhouse gases, greenhouse effect fossil fuels, climate change carbon footprint, glacier, habitat</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p>	<p>Children will explore sustainability and environmental science in greater depth.          They will apply scientific understanding to global environmental challenges.          They will study more advanced energy concepts in secondary science.</p> <p><b>Key Vocabulary</b>  <b>Sustainability / Energy</b>          renewable, non-renewable fossil fuels, solar power, wind power solar panels, wind turbine global warming, greenhouse gases</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

	<p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Working Scientifically Vocabulary</b> observe, compare, classify, identify, group, sort, pattern, predict, test, record</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>measure, observe, compare, data, prediction, conclusion, evaluation draw, label, record, sort, group, identify, pattern, table, results, diagram, classify</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They will explore reversible and irreversible changes. They will develop deeper understanding of scientific investigations and measurement.</p> <p><b>Key Vocabulary</b> States of matter solid, liquid, gas, volume, states of matter melting, freezing, boiling, evaporation, condensation temperature, water cycle, precipitation, atmosphere</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, results, investigate, plan, identify, explain, classify, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	
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# Science Long Term Plan and Unit Overview

<p>Autumn</p>	<p><b>Seasonal Changes (Winter)</b>  <b>Unit Overview</b>          This unit focuses on observing and understanding the changes that occur during winter, including weather, daylight, and differences from other seasons.</p> <p><b>National Curriculum Objectives</b>          Observe changes across the four seasons.          Observe and describe weather associated with the seasons and how day length varies.</p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways.          Observe closely, using simple equipment.          Identify and classify.          Use their observations and ideas to suggest answers to questions.          Gather and record data to help in answering questions.          (Developed through observing winter changes and recording weather patterns over time.)</p>	<p><b>Plastic</b>  <b>Unit Overview</b>          This unit introduces children to sustainability through the study of plastic. Pupils explore how plastic can be both helpful and harmful, and consider practical ways to reduce plastic waste in their school and everyday lives.</p> <p><b>National Curriculum Objectives</b>  <i>(This sustainability unit does not introduce new statutory content objectives but supports and applies prior learning about materials.)</i></p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways.          Observe closely, using simple equipment.          Use their observations and ideas to suggest answers to questions.          Explore the world around them and raise their own questions (non-statutory).</p> <p><b>Why Are Children Learning This?</b>          Children learn about plastic to:</p>	<p><b>Sustainability (Food Waste)</b>  <b>Overview</b>          In this unit, children learn about food waste and its impact on the environment. They investigate what food waste is, where it goes when it is thrown away, and why it is a problem. Children explore practical ways to reduce food waste at school and at home, developing an understanding of how their actions can contribute to a more sustainable future.</p> <p><b>National Curriculum Objectives</b>  <i>This sustainability unit does not introduce new statutory content objectives but supports and applies prior learning about plastic.)</i></p> <p><b>Working Scientifically Objectives</b>          Asking relevant questions and using different types of scientific enquiries to answer them.          Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p>			
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# Science Long Term Plan and Unit Overview

	<p><b>Why Are Children Learning This?</b>          Children learn about seasonal changes in winter to:          Understand how the environment changes throughout the year          Recognise patterns in weather and daylight          Develop observation and comparison skills          Build awareness of how seasons affect daily life (clothing, activities, nature)          This learning connects directly to children's everyday experiences and supports their understanding of the natural world.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning</b>          EYFS: Exploring weather and seasonal experiences through play          Year 1 Autumn: Seasonal Changes (Autumn), including observing leaf fall, cooler weather and reduced daylight  <b>Current Learning Focus</b>          Deepening understanding of seasonal patterns by focusing on winter          Observing colder weather, fewer daylight hours, and changes in plant life</p>	<p>Understand how materials impact the environment          Recognise that human actions can help or harm the planet          Develop responsibility for reducing waste          Begin to understand sustainability in a real-world context          This unit builds awareness of environmental issues in an age-appropriate and practical way.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning (Year 1 and Year 2 Materials)</b>          Identifying different materials          Understanding that materials can be natural or human-made          Recognising that some materials can be recycled  <b>Current Learning Focus</b>          Understanding that plastic is a human-made material          Exploring positive and negative impacts of plastic          Learning about single-use plastics          Taking action to reduce waste in their environment  <b>Future Learning</b>          KS2: Sustainability, environmental change and human impact</p>	<p><b>Why are children learning this?</b>          Children learn about food waste to understand the impact human actions have on the environment. This unit helps them recognise that wasting food has consequences for the planet and encourages them to take responsibility for reducing waste. It also supports the development of sustainability awareness and promotes positive environmental behaviours.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have learned about food groups and nutrition in the previous unit.          They understand that food provides nutrients for the body.          They have begun to group and classify foods.</p> <p><b>Current learning</b>          Children learn what food waste is and where it goes after it is thrown away. They understand that food waste can end up in landfill and harm the environment.</p>			
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# Science Long Term Plan and Unit Overview

	<p>Comparing winter to autumn to identify similarities and differences Continuing data collection over time (e.g. weather charts, rainfall)</p> <p><b>Future Learning</b> Later Year 1: Seasonal changes in spring and summer Year 2: Habitats and environmental changes Year 5: Earth and space (day length, seasons, planetary movement) This unit supports understanding of longitudinal change across the year and builds scientific thinking over time.</p> <p><b>Vocabulary</b> <b>Seasonal and Weather Vocabulary</b> winter, season, weather rainy, windy, frosty, snowy, cloudy, sunny daylight, night Measurement and Observation rainfall, rain gauge</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, measurement <b>Exposure vocabulary:</b> record, tally, table, identify, pattern, predict, sort, group</p>	<p>Geography links: Pollution and environmental responsibility This unit supports progression from understanding materials to understanding their impact on the world.</p> <p><b>Vocabulary</b> <b>Materials and Sustainability</b> Plastic, human-made material recycle Environmental Impact single-use plastic, plastic waste</p> <p><b>Working Scientifically Vocabulary</b> observe, compare predict, record identify, sort, group</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They explore practical ways to reduce food waste in school and at home.</p> <p><b>Future learning</b> Children will build on this understanding in future sustainability and environmental topics. They will explore wider issues such as climate change, habitats and human impact on the Earth. They will apply this knowledge to make informed choices about sustainability.</p> <p><b>Key Vocabulary</b> Sustainability food waste, landfill, food waste recycling, edible, inedible</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation draw, label, record, identify, discuss, explain, results, investigate</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>			
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# Science Long Term Plan and Unit Overview

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# Science Long Term Plan and Unit Overview

Autumn			<p><b>Rocks</b></p> <p><b>Overview</b> In this unit, children explore different types of rocks and their properties. They learn to identify, compare and group rocks based on appearance and simple physical characteristics. Children carry out investigations to test properties such as hardness and whether rocks float or sink. They also explore how rocks are used in the local environment and how they change over time through weathering.</p> <p><b>National Curriculum Objectives</b> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p><b>Working Scientifically Objectives</b> Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment. Talking about criteria for grouping, sorting and classifying</p>			
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			<p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p><b>Why are children learning this?</b> Children learn about rocks to understand that they are natural materials with different properties and uses. This unit helps them develop skills in observing, comparing and classifying materials. It also supports their understanding of how materials are used in the world around them and introduces them to ideas about physical change over time.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have previously explored materials and identified basic properties such as hard, soft, shiny and dull. They have encountered rocks as a type of material in earlier years.</p> <p><b>Current learning</b> Children identify different types of rocks (e.g. granite, chalk, sandstone). They compare and group rocks based on observable</p>			
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# Science Long Term Plan and Unit Overview

			<p>properties such as texture, hardness and appearance. They carry out simple tests and use observations to support classification.</p> <p><b>Future learning</b></p> <p>Children will learn about soils and fossils, linking rocks to how soil is formed. They will study more complex properties of materials and changes in upper Key Stage 2. They will build on understanding of Earth processes and physical changes over time.</p> <p><b>Key Vocabulary</b> <b>Rocks</b> granite, pumice, sandstone, chalk, marble, gneiss, crystals, grains, layers, texture, hardness, weathering</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation, classify, grouping, sorting, identify, results, table, diagram, record, test, investigate</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p>			
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# Science Long Term Plan and Unit Overview

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# Science Long Term Plan and Unit Overview

<p>Spring</p>	<p><b>PLANTING (REVISIT SPRING 2 AND SUMMER 1)</b></p> <p><b>Unit Overview</b> This unit introduces children to plants, focusing on planting seeds and observing how they grow over time.</p> <p><b>National Curriculum Objectives</b> Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about plants to: Understand that plants are living things that grow and change</p>	<p><b>Plants (Light and Dark)</b></p> <p><b>Unit Overview</b> This unit explores how light affects plant growth. Children compare plants grown in light and dark conditions, helping them understand what plants need to grow and stay healthy through observation and a simple comparative investigation.</p> <p><b>National Curriculum Objectives</b> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Gather and record data to help in answering questions. Use their observations and ideas to suggest answers to questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about light and plant growth to:</p>	<p><b>Rocks (Fossils)</b></p> <p><b>Overview</b> In this unit, children learn about fossils and how they are formed. They explore what fossils are, examine examples of fossils, and understand that they are the preserved remains or traces of living things from long ago. Children also learn about the process of fossilisation and how rocks and fossils are linked over time.</p> <p><b>National Curriculum Objectives</b> Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p><b>Working Scientifically Objectives</b> Asking relevant questions and using different types of scientific enquiries to answer them Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about fossils to understand</p>	<p><b>Sound</b></p> <p><b>Overview</b> In this unit, children learn about how sound is made and how it travels. They explore vibrations and how these create sound, as well as how the ear detects sound. Children investigate volume and pitch, identifying patterns between vibrations and sound characteristics. They also carry out a scientific enquiry to explore how the distance from a sound source affects the volume of sound.</p> <p><b>National Curriculum Objectives</b> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance</p>	<p><b>Properties of Materials</b></p> <p><b>Overview</b> In this unit, children investigate and compare the properties of materials. They test materials for properties such as hardness, transparency, magnetism and electrical conductivity. Children plan and carry out an investigation into thermal insulation and analyse their results. They then apply their knowledge to explain why certain materials are suitable for specific uses, using scientific evidence to justify their ideas.</p> <p><b>National Curriculum Objectives</b> Compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p><b>Working Scientifically Objectives</b></p>	<p><b>Light</b></p> <p><b>Overview</b> In this unit, children develop their understanding of light and how it behaves. They explore how we see objects, learn that light travels in straight lines and investigate how shadows are formed. Children plan and carry out a scientific investigation into shadow size and distance. They also explore reflection and refraction and learn how light can be split into a spectrum of colours.</p> <p><b>National Curriculum Objectives</b> Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain how objects are seen. 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. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
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# Science Long Term Plan and Unit Overview

