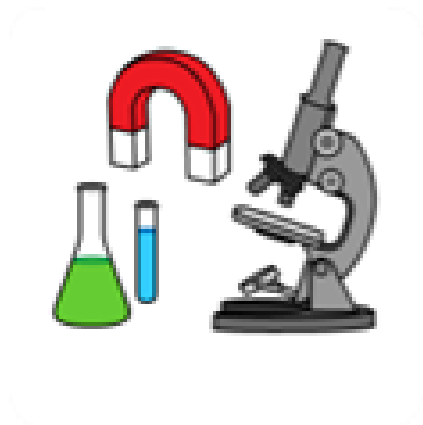



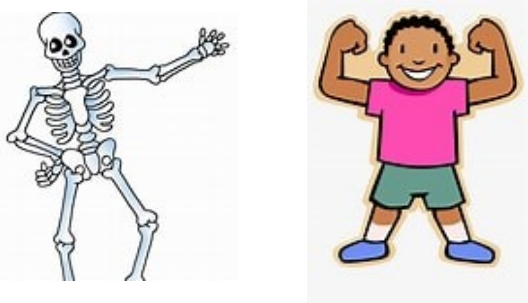

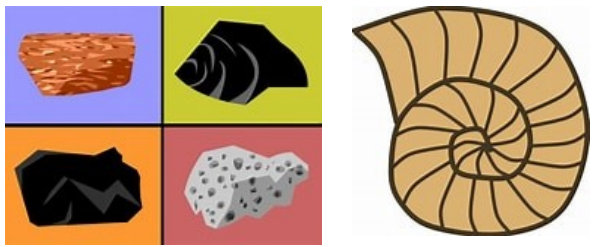
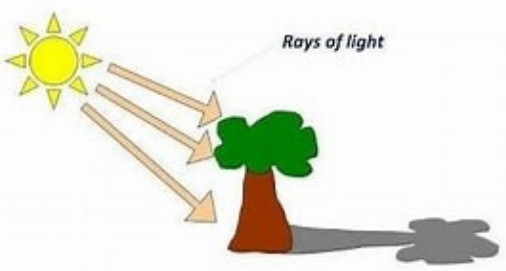






Stoneferry Science
Planning Document
Year 3



Year 3 Science—Yearly Overview

Autumn	Spring	Summer
<p style="text-align: center;">Our Changing World</p> 	<p style="text-align: center;">Our Changing World</p> 	<p style="text-align: center;">How does your garden grow?</p> 
<p style="text-align: center;">Amazing Bodies</p> 	<p style="text-align: center;">The Power of Forces</p> 	<p style="text-align: center;">Rock detectives</p> 
<p style="text-align: center;">Can you see me?</p> 	<p style="text-align: center;">How does your garden grow?</p> 	<p style="text-align: center;">Our Changing World</p> 

Autumn Modules Year 3

Amazing Bodies	Our Changing World	Can You See Me?
<p>Key Concepts Delivered - Biology</p> <p>Biology: Organisms require a supply of energy and materials.</p> <p>Biology: Genetic information.</p>	<p>Key Concepts Delivered -</p> <p>Biology</p>	<p>Key Concepts Delivered -</p> <p>Physics: The universe follows unbreakable rules that are all about forces, matter and energy</p> <p>Physics: Energy: There are many different forms of energy eg: light, sound, electricity, heat and wind</p>
<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 • identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 <p>find patterns in the way that the size of shadows change</p>
<p>Relevant Prior Learning</p> <p>The children have studied the human body in KS1. They will know that we need to eat different types of foods in the right amounts.</p> <p>They will have seen specific names for food groups.</p>	<p>Relevant Prior Learning</p> <p>Children will know how a plant grows and the names for different parts of plants.</p>	<p>Relevant Prior Learning</p> <p>Children will have their own understanding of light from their lives so far.</p> <p>They will know what a light source is.</p>
<p>Expected Outcomes</p> <p>Children will know:</p> <p>The food we eat provides us with nutrition</p> <p>The range of nutrients required for healthy lifestyles, the amounts of different food groups and what each food group provides for the body</p> <p>That human and other creatures have skeletons and muscles for support, protection and movement</p>	<p>Expected outcome</p> <p>Children will know:</p> <p>How a plant changes in appearance throughout the different seasons.</p> <p>That some trees lose their leaves and some don't and that this is called deciduous and evergreen</p>	<p>Expected outcome</p> <p>Children will know:</p> <p>How we see things</p> <p>How objects reflect light</p> <p>How shadows are created and how the shape and size of a shadow is affected by the position of the light source.</p> <p>How light can damage eyes if humans look directly into a light source</p>