	<p>Recognise the basic structure of plants Develop responsibility through caring for living things Begin to observe changes over time in a real-life context This unit builds curiosity about the natural world and supports hands-on scientific learning.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Exploring plants through play and outdoor learning Identifying simple features of plants (flowers, leaves) <b>Current Learning Focus</b> Introducing plant structure (roots, stem, leaves, flowers) Understanding that seeds grow into plants Beginning an observing over time enquiry Recognising that conditions affect growth (e.g. warmth in winter) <b>Future Learning</b> Later Year 1: Further planting and plant growth Year 2: What plants need to grow and stay healthy Year 3+: Functions of plant parts and reproduction This unit introduces the concept of growth over</p>	<p>Understand that plants are living things with specific needs Recognise that light is essential for healthy plant growth Develop skills in observing and comparing changes over time Build early enquiry skills through simple investigations This unit helps children connect scientific ideas to real-life experiences of growing plants.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1 and earlier Year 2)</b> Identifying plants and their parts Observing plant growth over time (planting units) Understanding that plants are living things <b>Current Learning Focus</b> Understanding that plants need light and water to stay healthy Comparing plant growth in different conditions (light vs dark) Using observations and measurements to draw conclusions Answering a simple scientific enquiry question <b>Future Learning</b></p>	<p>evidence of life from the past. This unit helps them recognise that living things have existed for millions of years and that fossils provide clues about how animals and plants once lived. It also develops their understanding of how scientific evidence is used to answer questions about the past.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about different types of rocks and their properties. They have observed, compared and grouped rocks. They understand that rocks are natural materials. <b>Current learning</b> Children explore what fossils are and identify different types. They learn how fossils form over long periods of time. They link fossils to rocks and understand that fossils are found within rocks. <b>Future learning</b> Children will deepen their understanding of soils and</p>	<p>from the sound source increases.</p> <p><b>Working Scientifically Objectives</b> Asking relevant questions and using different types of scientific enquiries. Recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. Making systematic and careful observations and taking accurate measurements using equipment (e.g. decibel meters). Identifying differences, similarities or changes related to scientific ideas. Setting up simple practical enquiries and fair tests. Using results to draw conclusions, make predictions, suggest improvements and raise further questions.</p> <p><b>Why are children learning this?</b> Children learn about sound to understand how we hear and how sounds are produced. This unit helps them explain everyday experiences such as hearing music, talking and environmental</p>	<p>Planning different types of scientific enquiries, including recognising and controlling variables Taking measurements using scientific equipment with increasing accuracy and precision. Recording data using tables, diagrams and scientific language Using results to draw conclusions, make predictions and evaluate investigations.</p> <p><b>Why are children learning this?</b> Children learn about the properties of materials to understand how materials behave and why they are used in particular ways. This unit helps them develop investigative skills and apply scientific reasoning to real-life situations, such as selecting the best material for a purpose.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have explored materials and their properties in Key Stage 1 and Year 4</p>	<p><b>Working Scientifically Objectives</b> Planning and carrying out fair tests, including identifying variables. Taking measurements with accuracy and precision. Recording data using diagrams, tables and graphs. Using results to draw conclusions and evaluate investigations.</p> <p><b>Why are children learning this?</b> Children learn about light to understand how we see the world around us and how light behaves. This unit helps them explain everyday phenomena such as shadows, reflections and rainbows, while developing investigative skills through practical enquiry.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have explored light and shadows in Year 3. They have learned about materials and their properties affecting light. <b>Current learning</b></p>
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# Science Long Term Plan and Unit Overview

	<p>time, which is essential for future biology learning.</p> <p><b>Vocabulary</b>  <b>Plants</b>          plant, flower, leaf, stem, roots seed, soil growth</p> <p><b>Working Scientifically</b>          Vocabulary (Year 1)          measure, observe, compare, measurement, growth          Exposure vocabulary:          draw, label, record, identify, pattern, predict, test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Year 2 later: Further plant growth and conditions          Year 3: Functions of plant parts and nutrition          KS2: Photosynthesis and plant life processes          This unit builds the foundation for understanding how environmental conditions affect plant growth.</p> <p><b>Vocabulary (From Vocabulary Progression Document)</b>  <b>Plants and Growth</b>          plant, seed growth  <b>Conditions for Growth</b>          light, sunlight, water  <b>Life Processes</b>          living, dead</p> <p><b>Working Scientifically Vocabulary (Year 2)</b>          observe, compare measure, record predict, test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>how they are formed from rocks.          They will explore evolution and inheritance in later years, using fossils as evidence of change over time.          They will continue to develop skills in interpreting scientific evidence.</p> <p><b>Key Vocabulary</b>  <b>Rocks</b>          fossil, fossilisation, sediment, rock, skeleton, shell</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation ask questions, record, describe, explain, results, investigate, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>sounds. It also develops their understanding of how sound behaves and builds their ability to investigate scientific questions.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have explored materials and their properties, including solids, liquids and gases. They have carried out simple investigations and developed observation skills.</p> <p><b>Current learning</b>          Children learn that sounds are made by vibrations. They understand how sound travels and how the ear works. They explore volume and pitch and how these relate to vibrations. They investigate how distance affects sound.</p> <p><b>Future learning</b>          Children will explore more complex aspects of sound, including how sound travels in waves. They will develop a deeper understanding of energy and forces. They will build on scientific enquiry skills in further physics topics.</p>	<p>They have learned about states of matter and simple material properties.</p> <p><b>Current learning</b>          Children test and classify materials based on properties such as hardness, transparency and conductivity. They investigate electrical conductors and insulators. They plan and carry out a thermal insulation experiment. They use evidence to explain the suitability of materials for different uses.</p> <p><b>Future learning</b>          Children will explore reversible and irreversible changes in materials. They will develop a deeper understanding of chemical and physical changes. They will apply investigation skills to more complex scientific enquiries.</p> <p><b>Key Vocabulary</b>  <b>Materials</b>          properties, hardness, transparency, translucent, opaque, magnetism, electrical conductor, electrical insulator thermal insulator, temperature, material metal, plastic, wood</p>	<p>Children learn how light travels and how we see objects.          They investigate shadow formation and factors affecting shadow size. They explore reflection and refraction. They understand how white light is made up of different colours.</p> <p><b>Future learning</b>          Children will explore more complex physics concepts in secondary science. They will deepen understanding of waves, optics and energy transfer. They will apply scientific concepts to real-world phenomena.</p> <p><b>Key Vocabulary</b>  <b>Light</b>          light source, reflection, refraction ray diagram, shadow, transparent, translucent, opaque spectrum, prism, rainbow</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable</p>
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				<p><b>Key Vocabulary</b> <b>Sound</b> sound, vibration, ear, volume, pitch high-pitched, low-pitched, decibel (dB), decibel meter</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, results, investigate, plan, identify, explain, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable record, results, investigate, explain, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>record, analyse, investigate, explain, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

<p>Spring</p>	<p><b>ANIMALS</b>  <b>Unit Overview</b>          This unit introduces children to different animal groups and diets, focusing on identifying, naming, comparing and classifying animals based on their features.</p> <p><b>National Curriculum Objectives</b>          Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.          Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).          Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways.          Observe closely, using simple equipment.          Identify and classify.          Use their observations and ideas to suggest answers to questions.</p>	<p><b>Living Things and Their Habitats</b>  <b>Unit Overview</b>          This unit develops children’s understanding of how plants and animals live in different habitats. Pupils explore a range of habitats across the world, identify how living things depend on each other, and learn about food chains, microhabitats and the differences between living and non-living things.</p> <p><b>National Curriculum Objectives</b>          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.          Identify and name a variety of plants and animals in their habitats, including microhabitats.          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.          Explore and compare the differences between things that are living, dead</p>	<p><b>Rocks (Soils)</b>  <b>Overview</b>          In this unit, children learn about different types of soil and what they are made from. They explore and compare soils such as sandy, clay, peat and chalky soils, and investigate their properties. Children also learn why soil is important for plants, animals and humans, and carry out a comparative experiment to test how much water different soils can absorb.</p> <p><b>National Curriculum Objectives</b>          Recognise that soils are made from rocks and organic matter</p> <p><b>Working Scientifically Objectives</b>          Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.          Using straightforward scientific evidence to answer questions or to support their findings.          Setting up simple practical enquiries, comparative and fair tests.          Making systematic and careful observations and, where appropriate, taking</p>	<p><b>Living Things and Their Habitats (Data Collection B)</b>  <b>Overview</b>          In this unit, children continue their scientific enquiry by collecting data about living things in their local area during spring. They observe and identify plants and animals, record their findings, and compare them with previous data from autumn. Children then analyse their data to identify patterns and understand how seasonal changes affect living things.</p> <p><b>National Curriculum Objectives</b>          Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p><b>Working Scientifically Objectives</b>          Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.          Recording findings using simple scientific language, drawings, labelled</p>	<p><b>Animals Including Humans</b>  <b>Overview</b>          In this unit, children learn about the human life cycle and how humans grow and develop from birth to old age. They explore stages such as infancy, childhood, adolescence and adulthood, including the changes that occur during puberty. Children investigate how babies develop, how humans age and how gestation periods vary between mammals. They also analyse patterns between gestation periods and lifespan using scientific data.</p> <p><b>National Curriculum Objectives</b>          Describe the changes as humans develop to old age.</p> <p><b>Working Scientifically Objectives</b>          Exploring ideas and raising different kinds of scientific questions.          Recording and presenting data using graphs and tables.          Identifying patterns, including relationships between variables.          Reporting and presenting findings from enquiries and drawing conclusions.</p>	<p><b>Sustainability (Light Pollution)</b>  <b>Overview</b>          In this unit, children learn about light pollution and its impact on the environment. They explore different types of light pollution, including glare, light trespass and skyglow. Children investigate how artificial light affects humans, animals and habitats, considering issues such as sleep disruption and changes to animal behaviour. They also explore practical ways to reduce light pollution in their homes, schools and communities.</p> <p><b>National Curriculum Objectives</b>          Identifying scientific evidence that has been used to support or refute ideas or arguments.          Reporting and presenting findings from enquiries, including explanations and conclusions</p> <p><b>Working Scientifically Objectives</b>          Identifying scientific evidence to support or challenge ideas          Reporting and presenting findings using scientific explanations.</p>
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# Science Long Term Plan and Unit Overview

	<p>Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about animals to: Understand the diversity of living things Recognise similarities and differences between animals Develop classification skills Learn how animals are grouped based on features and diet This unit helps children make sense of the natural world and builds early biological understanding.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Identifying familiar animals through stories, play and exploration Year 1 Autumn: Basic animal identification and body parts <b>Current Learning Focus</b> Developing knowledge of animal groups (mammals, birds, fish, amphibians, reptiles) Understanding key features of each group Introducing classification based on diet (carnivore, herbivore, omnivore)</p>	<p>and things that have never been alive.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about living things and their habitats to: Understand that plants and animals depend on their environment Recognise how living things are suited to where they live Develop awareness of how food and survival are linked Build knowledge of how living things interact This unit helps children understand the natural world and how living things are connected.</p>	<p>accurate measurements using standard units. Using results to draw simple conclusions, make predictions, suggest improvements and raise further questions.</p> <p><b>Why are children learning this?</b> Children learn about soils to understand that they are made from a mixture of materials and are essential for life. This unit helps them recognise the importance of soil in supporting plant growth, providing habitats for animals and affecting the environment. It also develops their skills in carrying out investigations and analysing results.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about different types of rocks and their properties. They have explored how rocks can be grouped and tested. They have learned about fossils and how they form within rocks. <b>Current learning</b></p>	<p>diagrams, keys, bar charts and tables.</p> <p>Why are children learning this? Children learn this unit to understand how living things change over time and across seasons. It helps them develop scientific enquiry skills by collecting, comparing and analysing real-world data. They also build an understanding of how environmental changes affect plants and animals.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children collected data about living things in autumn (Data Collection A). They learned how to group and classify plants and animals. They used classification keys to identify living things. <b>Current learning</b> Children collect data about living things in spring. They compare this data with previous observations. They identify patterns and trends linked to seasonal changes.</p>	<p><b>Why are children learning this?</b> Children learn about human development to understand how their bodies change over time. This unit helps them recognise physical and emotional changes, including those linked to puberty, and supports their personal development. It also builds scientific thinking through pattern-finding and data analysis.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about basic human body parts and health in earlier years They have explored animals and simple life cycles. <b>Current learning</b> Children learn the stages of the human life cycle. They explore growth and development in babies and children. They understand the changes that occur during puberty. They examine adulthood and ageing.</p>	<p><b>Why are children learning this?</b> Children learn about light pollution to understand how human use of artificial light can impact the environment and living things. This unit helps them recognise the importance of responsible energy use and encourages them to make changes that support sustainability and protect ecosystems.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied light and how it behaves in science. They have explored environmental issues such as global warming and renewable energy. <b>Current learning</b> Children learn what light pollution is and the different types. They explore how artificial light affects humans, animals and habitats. They investigate sources of light pollution in their local environment. They identify ways to reduce light pollution in everyday life.</p>
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# Science Long Term Plan and Unit Overview

	<p>Beginning to compare and group animals systematically</p> <p><b>Future Learning</b>        Year 2: Habitats and how animals survive        Year 3+: Skeletons and classification        Year 6: Advanced classification and evolution</p> <p>This unit builds the foundation for biological classification and ecological understanding.</p> <p><b>Vocabulary</b>  <b>Animal Groups and Features</b>        animal, mammal, bird, fish, amphibian, reptile, fur, feathers, wings, beak, fins, scales, gills, tail, webbed feet</p> <p><b>Examples of Animals</b>        frog, toad, newt, lizard, crocodile, turtle</p> <p><b>Diet and Classification</b>        carnivore, herbivore, omnivore, plants, fruit, vegetable</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare, measurement</p> <p><b>Exposure vocabulary:</b>        record, identify, sort, group, pattern, predict, test</p>	<p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning (Year 1 and Year 2 Autumn)</b>        Identifying animals and grouping them (mammals, birds, fish, etc.)        Understanding animals' basic needs for survival        Learning about plants as living things</p> <p><b>Current Learning Focus</b>        Understanding that habitats provide everything needed for survival        Exploring different environments (polar, desert, ocean, woodland)        Learning that living things depend on each other        Introducing food chains and simple interdependence        Identifying living, dead and never alive</p> <p><b>Future Learning</b>        Year 4+: Food chains and ecosystems        KS2: Interdependence, classification and adaptation        Environmental science and sustainability        This unit builds a crucial bridge from basic needs for survival to understanding ecosystems and interdependence.</p> <p><b>Vocabulary</b></p>	<p>Children learn that soil is made from rocks, organic matter and water.        They explore and compare different soil types (sandy, clay, peat and chalky).        They investigate soil properties, including how much water different soils absorb.        They understand the importance of soil for plants, animals and the environment.</p> <p><b>Future learning</b>        Children will build on this understanding in plant units, linking soil types to plant growth.        They will explore ecosystems and habitats in greater depth.        They will develop more advanced investigation skills and scientific reasoning in later years.</p> <p><b>Key Vocabulary</b>  <b>Rocks / Soils</b>        soil, sandy soil, clay soil, peat soil, chalky soil, organic matter, nutrients, habitat, habitat loss, deforestation, absorb, data, conclusion, evaluation</p> <p><b>Working Scientifically Vocabulary</b></p>	<p>They present and analyse data using charts and diagrams.</p> <p><b>Future learning</b>        Children will collect further data in summer (Data Collection C).        They will deepen their understanding of habitats and ecosystems.        They will build more advanced skills in analysing and interpreting data.</p> <p><b>Key Vocabulary</b>  <b>Living things and habitats</b>        vertebrate, invertebrate, flowering plant, non-flowering plant</p> <p><b>Working Scientifically Vocabulary</b>        data, bar chart, pictogram, prediction, measure, observe, compare, record, results, analyse, investigate, explain</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They compare gestation periods and lifespans of mammals.</p> <p><b>Future learning</b>        Children will explore reproduction in more detail in later science units.        They will develop a deeper understanding of human biology and health.        They will build more advanced data analysis and enquiry skills.</p> <p><b>Key Vocabulary</b>        Animals including humans        life cycle, foetus, baby, child, adolescent, adult, elderly        puberty, hormone, reproduce        gestation, offspring, mammal        lifespan, correlation, anomaly</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare, data, prediction, conclusion, evaluation        record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> </ul>	<p><b>Future learning</b>        Children will deepen their understanding of sustainability and environmental science.        They will explore links between energy use and environmental impact.        They will apply scientific knowledge to real-world issues and solutions.</p> <p><b>Key Vocabulary</b>  <b>Sustainability / Environment</b>        light pollution, glare, light trespass, skyglow        habitat, migration        urban, rural        light emission</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare, data, prediction, conclusion, evaluation        record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

	<p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Habitats and Living Things</b> habitat, microhabitat living, dead, never alive plant, animal</p> <p><b>Types of Habitats</b> ocean, woodland, desert, polar, local habitat</p> <p><b>Animals and Diet</b> carnivore, herbivore, omnivore, diet</p> <p><b>Food Chains</b> food chain</p> <p><b>Working Scientifically</b></p> <p><b>Vocabulary</b> observe, compare, classify, identify, group, sort, pattern, predict, record</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>measure, observe, compare, data, prediction, conclusion, evaluation record, diagram, results, test, investigate, plan, identify, classify, fair test</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>		<ul style="list-style-type: none"> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	
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# Science Long Term Plan and Unit Overview

<p>Spring</p>	<p><b>CARING FOR THE PLANET</b> <b>Unit Overview</b> This unit introduces children to the idea of caring for the Earth, focusing on helpful and harmful actions and how people can protect the environment.</p> <p><b>National Curriculum Objectives</b> Year 1 statutory content objectives for this sustainability unit.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions. Non-statutory: Explore the world around them and raise their own questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about caring for the planet to:</p>	<p><b>Plants (Light and Dark) (Follow-up Findings Unit)</b> <b>Unit Overview</b> This short unit focuses on analysing the results of a plant investigation. Children compare plants grown in light and dark conditions, using observations and measurements to decide which conditions help plants grow and stay healthy.</p> <p><b>National Curriculum Objectives</b> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Gather and record data to help in answering questions. Use their observations and ideas to suggest answers to questions.</p> <p><b>Why Are Children Learning This?</b></p>	<p><b>Light</b> <b>Overview</b> In this unit, children learn about light and how it enables us to see. They explore different light sources, including natural and artificial light, and understand the importance of the Sun. Children investigate how light travels and how it is reflected to allow us to see objects. They also explore how shadows are formed and how their size changes, and learn to classify materials as opaque, translucent or transparent.</p> <p><b>National Curriculum Objectives</b> Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the Sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.</p>	<p><b>Electricity</b> <b>Overview</b> In this unit, children are introduced to electricity and how it powers everyday appliances. They learn about simple electrical circuits, including their components and how they work. Children build and test circuits, identify faults, and explore the properties of materials as conductors or insulators. They develop their understanding of how electricity flows and how materials affect this flow.</p> <p><b>National Curriculum Objectives</b> Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not it is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp</p>	<p><b>Living Things and Their Habitats (Life Cycles)</b> <b>Overview</b> In this unit, children learn about the life cycles of different groups of animals, including mammals, amphibians, insects and birds. They explore how animals grow, develop and reproduce, and compare similarities and differences between life cycles. Children investigate processes such as metamorphosis and use scientific evidence to explain patterns across animal groups.</p> <p><b>National Curriculum Objectives</b> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence to support or refute ideas. Recording data and results using diagrams, tables and graphs. Reporting and presenting findings, including conclusions and explanations</p>	<p><b>Animals Including Humans (The Circulatory System)</b> <b>Overview</b> In this unit, children learn about the human circulatory system and how it transports substances around the body. They explore the structure and function of the heart, blood and blood vessels. Children investigate how blood carries oxygen, nutrients and waste, and understand the difference between oxygenated and deoxygenated blood. They also examine blood flow through the heart and, where appropriate, observe a dissection to deepen their understanding of structure and function.</p> <p><b>National Curriculum Objectives</b> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Describe the ways in which nutrients and water are transported within animals, including humans.</p> <p><b>Working Scientifically Objectives</b></p>
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	<p>Develop an understanding of their role in looking after the world Recognise that actions can be helpful or harmful to the environment Begin to understand responsibility towards living things Build awareness of protecting humans, animals and plants This unit promotes positive attitudes and responsible behaviour.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Caring for living things (plants, animals) Year 1: Learning about animals, plants and seasonal changes <b>Current Learning Focus</b> Understanding that the Earth needs to be cared for Recognising helpful vs harmful actions Beginning to understand cause and effect Taking simple actions to improve their environment <b>Future Learning</b> Year 2: Habitats and environmental needs KS2: Sustainability, environmental change, climate and conservation</p>	<p>Children learn about plant growth in light and dark to: Understand how scientific investigations lead to conclusions Recognise that evidence can be used to answer questions Deepen understanding of what plants need to stay healthy Develop confidence in explaining their ideas using observations This unit strengthens children’s ability to think like scientists by interpreting results.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> Identifying plants and their parts Planning and carrying out a plant investigation (light vs dark) Understanding that plants need water and light to grow <b>Current Learning Focus</b> Reviewing and analysing investigation results Comparing plant growth in different conditions Using measurement and observation evidence Drawing simple conclusions about plant health</p>	<p><b>Working Scientifically Objectives</b> Identifying differences, similarities or changes related to simple scientific ideas and processes Using straightforward scientific evidence to answer questions or to support findings. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Gathering, recording, classifying and presenting data to answer questions. Asking relevant questions and using different types of scientific enquiries. Setting up simple practical enquiries and fair tests. Using results to draw simple conclusions, make predictions, suggest improvements and raise further questions]</p> <p><b>Why are children learning this?</b> Children learn about light to understand how we see and how light behaves. This unit helps them explain everyday phenomena such as reflections and shadows, and understand the</p>	<p>lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.</p> <p><b>Working Scientifically Objectives</b> Talking about criteria for grouping, sorting and classifying. Recording findings using simple scientific language, drawings and labelled diagrams. Using results to draw simple conclusions, make predictions, suggest improvements and raise further questions. Asking relevant questions and using different types of scientific enquiries.</p> <p><b>Why are children learning this?</b> Children learn about electricity to understand how energy is transferred to power everyday devices. This unit helps them recognise how circuits work and the importance of materials in allowing electricity to flow. It also promotes awareness of electrical safety and develops</p>	<p><b>Why are children learning this?</b> Children learn about life cycles to understand how living things grow and reproduce. This unit helps them compare different animal groups and recognise patterns in nature. It also develops their scientific reasoning by analysing similarities, differences and processes such as metamorphosis.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied the human life cycle in the previous unit. They have learned about animals and habitats in earlier years. <b>Current learning</b> Children study life cycles of mammals, amphibians, insects and birds. They learn about stages such as foetus, egg, larva, pupa and adult. They explore metamorphosis and animal development. They compare similarities and differences between life cycles. <b>Future learning</b> Children will develop a deeper understanding of</p>	<p>Exploring scientific ideas and raising questions. Using scientific language to explain and justify ideas. Reporting and presenting findings, including explanations and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about the circulatory system to understand how their bodies transport essential substances such as oxygen and nutrients. This unit helps them recognise how body systems work together to keep them alive and healthy, and builds knowledge for making informed lifestyle choices.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied the digestive system in Year 4. They have learned about human development and life cycles in Year 5. <b>Current learning</b> Children learn the structure and function of the circulatory system. They explore the roles of the heart, blood and blood vessels.</p>
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# Science Long Term Plan and Unit Overview