Autumn term - Amazing Bodies

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Amazing Bodies	Lesson 1 Survival	<p>Enquiry Type Exploration</p> <p>NC: 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>Working Scientifically: Asking relevant questions</p>	Children will know what is required for a human being to survive	stay alive, survive, food, protection, shelter, exercise, movement	
Amazing Bodies	Lesson 2 Balanced diet	<p>Enquiry Type - Grouping and classifying</p> <p>NC: 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>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	Children will know the term balanced diet	food, nutrition, balanced diet, nutrients, carbohydrates, protein, fat, roughage (fibre), water, dairy, fruits, vegetables, meat	Local restaurant menus
Amazing Bodies	Lesson 4 Skeletons	<p>Enquiry Type - Grouping and classifying</p> <p>NC: Identify that humans and some animals have skeletons and muscles for support, protection and movement.</p> <p>Working Scientifically: Using straightforward scientific evidence to answer questions, or to support their findings</p>	<p>Children will know that not all skeletons are the same</p> <p>Children will know the function of a skeleton</p>	skeleton, bones, protect, support, move, muscles, joints, ribs, heart, skull, brain, backbone, spine, spinal column, vertebrate, invertebrate	Internet access for research

Autumn term - Amazing Bodies

Module	Snap Science recommend-ed lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Amazing Bodies	Lesson 5 Vertebrates	<p>Enquiry Type :Using secondary source of information</p> <p>NC: Identify that humans and some animals have skeletons and muscles for support, protection and movement</p> <p>Working Scientifically: Reporting on findings from enquiries, including oral and written explanations, displays or presentation of results and conclusions</p>	<p>Children will design a vertebrate and its skeleton using existing knowledge</p> <p>Children will know how to present their new creature to the class orally</p>	pskeleton, bones, joints, vertebrate, backbone, skull, ribs, tailbone	Tracing paper, paperclip
Amazing Bodies	Lesson 6 Muscles	<p>Enquiry Type - Grouping and classifying</p> <p>NC: Identify that humans and some animals have skeletons and muscles for support, protection and movement</p> <p>Working Scientifically: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	<p>Children will know the names of different muscles</p> <p>They will know where these muscles are positioned in the body</p> <p>They will know what muscles do.</p>	bones, joints, muscles, tendons, pull	Chicken leg, large space such as a hall, small weights such as bottles of water, bench, access to internet and relevant text books
Amazing Bodies	Lesson 7 Investigation	<p>Enquiry Type - Looking for patterns</p> <p>NC: Identify that humans and some animals have skeletons and muscles for support, protection and movement</p> <p>Working Scientifically: Asking relevant questions and using different types of scientific enquiries to answer them</p> <ul style="list-style-type: none"> • Setting up simple practical enquiries, comparative and fair tests 	<p>Children will know that a person's body will affect performance in specific activities.</p> <p>Children will explain results from investigation orally to others</p>	taller, shorter, longer, faster, slower, compare, contrast	

Autumn Term—Our Changing World

Module	Lesson Structure	National Curriculum Objectives	Expected outcome	Vocabulary	Resources
<p>Our Changing World</p> <p>Biology</p> <p><i>Organisms</i></p>	<p>Lesson 1, 2 and 3 to be combined into one lesson.</p>	<p>Enquiry Type Observation</p> <p>LO: I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>LO: I can describe how leaves and flowers change through the year.</p> <p>WS: I can record findings and present data using simple scientific language, written and oral explanations, diagrams, pictures, keys, bar charts and tables.</p>	<p>Children will know how plants and trees appear within the local area at a specific time of the year.</p> <p>Children will know the term deciduous and evergreen</p>	<p>Evergreen, deciduous, season</p>	<p>Photographs of trees</p> <p>Photographs of gardens</p> <p>Balls of string</p> <p>Lolly sticks</p> <p>Large hoops</p>