	<p>This unit introduces early ideas of environmental responsibility, which are developed in later science learning.</p> <p><b>Vocabulary</b>  <b>Sustainability Vocabulary</b>        Earth, helpful, harmful, recycle, reuse        Linked Knowledge Vocabulary        plant, animal, material</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare        Exposure vocabulary:        record, identify, sort, group, pattern, predict</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Future Learning</b>        Year 2 Summer: Further investigations into plant growth (including temperature)        Explanations for plant growth and function        KS2: Photosynthesis and plant systems        This unit develops progression from investigating to interpreting results and explaining outcomes.</p> <p><b>Vocabulary</b>  <b>Plants and Growth</b>        plant, seed, growth  <b>Conditions for Growth</b>        light, sunlight, water  <b>Life Processes</b>        living, dead</p> <p><b>Working Scientifically Vocabulary</b>        observe, compare        measure, record        predict, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>importance of light for life. It also promotes awareness of safety when exposed to sunlight.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>        Children have explored materials and their properties (e.g. transparent and opaque). They have developed observation and classification skills in earlier science units.  <b>Current learning</b>        Children learn that light is needed to see and that darkness is the absence of light. They explore how light travels and is reflected into our eyes. They investigate shadows and how they are formed and change. They classify materials based on how they interact with light.  <b>Future learning</b>        Children will explore more complex ideas about light, including refraction and how the eye works in detail. They will develop deeper understanding of physics concepts such as waves and energy.</p>	<p>practical investigation skills.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>        Children have explored materials and their properties. They have learned about forces and how energy can move objects. They have developed basic scientific enquiry skills.  <b>Current learning</b>        Children learn what electricity is and how it is used. They build and draw simple series circuits. They identify faults in circuits and explain how to fix them. They investigate conductors and insulators and identify patterns.  <b>Future learning</b>        Children will develop a deeper understanding of electrical circuits, including symbols and more complex circuits. They will learn about electricity in greater depth in upper Key Stage 2. They will build on enquiry skills when investigating electrical systems and materials.</p> <p><b>Key Vocabulary</b></p>	<p>reproduction in plants and animals.        They will study classification and evolution in later learning. They will apply enquiry skills to more complex biological concepts.</p> <p><b>Key Vocabulary</b>  <b>Living things and habitats</b>        life cycle, offspring, mammal, amphibian, insect, bird        metamorphosis, larva, pupa, chrysalis        egg, hatchling, nestling, fledgling        monotreme</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare, data, prediction, conclusion, evaluation        record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They understand blood composition and its functions. They investigate blood flow and oxygen transport.  <b>Future learning</b>        Children will explore the effects of diet, exercise and lifestyle on the body. They will develop deeper understanding of human biology. They will study more complex body systems in secondary science.</p> <p><b>Key Vocabulary</b>  <b>Animals including humans</b>        circulatory system, heart, blood vessels        arteries, veins, capillaries        blood, plasma, red blood cells, white blood cells        oxygenated, deoxygenated        atria, ventricles</p> <p><b>Working Scientifically Vocabulary</b>        measure, observe, compare, data, prediction, conclusion, evaluation        record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> </ul>
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# Science Long Term Plan and Unit Overview

			<p>They will apply investigation skills to more complex scientific enquiries.</p> <p><b>Key Vocabulary</b> Light light, light sources, natural light sources, artificial light sources, Sun, reflection, shadow, opaque, translucent, transparent</p> <p>Working Scientifically Vocabulary measure, observe, compare, data, prediction, conclusion, evaluation record, diagram, results, classify, investigate, test, explain, pattern</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Electricity</b> electricity, appliance, plug, socket, cell, battery circuit, switch, wire, bulb, buzzer conductor, insulator, metal, material</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, results, investigate, plan, identify, explain</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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<p>Spring</p>	<p><b>SEASONAL CHANGES (SPRING)</b> This unit focuses on observing and understanding the changes that occur during spring, including weather, daylight, and changes in plant and animal life.</p> <p><b>National Curriculum Objectives</b> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about seasonal changes in spring to:</p>			<p><b>Sustainability (Energy) Overview</b> In this unit, children learn about energy and how it is used in everyday life. They explore different sources of energy, including renewable and non-renewable energy, and consider how electricity is generated. Children investigate how their actions affect energy usage and develop an understanding of how reducing energy consumption can help protect the environment.</p> <p><b>National Curriculum Objectives</b> Asking relevant questions and using different types of scientific enquiries to answer them. Using straightforward scientific evidence to answer questions or support findings.</p> <p><b>Working Scientifically Objectives</b> Asking relevant questions and using different types of scientific enquiries. Using straightforward scientific evidence to answer questions or support findings.</p>		<p><b>Animals Including Humans (Diet, Drugs and Lifestyle) Overview</b> In this unit, children learn how diet, drugs, exercise and lifestyle choices affect the way their bodies function. They explore the importance of a balanced diet, the impact of different types of fats and nutrients, and how substances such as drugs and cigarettes affect the body. Children also carry out a scientific investigation into how exercise affects heart rate, linking their learning to the circulatory system.</p> <p><b>National Curriculum Objectives</b> Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence to support or refute ideas. Planning and carrying out fair tests with variables. Taking measurements accurately (e.g. heart rate). Analysing data, drawing conclusions and evaluating investigations</p>
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# Science Long Term Plan and Unit Overview

	<p>Understand how the environment changes throughout the year Recognise patterns in weather and daylight Observe changes in plants and animals Develop their ability to notice and describe change over time This learning helps children connect scientific ideas with their real-world experiences.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Seasonal awareness through play and outdoor learning Year 1 Autumn: Seasonal Changes (Autumn) Year 1 Autumn: Seasonal Changes (Winter) <b>Current Learning Focus</b> Understanding spring as part of the yearly cycle Observing warmer weather and longer daylight hours Recognising that plants begin to grow and trees regrow leaves Comparing spring with autumn and winter Continuing data collection over time <b>Future Learning</b> Later Year 1: Seasonal Changes (Summer)</p>			<p>Why are children learning this? Children learn about energy to understand how it is produced and used in their daily lives. This unit helps them recognise the environmental impact of energy use and encourages them to take responsibility for reducing energy consumption. It also supports the development of sustainable thinking and environmentally friendly behaviours.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about electricity and how it powers appliances. They understand simple circuits and how energy flows. They have explored materials and scientific enquiry skills. <b>Current learning</b> Children learn what energy is and how it is used. They explore renewable and non-renewable energy sources. They understand the environmental impact of energy use.</p>		<p><b>Why are children learning this?</b> Children learn about diet, drugs and lifestyle to understand how their choices affect their health and wellbeing. This unit helps them make informed decisions and understand how the body works, particularly how the circulatory system supports physical activity and overall health.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied the circulatory system in the previous unit. They have learned about balanced diets and nutrition in earlier years. <b>Current learning</b> Children learn about balanced diets and nutrients. They explore different types of drugs and their effects. They investigate the impact of smoking and vaping. They plan, carry out and evaluate a heart rate investigation. <b>Future learning</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Year 2: Habitats and environmental change Year 5: Earth and space (day length, seasons, planetary movement) This unit strengthens understanding of patterns and change across the year.</p> <p><b>Vocabulary</b> <b>Seasonal and Weather Vocabulary</b> spring, season, weather rain, cloud, wind, sleet, snow, sun daylight, night</p> <p><b>Working Scientifically Vocabulary (Year 1)</b> measure, observe, compare, measurement <b>Exposure vocabulary:</b> record, tally, table, identify, pattern, predict, sort, group</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>			<p>They investigate ways to reduce energy consumption at home and school.</p> <p><b>Future learning</b> Children will develop a deeper understanding of sustainability and environmental change. They will explore global issues such as climate change and resource use. They will apply scientific understanding to real-world environmental challenges.</p> <p><b>Key Vocabulary</b> <b>Sustainability / Energy</b> electricity, mains electricity, battery-powered, renewable energy, non-renewable energy appliance, energy usage, Earth</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, identify, investigate, explain, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> </ul>		<p>Children will develop deeper understanding of health and human biology. They will apply this knowledge to real-life health decisions. They will study more complex biological systems in secondary science.</p> <p><b>Key Vocabulary</b> Animals including humans balanced diet, calories unsaturated fats, saturated fats, trans fats drug, stimulant, depressant, painkiller cigarette, nicotine, tar, carbon monoxide heart rate, exercise, duration</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable record, analyse, investigate, results</p>
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# Science Long Term Plan and Unit Overview

				<ul style="list-style-type: none"><li>• Healthy Me (inc keeping safe)</li><li>• Equality and Diversity</li></ul>		
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# Science Long Term Plan and Unit Overview

Spring	<p><b>PLANTING (SPRING)</b></p> <p><b>Unit Overview</b>          This unit builds on previous planting work, enabling children to observe plant growth over time and compare how plants grow in different seasons.</p> <p><b>National Curriculum Objectives</b>          Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways.          Observe closely, using simple equipment.          Identify and classify.          Use their observations and ideas to suggest answers to questions.          Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b>          Children learn about planting to:          Understand that plants grow and change over time</p>					
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# Science Long Term Plan and Unit Overview

	<p>Recognise the basic structure of plants Compare plant growth in different conditions Develop observation and enquiry skills This unit builds on children’s curiosity about living things and deepens their understanding of growth.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Exploring plants through play and observation Year 1 Spring: Planting A (planting seeds indoors in winter) Seasonal Changes (Winter and Spring) <b>Current Learning Focus</b> Observing how plants have changed over time Identifying plant parts (roots, stem, leaves, flowers) Comparing plant growth in winter vs spring conditions Understanding that warmer weather supports growth Future Learning Year 2: What plants need to grow and stay healthy Year 3+: Functions of plant parts and life cycles This unit strengthens understanding of growth</p>					
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# Science Long Term Plan and Unit Overview

	<p>over time and seasonal influence on living things.</p> <p><b>Vocabulary</b>  <b>Plants</b>            plant, flower, leaf, stem, roots seed, soil growth  <b>Working Scientifically Vocabulary</b>            measure, observe, compare, measurement, growth  <b>Exposure vocabulary:</b>            draw, label, record, identify, pattern, predict, test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences (allotment visit)</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>					
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# Science Long Term Plan and Unit Overview

<p>Summer</p>	<p><b>PLANTS</b>  <b>Unit Overview</b>          This unit develops children’s understanding of plants by identifying their parts, recognising different types of plants and trees, and classifying them based on observable features.</p> <p><b>National Curriculum Objectives</b>          Identify and describe the basic structure of a variety of common flowering plants, including trees. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b></p>	<p><b>Plants (Bulbs and Seeds)</b>  <b>Unit Overview</b>          This unit develops children’s understanding of how plants grow from bulbs and seeds. Pupils explore the differences between bulbs and seeds, investigate the conditions needed for growth, and observe how plants change over time through practical enquiry.</p> <p><b>National Curriculum Objectives</b>          Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><b>Working Scientifically Objectives</b>          Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p>	<p><b>Plants A</b>  <b>Overview</b>          In this unit, children explore the structure and function of flowering plants. They learn about the different parts of plants and how they support growth and reproduction. Children investigate how plants grow, including their requirements for life, and explore processes such as water transportation, germination, pollination and seed dispersal. They also study the life cycle of a plant.</p> <p><b>National Curriculum Objectives</b>          Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed</p>	<p><b>Living Things and Their Habitats (Data Collection C)</b>  <b>Overview</b>          In this unit, children complete their year-long scientific enquiry by collecting data about living things in their local area during summer. They compare this data with previous observations from autumn and spring to identify patterns and changes over time. Children analyse and interpret their findings to understand how seasonal changes affect plants and animals and use this evidence to draw conclusions.</p> <p><b>National Curriculum Objectives</b>          Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p><b>Working Scientifically Objectives</b>          Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language,</p>	<p><b>Living Things and Their Habitats (Reproduction A)</b>  <b>Overview</b>          In this unit, children learn about reproduction in plants and animals. They explore sexual reproduction in mammals, including fertilisation and development, and investigate plant reproduction through pollination. Children also learn about asexual reproduction and how some plants reproduce without seeds. Through practical enquiry, they plan and carry out an investigation into cloning plants and observe how new plants grow from cuttings.</p> <p><b>National Curriculum Objectives</b>          Describe the life process of reproduction in some plants and animals.</p> <p><b>Working Scientifically Objectives</b>          Recording data and results using diagrams, tables and scientific language. Reporting and presenting findings from enquiries. Planning different types of scientific enquiries and recognising variables.</p>	<p><b>Evolution and Inheritance (Variation)</b>  <b>Overview</b>          In this unit, children learn about variation within species and how living things are similar but not identical. They explore differences between organisms and understand that offspring inherit characteristics from their parents. Children investigate how variation occurs within and between species and learn about inheritance, including how traits are passed on and why selective breeding can lead to desired characteristics.</p> <p><b>National Curriculum Objectives</b>          Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p><b>Working Scientifically Objectives</b>          Recording and presenting data using scientific diagrams, tables and graphs.</p> <p><b>Why are children learning this?</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Children learn about plants to: Understand that plants are living things with identifiable parts Recognise different types of plants and trees Develop classification skills based on observable features Build awareness of the natural environment This unit encourages curiosity about nature and supports careful observation of living things.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Exploring plants through play and outdoor learning Year 1 Spring: Planting A and Planting B (growing plants and observing change over time) Seasonal Changes units (observing how plants change through the year) <b>Current Learning Focus</b> Naming and identifying plant and tree parts Recognising wild vs garden plants Identifying deciduous and evergreen trees Applying knowledge in the local environment</p>	<p><b>Why Are Children Learning This?</b> Children learn about bulbs and seeds to: Understand how plants reproduce and grow Recognise that plants change over time Develop skills in observing growth and recording changes Build understanding of scientific enquiry through real investigations This unit strengthens children’s understanding of plant life cycles in a practical, hands-on way.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1 and Year 2 Spring)</b> Identifying plants and their parts Understanding what plants need to grow (light and water) Investigating plant growth in different conditions (light vs dark) <b>Current Learning Focus</b> Understanding differences between bulbs and seeds Learning that plants grow into mature plants over time Investigating how temperature affects growth</p>	<p>formation and seed dispersal.</p> <p><b>Working Scientifically Objectives</b> Using straightforward scientific evidence to answer questions or to support findings Talking about criteria for grouping, sorting and classifying Asking relevant questions and using different types of scientific enquiries. Setting up simple practical enquiries and fair tests. Identifying differences, similarities or changes related to simple scientific ideas and processes. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about plants to understand how living things grow, survive and reproduce. This unit helps them recognise that plants are living organisms with specific requirements</p>	<p>drawings, labelled diagrams, bar charts and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn this unit to understand how living things change throughout the year and how scientists use data over time to identify patterns. It helps them develop skills in comparing, analysing and drawing conclusions from evidence. It also strengthens their understanding of how seasonal changes impact ecosystems.</p> <p><b>Why now? (Curriculum sequencing)</b> Prior learning Children collected data about living things in autumn (Data Collection A). They continued their enquiry in spring (Data Collection B). They learned how to classify and identify plants and animals. <b>Current learning</b></p>	<p>Taking measurements using scientific equipment with increasing accuracy and precision.</p> <p><b>Why are children learning this?</b> Children learn about reproduction to understand how living things grow and produce offspring. This unit helps them recognise similarities and differences between plant and animal reproduction, and deepens their understanding of life cycles. It also develops enquiry skills through practical investigations.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied life cycles of animals and humans. They have learned about plants and their basic structure in earlier years. <b>Current learning</b> Children learn about sexual reproduction in mammals. They explore plant reproduction, including pollination and fertilisation.</p>	<p>Children learn about variation and inheritance to understand why living things look and behave differently. This unit helps them make sense of similarities and differences between organisms and introduces key ideas that lead into evolution. It also supports scientific thinking by encouraging comparison and classification.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied reproduction and life cycles in Year 5. They have learned about living things and classification earlier in Year 6. <b>Current learning</b> Children learn what variation means within species. They explore differences between individuals and species. They understand inheritance and how characteristics are passed on. They investigate selective breeding and desirable traits. <b>Future learning</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Developing classification skills</p> <p><b>Future Learning</b> Year 2: What plants need to grow and survive Year 3: Functions of plant parts and reproduction KS2: Life cycles and plant systems This unit consolidates knowledge of plants and introduces classification based on observable characteristics, preparing children for more detailed study.</p> <p><b>Vocabulary</b> <b>Plant Structure</b> plant, flower, leaf, petals, stem, roots, branch, trunk seed, soil, growth <b>Types of Plants</b> wildflower, garden plant daisy, sunflower, nettle, buttercup, dandelion <b>Trees</b> deciduous tree, evergreen tree, oak, sycamore, pine, holly needles</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, measurement, growth Exposure vocabulary: record, identify, sort, group, pattern, predict, draw, label</p>	<p>Carrying out an observation over time enquiry Measuring and recording plant growth</p> <p><b>Future Learning</b> Year 3: Plant life cycles and reproduction KS2: Pollination, seed dispersal and plant systems This unit builds progression from understanding plant needs to recognising growth over time and early life cycle concepts.</p> <p><b>Vocabulary</b> <b>Plants and Growth</b> plant, seed, bulb growth <b>Plant Structure</b> shoot, roots <b>Conditions for Growth</b> light, sunlight, water, temperature <b>Additional Vocabulary</b> compost, measure, observe</p> <p><b>Working Scientifically Vocabulary</b> observe, compare, measure predict, test, record</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> </ul>	<p>and processes. It also develops their understanding of life cycles and the interdependence between plants, animals and the environment.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have identified and named parts of plants in Year 1 and Year 2. They have observed how seeds grow into plants under the right conditions. They have learned about materials such as soil and its role in supporting plant life. <b>Current learning</b> Children develop their understanding of plant structure by learning the functions of roots, stems, leaves and flowers. They investigate what plants need to grow and how water is transported. They explore reproduction in plants, including pollination and seed dispersal. They study the stages of a plant life cycle. <b>Future learning</b> Children will study plant reproduction in greater detail in later years,</p>	<p>Children collect data about living things in summer. They compare data across all three seasons. They identify patterns and trends in plant and animal life. They use evidence to draw conclusions and answer enquiry questions.</p> <p>Future learning</p> <p>Children will build on their understanding of habitats and ecosystems. They will develop more advanced data analysis skills in further science units. They will explore environmental changes and interdependence in greater depth.</p> <p><b>Key Vocabulary</b> Living things and habitats vertebrate, invertebrate, flowering plant, non-flowering plant seasonal changes, increase, decrease, compare, conclusion</p> <p><b>Working Scientifically Vocabulary</b> data, bar chart, pictogram measure, observe, compare, record, results,</p>	<p>They understand asexual reproduction in plants. They plan and carry out an investigation into cloning plants.</p> <p><b>Future learning</b> Children will explore reproduction and relationships in greater depth. They will study plant biology and genetics in more complex contexts. They will apply enquiry skills to long-term scientific investigations.</p> <p><b>Key Vocabulary</b> <b>Living things and habitats</b> reproduction, fertilisation, embryo, foetus sperm cell, egg cell, sexual reproduction pollination, pollen, ovule, stigma asexual reproduction, clone, runner, tuber, bulb</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation independent variable, dependent variable, controlled variable record, investigate, explain, results, fair test</p>	<p>Children will study evolution and natural selection. They will explore adaptation and survival in greater depth. They will develop a deeper understanding of genetics in secondary science.</p> <p><b>Key Vocabulary</b> <b>Evolution and inheritance</b> organism, species, variation offspring, characteristic inheritance, desirable characteristics</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>Fresh experiences</li> <li>Possibilities</li> <li>Healthy Me (inc keeping safe)</li> <li>Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

	<p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>including more complex structures. They will develop a deeper understanding of ecosystems and interdependence. They will build on scientific enquiry skills when investigating growth and environmental factors.</p> <p><b>Key Vocabulary</b> <b>Plants</b> leaf, stem, roots, flower, soil, seed, seedling, seed coating, germination, water transportation petals, stamen, pistil, pollen, reproductive organs, pollination, pollinators seed dispersal, wind dispersal, animal dispersal, water dispersal, explosion dispersal life cycle</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, diagram, results, identify, classify, test, investigate, plan, explain</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> </ul>	<p>analyse, investigate, explain</p> <p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Links to Baldon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	
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# Science Long Term Plan and Unit Overview



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|  |  |  | <ul style="list-style-type: none"><li>• Healthy Me (inc keeping safe)</li><li>• Equality and Diversity</li></ul> |  |  |  |
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	<p><b>Planting C</b> <b>Unit Overview</b> This unit continues children’s learning about plant growth, focusing on observing changes over time and planting seeds in summer conditions.</p> <p><b>National Curriculum Objectives</b> Identify and describe the basic structure of a variety of common flowering plants, including trees. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about planting in this unit to:</p>	<p><b>Growing Up</b> <b>Unit Overview</b> This unit develops children’s understanding of how animals, including humans, grow and change over time. Pupils explore life cycles, learn about parent and offspring relationships, and compare how different animals develop.</p> <p><b>National Curriculum Objectives</b> Notice that animals, including humans, have offspring which grow into adults</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about growing up to:</p>	<p><b>Forces</b> <b>Overview</b> In this unit, children are introduced to forces as pushes and pulls. They explore how forces affect the movement of objects and compare how objects move on different surfaces. Children learn about friction as a force that slows objects down and investigate how different surfaces affect movement. They plan and carry out a simple enquiry to test friction and use observations and measurements to draw conclusions.</p> <p><b>National Curriculum Objectives</b> Compare how things move on different surfaces.</p> <p><b>Working Scientifically Objectives</b> Identifying differences, similarities or changes related to simple scientific ideas and processes. Using straightforward scientific evidence to answer questions or to support findings. Setting up simple practical enquiries and fair tests. Using results to draw simple conclusions, make predictions, suggest</p>	<p><b>Living Things and Their Habitats (Habitats)</b> <b>Overview</b> In this unit, children explore different habitats and the living things that depend on them. They investigate how habitats provide what plants and animals need to survive and compare different environments, including urban and rural habitats. Children use classification keys to group plants and animals and learn how human activity can have both positive and negative impacts on habitats and biodiversity.</p> <p><b>National Curriculum Objectives</b> Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that environments can change, and that this can sometimes pose dangers to living things.</p> <p><b>Working Scientifically Objectives</b></p>	<p><b>Properties of Materials (Reversible and Irreversible Changes)</b> <b>Overview</b> In this unit, children learn about reversible and irreversible changes in materials. They explore dissolving, solutions and how substances can be separated using filtering, sieving and evaporation. Children investigate reversible changes, such as dissolving and changes of state, and compare them with irreversible changes, such as burning and chemical reactions. They use scientific enquiry to identify patterns and explain how new materials can be formed.</p> <p><b>National Curriculum Objectives</b> Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Demonstrate that dissolving, mixing and changes of state are reversible changes.</p>	<p><b>Evolution and Inheritance (Adaptations)</b> <b>Overview</b> In this unit, children learn how animals and plants adapt to survive in different environments and how these adaptations can lead to evolution. They explore adaptations in a range of habitats, including polar and desert environments, and examine how characteristics improve survival. Children are introduced to evolutionary theory, the work of Charles Darwin and the concept of natural selection. They investigate how species change over time and how adaptations are passed on through generations, using examples such as Darwin’s finches.</p> <p><b>National Curriculum Objectives</b> Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p><b>Working Scientifically Objectives</b></p>
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# Science Long Term Plan and Unit Overview

	<p>Understand how plants grow and change over time Develop skills in observing and measuring growth Recognise that environmental conditions affect plant growth Build responsibility for caring for living things This unit reinforces understanding of living things through practical, hands-on experience.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning</b> EYFS: Exploring plants and growth through play Year 1 Spring: Planting A and Planting B (growing seeds indoors and outdoors) Seasonal Changes units (understanding how seasons affect plant growth) <b>Current Learning Focus</b> Observing and measuring plant growth over time Comparing plant growth across winter, spring and summer Understanding that warmer weather supports outdoor plant growth Revisiting plant structure using correct scientific vocabulary <b>Future Learning</b></p>	<p>Understand that all animals change as they grow Recognise the relationship between parents and offspring Develop understanding of life cycles Identify similarities and differences between living things This unit helps children develop a clearer understanding of life processes and how living things develop.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1 and Year 2 earlier units)</b> Identifying animals and grouping them Understanding animals' needs for survival Recognising that humans are animals <b>Current Learning Focus</b> Understanding that animals have offspring that grow into adults Learning the stages of life cycles (humans, mammals, amphibians, insects) Identifying patterns and differences between life cycles Comparing how animals are born (live young vs eggs) <b>Future Learning</b></p>	<p>improvements and raise further questions.</p> <p><b>Why are children learning this?</b> Children learn about forces to understand how movement occurs in the world around them. This unit helps them recognise that pushes and pulls can change how objects move and introduces the idea that surfaces affect movement through friction. It also develops their ability to investigate, measure and explain simple physical phenomena.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have explored how objects can be changed by squashing, bending, twisting and stretching. They have investigated materials and their properties. They have developed basic observation and comparison skills. <b>Current learning</b> Children learn that forces are pushes and pulls. They explore how forces affect movement.</p>	<p>Asking relevant questions and using different types of scientific enquiries. Gathering, recording, classifying and presenting data in a variety of ways to answer questions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about habitats to understand how living things depend on their environment for survival. This unit helps them recognise how ecosystems work and how changes to environments can affect plants and animals. It also encourages awareness of human impact and promotes responsibility for protecting the natural world.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about living things and their environments in Key Stage 1.</p>	<p>Explain that some changes result in the formation of new materials and are usually not reversible, including burning and reactions with acids.</p> <p><b>Working Scientifically Objectives</b></p> <p>Recording data using scientific diagrams, tables and language. Taking measurements using a range of scientific equipment with accuracy. Using results to make predictions and answer questions. Identifying scientific evidence to support ideas.</p> <p><b>Why are children learning this?</b> Children learn about reversible and irreversible changes to understand how materials behave and change in different conditions. This unit helps them recognise when changes can be undone and when new substances are formed. It builds their understanding of chemistry and supports their ability to carry out and explain scientific investigations.</p>	<p>Using secondary sources to research and evaluate information. Identifying scientific evidence to support explanations. Reporting and presenting findings with explanations and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about adaptations and evolution to understand how living things survive and change over time. This unit helps them make sense of biodiversity and how species respond to environmental challenges. It also introduces key scientific theories that underpin modern biology.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have studied variation and inheritance in the previous unit. They have explored habitats and classification earlier in KS2. <b>Current learning</b> Children learn how animals and plants are adapted to different environments.</p>
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# Science Long Term Plan and Unit Overview

	<p>Year 2: What plants need to grow and stay healthy          Year 3+: Functions of plant parts and plant reproduction          This unit consolidates understanding of growth, change over time and seasonal influence on living things.</p> <p><b>Vocabulary</b>  <b>Plants and Growth</b>          plant, flower, leaf, stem, roots, seed, soil, growth          Additional Vocabulary from Unit          measure, trowel</p> <p><b>Working Scientifically Vocabulary (Year 1)</b>          measure, observe, compare, measurement, growth</p> <p><b>Exposure vocabulary:</b>          record, identify, pattern, predict, test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Year 5: Human development and life processes (including puberty and ageing)          KS2: Life cycles in more detail (plants and animals)          This unit builds progression from understanding basic needs for survival to understanding growth and development over time.</p> <p><b>Vocabulary</b>  <b>Growth and Development</b>          offspring, growth, adult, parent, life cycle  <b>Human Life Cycle</b>          baby, child, teenager, adult  <b>Animal Groups and Development</b>          mammal, amphibian  <b>Life Cycle Stages</b>          egg, caterpillar, pupa, butterfly, frogspawn, tadpole, froglet</p> <p><b>Working Scientifically Vocabulary</b>          observe, compare, classify, identify          group, sort, pattern          predict, record</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> </ul>	<p>They investigate friction and how different surfaces affect how objects move.          They plan and carry out a simple enquiry to test these ideas.</p> <p><b>Future learning</b>          Children will study magnets and magnetic forces.          They will explore non-contact forces such as gravity in later years.          They will develop a deeper understanding of forces, motion and resistance in upper Key Stage 2.</p> <p><b>Key Vocabulary Forces</b>          push, pull, force, contact force, friction, smooth, rough</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation          record, results, investigate, test, plan, identify, explain, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>	<p>They have classified plants and animals and used classification keys.          They have collected and analysed data about living things across the year.</p> <p><b>Current learning</b>          Children explore different habitats and what living things need to survive.          They compare urban and rural environments.          They use classification keys to group plants and animals.          They investigate human impact on habitats, including both positive and negative changes.</p> <p><b>Future learning</b>          Children will explore ecosystems, food chains and interdependence in more depth.          They will study environmental change and conservation.          They will build on their understanding of biodiversity and sustainability.</p> <p><b>Key Vocabulary</b>          Living things and habitats          habitat, rural habitat, urban habitat, biodiversity          classification key, vertebrate, invertebrate          flowering plant, non-flowering plant</p>	<p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have explored materials and their properties earlier in the year.          They have studied states of matter and simple changes of state in Year 4.</p> <p><b>Current learning</b>          Children learn about dissolving and solutions.          They separate mixtures using filtering, sieving and evaporation.          They identify reversible changes such as dissolving and freezing.          They understand irreversible changes such as burning and chemical reactions.</p> <p><b>Future learning</b>          Children will develop a deeper understanding of chemical reactions.          They will study more advanced chemistry concepts in secondary science.          They will apply scientific reasoning to more complex investigations.</p> <p><b>Key Vocabulary Materials</b>          dissolve, soluble, insoluble, solution, substance</p>	<p>They explore evolution and how species change over time.          They study Charles Darwin and his contributions to science.          They understand natural selection and how it leads to adaptation.</p> <p><b>Future learning</b>          Children will build on their understanding of evolution in secondary science.          They will explore genetics and inheritance in more detail.          They will apply these concepts to environmental and biological studies.</p> <p><b>Key Vocabulary Evolution and inheritance</b>          adaptation, habitat, characteristics          evolution, natural selection          inheritance, species, offspring          Charles Darwin, common ancestor</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation          record, analyse, investigate, explain, present</p>
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# Science Long Term Plan and Unit Overview

		<ul style="list-style-type: none"> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Equality and Diversity</li> </ul>	<p>natural resources, deforestation, rewilding, nature reserve</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, classify, identify, results, investigate, explain</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>mixture, filtering, sieving, evaporation reversible change, irreversible change chemical reaction, burning, acid</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

<p>Summer</p>	<p><b>Growing and Cooking Unit Overview</b> This unit connects plant learning to real-life applications, helping children understand where food comes from and how plants are used for eating and cooking.</p> <p><b>National Curriculum Objectives</b> <i>(There are no additional statutory content objectives beyond plants; this unit supports previous plant knowledge and application.)</i></p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about growing and cooking to:</p>	<p><b>Plants (Bulbs and Seeds – Findings) Unit Overview</b> This unit focuses on reviewing and analysing the results of a plant investigation. Children observe how bulbs and seeds have grown over time and use their findings to explain how different conditions affect plant growth.</p> <p><b>National Curriculum Objectives</b> Observe and describe how seeds and bulbs grow into mature plants.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about plant growth in this unit to:</p>	<p><b>Forces (Magnets) Overview</b> In this unit, children learn about magnets and magnetic forces. They explore how magnets work and understand that magnetic forces act at a distance. Children investigate which materials are magnetic, learn that not all metals are magnetic, and explore how magnets interact through attraction and repulsion. They also learn about north and south poles and use this knowledge to predict how magnets will behave.</p> <p><b>National Curriculum Objectives</b> Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Observe how magnets attract or repel each other and attract some materials and not others. Describe magnets as having 2 poles and predict</p>	<p><b>Sustainability (Deforestation) Overview</b> In this unit, children learn about deforestation and its impact on habitats and the environment. They explore why forests are cut down and how this affects plants, animals and biodiversity. Children investigate how human actions contribute to deforestation and consider ways to reduce its impact, including making more sustainable choices in everyday life.</p> <p><b>National Curriculum Objectives</b> Asking relevant questions and using different types of scientific enquiries to answer them. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Working Scientifically Objectives</b> Asking relevant questions and using different types of scientific enquiries. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p>	<p><b>Sustainability (Plastic Pollution) Overview</b> In this unit, children learn about plastic pollution and its impact on the environment. They explore why plastics are widely used, how plastic waste is created and where it ends up. Children investigate the effects of plastic pollution on habitats, animals and humans, and consider ways to reduce its impact through sustainable choices and behaviour.</p> <p><b>National Curriculum Objectives</b> Identifying scientific evidence that has been used to support or refute ideas or arguments Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations.</p> <p><b>Working Scientifically Objectives</b> Identifying scientific evidence to support or challenge ideas. Reporting and presenting findings using scientific explanations.</p>	<p><b>Evolution and Inheritance (Fossils) Overview</b> In this unit, children learn about fossils and how they provide evidence of life from millions of years ago. They explore how fossils are formed and what they can tell us about the past. Children compare older and newer fossils to identify patterns and understand how living things have changed over time. They also study the work of Mary Anning and her contributions to palaeontology, linking fossil evidence to the theory of evolution.</p> <p><b>National Curriculum Objectives</b> 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><b>Working Scientifically Objectives</b> Identifying scientific evidence to support or refute ideas or arguments. Using scientific language to explain and justify ideas.</p>
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# Science Long Term Plan and Unit Overview

	<p>Understand that food comes from plants and is grown by people          Recognise that plants can be used for different purposes, including food          Make connections between science and everyday life          Develop awareness of healthy eating and food sources          This unit helps children apply scientific knowledge in a meaningful, real-world context.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning</b>          EYFS: Exploring food and planting through play          Year 1: Planting A, B and C (growing plants across the year)          Plants unit (identifying plant types and structure)  <b>Current Learning Focus</b>          Understanding that food comes from plants (crops)          Recognising the role of farmers          Identifying edible parts of plants (fruit, stems, leaves, roots)          Reflecting on plants grown throughout the year          Applying knowledge by linking plants to meals and cooking  <b>Future Learning</b></p>	<p>Understand how evidence can be used to answer scientific questions          Reflect on and explain changes observed over time          Strengthen understanding of how plants grow          Develop confidence in discussing and explaining results          This unit supports children in thinking like scientists by interpreting evidence.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning</b>          Identifying plants and understanding their parts          Learning that plants need light, water and temperature to grow          Growing bulbs and seeds in different conditions          Recording observations over time  <b>Current Learning Focus</b>          Observing and comparing final outcomes of plant growth          Measuring and recording plant height          Explaining how conditions (light, water, temperature) affected growth          Drawing conclusions from an investigation  <b>Future Learning</b></p>	<p>whether 2 magnets will attract or repel each other, depending on which poles are facing.</p> <p><b>Working Scientifically Objectives</b>          Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.          Identifying differences, similarities or changes related to simple scientific ideas and processes.          Setting up simple practical enquiries and fair tests.          Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b>          Children learn about magnets to understand a type of force that can act without direct contact. This unit helps them recognise how magnetic forces differ from contact forces such as pushes and pulls. It also develops their ability to classify materials and make predictions based on scientific observations.</p>	<p><b>Why are children learning this?</b>          Children learn about deforestation to understand how human actions can impact the environment. This unit helps them recognise the importance of protecting habitats and biodiversity, and encourages them to make more environmentally responsible choices. It also promotes awareness of global environmental issues.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have learned about habitats and how environments support living things.          They have explored biodiversity and human impact on habitats.          They have studied sustainability topics such as energy use.  <b>Current learning</b>          Children learn what deforestation is and why it happens.          They explore how deforestation affects plants, animals and biodiversity.</p>	<p><b>Why are children learning this?</b>          Children learn about plastic pollution to understand how human actions affect the environment. This unit helps them recognise the long-term impact of materials such as plastic and encourages them to take responsibility for making sustainable choices that protect the planet.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have learned about materials and their properties. [ They have explored environmental issues such as global warming.  <b>Current learning</b>          Children learn what plastic pollution is and how it occurs.          They explore where plastic waste ends up, including landfill and oceans.          They investigate the impact on habitats, animals and humans.          They identify ways to reduce plastic pollution in everyday life.  <b>Future learning</b>          Children will develop greater awareness of</p>	<p>Reporting and presenting findings, including conclusions and explanations.</p> <p><b>Why are children learning this?</b>          Children learn about fossils to understand how scientists gather evidence about the past. This unit helps them see how living things have changed over time and supports their understanding of evolution. It also introduces them to important scientists and how discoveries shape scientific thinking.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have studied variation, inheritance and adaptations in previous Year 6 units.          They have explored rocks and fossil formation in Year 3.  <b>Current learning</b>          Children learn how fossils are formed.          They explore similarities and differences between fossils.          They understand how fossils provide evidence for evolution.</p>
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# Science Long Term Plan and Unit Overview

	<p>Year 2: Plants and their needs for growth          KS2: Nutrition, food chains and sustainability          Wider curriculum links to DT (cooking and nutrition)          This unit brings together learning from across the year and supports understanding of food, sustainability and real-world science.</p> <p><b>Vocabulary</b>  <b>Plants and Food</b>          plant, seed, fruit, vegetable          crops, farmer, cook</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare          Exposure vocabulary: record, identify, sort, group, predict</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Year 3: Plant functions and scientific explanations of growth          KS2: Detailed understanding of plant systems and life cycles          This unit builds progression from investigation to evaluation and explanation, deepening scientific understanding.</p> <p><b>Vocabulary</b>  <b>Plants and Growth</b>          plant, seed, bulb growth  <b>Conditions for Growth</b>          light, water, temperature</p> <p><b>Working Scientifically Vocabulary</b>          observe, compare, measure, record, results predict</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Why now? (Curriculum sequencing)          Prior learning          Children have learned that forces are pushes and pulls.          They have explored contact forces such as friction.          They have compared how objects move on different surfaces.</p> <p><b>Current learning</b>          Children learn that magnetic forces are non-contact forces.          They explore which materials are magnetic and that not all metals are magnetic.          They investigate how magnets attract and repel.          They learn about magnetic poles and use this to make predictions.</p> <p><b>Future learning</b>          Children will study non-contact forces such as gravity in more detail.          They will deepen their understanding of forces and motion in upper Key Stage 2.          They will apply scientific enquiry skills to more complex investigations involving forces and materials.</p> <p><b>Key Vocabulary</b>  <b>Forces and magnets</b></p>	<p>They understand links between human actions (e.g. palm oil production) and environmental impact.          They consider ways to reduce deforestation and protect habitats.</p> <p><b>Future learning</b>          Children will further explore environmental issues such as climate change and conservation.          They will develop a deeper understanding of ecosystems and global sustainability.          They will apply scientific knowledge to real-world environmental challenges.</p> <p><b>Key Vocabulary</b>  <b>Sustainability / Living things and habitats</b>          deforestation, habitat destruction, biodiversity, natural resource palm oil, sustainable, endangered, extinct</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation record, identify, investigate, explain, results, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p>	<p>sustainability and conservation.          They will explore environmental responsibility in wider scientific contexts.          They will apply their knowledge to real-world environmental issues.</p> <p><b>Key Vocabulary</b>  <b>Sustainability / Environment</b>          plastic, plastic pollution, landfill          habitat, pollution, microplastics          recycle, reusable</p> <p>Working Scientifically Vocabulary          measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They study Mary Anning and her fossil discoveries.</p> <p><b>Future learning</b>          Children will develop a deeper understanding of evolution in secondary science.          They will apply fossil evidence to more complex biological theories.          They will explore geological timescales and Earth history.</p> <p><b>Key Vocabulary</b>  <b>Evolution and inheritance</b>          fossil, rock, sediment decompose, skeleton evolution, species palaeontologist, Mary Anning</p> <p><b>Working Scientifically Vocabulary</b>          measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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# Science Long Term Plan and Unit Overview

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# Science Long Term Plan and Unit Overview

	<p><b>Seasonal Changes Unit Overview</b> This unit focuses on observing and understanding the changes that occur during summer, including weather, daylight, and changes in plant and animal life, and drawing together learning from all seasons.</p> <p><b>National Curriculum Objectives</b> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p> <p><b>Why Are Children Learning This?</b> Children learn about seasonal changes in summer to: Understand how the environment changes across the year Recognise patterns in weather, daylight and living things Compare all four seasons Develop observation and reasoning skills This unit helps children consolidate their understanding of seasonal patterns and apply</p>	<p><b>Science – Growing Up (Butterfly Diary) Unit Overview</b> This unit builds on previous life cycle learning by focusing on first-hand observation of a butterfly’s life cycle. Children record changes over time and apply their understanding of growth and development in animals.</p> <p><b>National Curriculum Objectives</b> Notice that animals, including humans, have offspring which grow into adults.</p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Use their observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.</p> <p><b>Why Are Children Learning This?</b> Children learn through observing the butterfly life cycle to:</p>	<p><b>Plants B Overview</b> In this unit, children revisit their plant growth investigation from earlier in the year. They measure and analyse the growth of plants under different conditions, focusing on how space affects plant development. Children use their data to draw conclusions, explain patterns, and understand that plants need sufficient room, light, water and nutrients to grow healthily.</p> <p><b>National Curriculum Objectives</b> Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</p> <p><b>Working Scientifically Objectives</b> Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p><b>Why are children learning this?</b> Children learn this unit to develop their ability to use</p>	<p><b>Animals Including Humans (The Digestive System) Overview</b> In this unit, children learn about the human digestive system and how food is processed in the body. They explore the different types and functions of teeth, including how diet affects tooth structure. Children investigate tooth decay through a practical enquiry and learn about the structure of teeth. They then study the organs of the digestive system and understand the journey food takes through the body, using models to support their understanding.</p> <p><b>National Curriculum Objectives</b> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions.</p> <p><b>Working Scientifically Objectives</b> Identifying differences, similarities or changes related to simple scientific ideas.</p>	<p><b>Living Things and Their Habitats (Reproduction B) Overview</b> In this unit, children revisit their investigation into plant reproduction by analysing the results of a plant cloning enquiry. They measure plant growth, compare findings and draw conclusions about which plant cuttings are most successful. Children interpret data using graphs and develop their understanding of asexual reproduction. They also use their results to make predictions and plan further scientific enquiries.</p> <p><b>National Curriculum Objectives</b> Describe the life process of reproduction in some plants and animals</p> <p><b>Working Scientifically Objectives</b> Using test results to make predictions and set up further investigations. Measuring accurately using scientific equipment. Interpreting data and presenting findings using graphs.</p> <p><b>Why are children learning this?</b></p>	<p><b>Year 7 Ready (Summer Projects) Overview</b> In this unit, children apply their scientific knowledge and enquiry skills through project-based learning. They investigate real-world problems linked to melting points and thermal insulation, focusing on how to prevent chocolate from melting. Children revisit key scientific concepts from across primary science, particularly in chemistry, and develop their ability to plan, carry out and evaluate investigations independently in preparation for secondary science.</p> <p><b>National Curriculum Objectives (Statutory Content)</b> This unit is non-statutory and designed to consolidate and extend learning from the Key Stage 2 Science curriculum.</p> <p><b>Working Scientifically Objectives</b> Planning and carrying out different types of scientific enquiries.</p>
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# Science Long Term Plan and Unit Overview

	<p>learning across the whole year.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning</b>          EYFS: Awareness of weather and seasonal change through play          Year 1 Autumn: Seasonal Changes (Autumn and Winter)          Year 1 Spring: Seasonal Changes (Spring)</p> <p><b>Current Learning Focus</b>          Understanding summer as part of the yearly cycle          Observing longer days, warmer weather and increased plant growth          Recognising that more animals are active in summer          Collecting and comparing data across all seasons          Drawing conclusions about how seasons change over time</p> <p><b>Future Learning</b>          Year 2: Habitats and how environments change          Year 5: Earth and space (day length, seasons, planetary movement)          This unit consolidates Year 1 learning by helping children understand patterns over time and seasonal cycles.</p> <p><b>Vocabulary</b></p>	<p>Develop understanding of how animals change over time          Apply knowledge from previous life cycle learning          Strengthen observation and recording skills          Experience real-life scientific enquiry          This unit helps children connect classroom knowledge with real scientific observation.</p> <p><b>Why Now? (Curriculum Positioning)</b>  <b>Prior Learning</b>          Understanding that animals have offspring that grow into adults          Learning life cycles of humans, mammals, amphibians and insects          Observing the butterfly life cycle (started in previous unit)</p> <p><b>Current Learning Focus</b>          Recording first-hand observations of a life cycle          Identifying stages of a butterfly life cycle (egg, caterpillar, pupa, butterfly)          Comparing butterfly life cycles with other animals          Using evidence to answer questions about growth and change</p> <p><b>Future Learning</b>          Year 3: More detailed study of life processes and development</p>	<p>evidence from investigations to support scientific understanding. It reinforces the idea that plants need specific conditions to grow and allows children to see how scientific enquiries build knowledge over time. It also strengthens measuring, recording and interpreting data skills.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children carried out a plant growth investigation in Plants A.          They learned about the parts of plants and their functions.          They explored what plants need to grow, including water, light, nutrients and space.</p> <p><b>Current learning</b>          Children revisit and complete their plant growth investigation. They measure plant growth accurately using centimetres and millimetres.          They analyse their results and identify patterns.          They understand how space and competition affect plant growth.</p> <p><b>Future learning</b></p>	<p>Asking relevant questions and using different types of scientific enquiries. Recognising when and how secondary sources can help answer questions.          Setting up simple practical enquiries and fair tests.          Recording findings using simple scientific language and diagrams.          Using results to draw conclusions, make predictions, suggest improvements and raise further questions.          Reporting on findings from enquiries, including oral and written explanations.</p> <p><b>Why are children learning this?</b>          Children learn about the digestive system to understand how their bodies process food and stay healthy. This unit helps them recognise the importance of nutrition, dental care and bodily functions. It also builds awareness of how lifestyle choices affect health, particularly in relation to teeth and diet.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b></p>	<p>Children learn to analyse and interpret scientific data to deepen their understanding of plant reproduction. This unit strengthens their enquiry skills by encouraging them to evaluate results, draw conclusions and suggest improvements. It also reinforces their understanding of asexual reproduction through real investigation.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have studied plant reproduction and asexual reproduction in Reproduction A.          They have planned and carried out an investigation into cloning plants.</p> <p><b>Current learning</b>          Children measure plant growth and record results. They compare outcomes from different plant cuttings.          They interpret data using tables and line graphs.          They draw conclusions and evaluate their investigation.</p> <p><b>Future learning</b>          Children will apply data interpretation skills to</p>	<p>Recording data and presenting findings. Evaluating investigations and suggesting improvements. Asking questions and developing curiosity.</p> <p><b>Why are children learning this?</b>          Children complete this unit to consolidate their primary science learning and prepare for secondary school. It allows them to apply knowledge in a meaningful, real-world context while strengthening independence, investigation skills and scientific thinking.</p> <p><b>Why now? (Curriculum sequencing)</b>  <b>Prior learning</b>          Children have completed all Key Stage 2 science topics.          They have developed enquiry skills across the primary curriculum.</p> <p><b>Current learning</b>          Children apply knowledge through practical investigations.          They explore melting points and thermal insulation.</p>
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	<p><b>Seasonal and Weather Vocabulary</b> summer, season, weather daylight, night rainy, cloudy, windy, sunny Seasonal Comparison Vocabulary winter, spring, autumn measure, observe, compare, measurement Exposure vocabulary: record, tally, table, identify, pattern, predict, sort, group</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>KS2: Life cycles, classification and biological processes This unit develops progression from learning life cycles to applying knowledge through observation and recording over time.</p> <p><b>Vocabulary (From Vocabulary Progression Document)</b> <b>Life Cycles</b> life cycle, egg, Butterfly Life Cycle caterpillar, pupa, butterfly</p> <p><b>Working Scientifically Vocabulary (Year 2)</b> observe, record compare, describe results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Children will apply these enquiry and data-handling skills in future science investigations. They will deepen their understanding of ecosystems and how living things compete for resources. They will build on scientific reasoning and evaluation skills in upper Key Stage 2.</p> <p><b>Key Vocabulary</b> <b>Plants</b> soil, seed, nutrients, measure, data</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, results, explain, analyse, investigate</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>Children have learned about animals and their diets (carnivores, herbivores, omnivores). They have studied basic human body parts and functions in earlier years. They have developed simple investigation skills.</p> <p><b>Current learning</b> Children learn about different types of teeth and their functions. They investigate how diet affects teeth and causes decay. They explore the structure of teeth and how to care for them. They learn the parts of the digestive system and the journey of food through the body.</p> <p><b>Future learning</b> Children will develop a deeper understanding of human biology, including nutrition and the circulatory system. They will explore more complex scientific concepts related to health and the body. They will apply investigation and reasoning skills to more advanced scientific enquiries.</p> <p><b>Key Vocabulary</b> <b>Animals including humans</b></p>	<p>more complex investigations. They will develop stronger scientific reasoning and analysis. They will build on enquiry skills in preparation for secondary science.</p> <p><b>Key Vocabulary</b> <b>Living things and habitats</b> asexual reproduction, clone, cutting, parent plant, data, growth, investigation</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, interpret, results, graph</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They design and carry out their own scientific enquiries. They evaluate and refine their investigations.</p> <p><b>Future learning</b> Children will begin Key Stage 3 science with stronger enquiry skills. They will build on chemistry concepts such as materials and thermal properties. They will work more independently in scientific investigations.</p> <p><b>Key Vocabulary</b> <b>Materials / Physics / Chemistry</b> melting point, thermal insulation temperature, heat material, properties</p> <p><b>Working Scientifically Vocabulary</b> question, prediction, investigation, variables data, results, conclusion, evaluation, analyse, explain, improve</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> </ul>
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# Science Long Term Plan and Unit Overview

				<p>teeth, incisor, canine, premolar, molar carnivore, herbivore, omnivore enamel, root, plaque, decay, germs digestive system, mouth, saliva, oesophagus, stomach small intestine, large intestine, rectum</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, results, investigate, plan, identify, explain, fair test</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>		<ul style="list-style-type: none"> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>
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		<p><b>Wildlife</b> <b>Unit Overview</b> This sustainability-focused unit helps children understand the importance of wildlife and how humans and the natural world are connected. Pupils explore how wildlife benefits humans and consider practical ways they can protect and support plants and animals in their local area.</p> <p><b>National Curriculum Objectives</b> <i>(This sustainability unit supports and applies prior knowledge rather than introducing new statutory content objectives.)</i></p> <p><b>Working Scientifically Objectives</b> Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Use their observations and ideas to suggest answers to questions.</p> <p><b>Why Are Children Learning This?</b> Children learn about wildlife to:</p>	<p><b>Sustainability (Biodiversity)</b> <b>Overview</b> In this unit, children learn about biodiversity and the variety of living things within a habitat. They explore how environments support different plants and animals and how biodiversity can change over time. Children investigate how human actions can have both positive and negative impacts on biodiversity and consider ways to improve it through actions such as rewilding.</p> <p><b>National Curriculum Objectives</b> Asking relevant questions and using different types of scientific enquiries to answer them. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p><b>Working Scientifically Objectives</b> Asking relevant questions and using different types of scientific enquiries to answer them. Reporting on findings from enquiries, including oral and written explanations,</p>	<p><b>Living Things and Their Habitats (Food Chains)</b> <b>Overview</b> In this unit, children learn about food chains and how energy is transferred between living things. They explore the roles of producers, consumers, predators and prey, and understand how these connect within a habitat. Children construct, interpret and draw food chains, and consider how changes, including human activity, can affect ecosystems.</p> <p><b>National Curriculum Objectives</b> Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p><b>Working Scientifically Objectives</b> Using straightforward scientific evidence to answer questions or support findings. Recording findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. Reporting on findings from enquiries, including oral and written explanations,</p>		
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		<p>Understand that humans, animals and plants are interdependent Recognise the importance of caring for the environment Develop awareness of sustainability and responsibility Apply scientific knowledge to real-life situations This unit encourages children to see themselves as active participants in protecting the natural world.</p> <p><b>Why Now? (Curriculum Positioning)</b> <b>Prior Learning (Year 1 and Year 2)</b> Identifying animals and plants Understanding animals' needs for survival Learning about habitats and food chains Exploring plants and growth</p> <p><b>Current Learning Focus</b> Understanding what wildlife is (plants and animals not cared for by humans) Recognising how wildlife supports humans (e.g. food, ecosystems) Exploring interdependence between living things Taking practical action to support local wildlife</p>	<p>displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about biodiversity to understand how living things depend on each other and their environment. This unit helps them recognise the importance of protecting habitats and encourages them to take responsibility for the natural world. It also promotes awareness of environmental issues and supports the development of sustainable thinking.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about plants, animals and their habitats in earlier years. They have explored nutrition, food waste and sustainability. They understand that living things need specific conditions to survive.</p> <p><b>Current learning</b> Children learn that biodiversity is the variety of living things in a habitat.</p>	<p>displays or presentations of results and conclusions.</p> <p><b>Why are children learning this?</b> Children learn about food chains to understand how living things depend on one another for survival. This unit helps them recognise how energy flows through ecosystems and how changes can affect the balance of nature. It also builds awareness of how human actions can impact habitats and living things.</p> <p><b>Why now? (Curriculum sequencing)</b> <b>Prior learning</b> Children have learned about habitats and living things within them. They have studied classification of plants and animals. They have explored biodiversity and human impact on habitats.</p> <p><b>Current learning</b> Children learn what food chains are and how they work. They identify producers, consumers, predators and prey. They interpret and draw food chains.</p>		
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# Science Long Term Plan and Unit Overview

		<p><b>Future Learning</b> KS2: Ecosystems, food webs and environmental change Geography links: Sustainability and human impact Environmental science concepts This unit builds progression from understanding habitats and living things to understanding human responsibility for the environment.</p> <p><b>Vocabulary</b> <b>Wildlife and Environment</b> wildlife, nature, habitat, local <b>Food and Survival</b> food chain, crops Animals insect</p> <p><b>Working Scientifically Vocabulary (Year 2)</b> observe, compare identify, describe predict</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> <li>• Equality and Diversity</li> </ul>	<p>They explore how biodiversity can increase or decrease. They understand how human actions impact ecosystems. They investigate ways to improve biodiversity, such as rewilding. <b>Future learning</b> Children will develop a deeper understanding of ecosystems and interdependence. They will explore environmental change and conservation in more detail. They will apply this knowledge to global issues such as climate change and habitat destruction.</p> <p><b>Key Vocabulary</b> Sustainability / Living things and habitats biodiversity, endangered, extinct, rewilding, habitat</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, identify, investigate, explain, results, present</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p>	<p>They explore how changes in one part of a food chain affect others. <b>Future learning</b> Children will develop a deeper understanding of ecosystems and interdependence. They will explore food webs and more complex ecological relationships. They will study environmental issues affecting global ecosystems.</p> <p><b>Key Vocabulary</b> <b>Living things and habitats</b> food chain, producer, consumer, predator, prey habitat, farming, overfishing, hunting</p> <p><b>Working Scientifically Vocabulary</b> measure, observe, compare, data, prediction, conclusion, evaluation record, analyse, investigate, explain, results</p> <p><b>Links to Baildon Glen Curriculum Drivers</b></p> <ul style="list-style-type: none"> <li>• Fresh experiences</li> <li>• Possibilities</li> <li>• Healthy Me (inc keeping safe)</li> </ul>		
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# Science Long Term Plan and Unit Overview

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# Science Long Term Plan and Unit Overview