Autumn term - Can You See Me?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Can You See Me?	Lesson 1 What's needed to see?	<p>Enquiry Type - Grouping and classifying things</p> <p>NC: Recognise that light is needed in order to see things and that dark is the absence of light</p> <p>Working Scientifically: Setting up simple practical enquiries, comparative and fair tests</p>	Children will know that light is needed to see objects and that some objects are easier to see than others	light, dark, shadow, mirror, bright, dim, reflect, eye	<p>A tent or small space made as dark as possible, torches, a collection of objects (a few different shapes and of different colours including black, white and reflective; cut out card may work best here but small toys, buttons or stones can be used), boxes (shoe box size) with removable lids and with a hole cut/made in the top</p>
Can You See Me?	Lesson 2 Reflection	<p>Enquiry Type - Grouping and classifying</p> <p>NC Notice that light is reflected from surfaces.</p> <p>Working Scientifically: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	Children will know that different surfaces reflect different amounts of light.	light, dark, shadow, mirror, bright, dim, reflect, eye, shiny	<p>A small plastic mirror (reflective tiles could be used) and torch per group, pieces of black card (A5), a collection of objects, both shiny and not shiny, e.g. a piece of smooth and a piece of crumpled up kitchen foil, a clear and/or black plastic CD/DVD case, CDs or DVDs, pieces of white and black card, some 2p coins; if possible some new ones as well as some very old and grubby ones (old coins can be soaked in vinegar/cola to clean them, or rubbed with dirt to make them grubby)</p>
Can You See Me?	Lesson 3 Using reflection to see things at night	<p>Enquiry Type - Grouping and classifying</p> <p>NC: Recognise that we need light in order to see things and that dark is the absence of light.</p> <p>Working Scientifically: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	Children will know how reflective strips can be used to make objects more visible at night.	light, dark, shadow, mirror, bright, dim, reflect, reflective, reflector, eye, shiny	<p>A collection of reflective and non-reflective materials that can be stuck to thick pieces of card approx 5 cm by 15/20 cm (e.g. strips of 10–15 cm long material, ribbon or tinsel, sequins, buttons, pieces of card), plain pieces of A4 paper, a large cut-out or drawn image of a person that is big enough (probably 1 m tall) for all of the class to be able to stick some of their strips on, torches to test the materials</p>

Autumn term - Can You See Me?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Can You See Me?	Lesson 4 Mirrors	<p>Enquiry Type - Looking for patterns</p> <p>NC: Notice that light is reflected from surfaces</p> <p>Working Scientifically: Using results to draw simple conclusions, make predictions for new values</p>	<p>Children will know images in mirrors look different</p> <p>Children will know how mirrors reflect light</p>	light, dark, mirror, bright, dim, reflect, eye	<p>Small plastic mirrors (at least 10 cm by 5 cm,, ideally one for each child but at least one between two), plain paper, coloured pens, torches (probably only four or five will be needed), pieces of metal – some flat, some not, some polished, some not – e.g new silver 5p/10p/20p coins (not flat/polished), old silver coins (not flat/not polished) a CD (flat/polished), an old steel spoon (not flat/not polished), crumpled kitchen foil</p>
Can You See Me?	Lesson 5 Shadows	<p>Enquiry Type - Noticing patterns</p> <p>NC: Recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>Working Scientifically: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	<p>Children will know how a shadow is formed and what shape it will be.</p>	light, dark, shadow, bright, dim, reflect, eye, opaque, transparent, translucent	<p>Torches, plastic combs with large teeth (Afro comb) or pieces of card with five or more slots cut into it to form a simple comb shape, transparent objects (e.g. pieces of clear Perspex, piece of cling film or overhead transparency film), translucent objects (e.g. baking parchment, tracing paper or a fine, thin material such as tights), opaque objects</p>
Can You See Me?	Lesson 6 Changing the size of a shadow	<p>Enquiry Type - Noticing patterns</p> <p>NC: Find patterns in the way that the size of shadows change</p> <p>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	<p>Children will know how varying the distance of the object from the light source will affect the size and sharpness of a shadow</p>	<p>light, dark, shadow, bright, dim, reflect, eye, opaque, transparent</p> <p>Fair test, variable, source</p>	<p>Simple experiment based on changing the distance of the object from the light source.</p> <p>Discussion around fair testing.</p> <p>Record data for the height of shadow</p> <p>Simple bar line graph</p> <p>Conclusion</p>

Spring Modules

The Power of Forces	Our Changing World	How Does Your Garden Grow?
<p>Key Concepts Delivered -</p> <p>Physics: The universe follows unbreakable rules that are all about forces, matter and energy</p> <p>Physics: Forces are different kinds of pushes and pulls that act on all the matter in the universe.</p> <p>Physics: Energy: There are many different forms of energy eg: light, sound, electricity, heat and wind</p>	<p>Key Concepts Delivered -</p> <ul style="list-style-type: none"> Biology 	<p>Key Concepts Delivered -</p> <p>Biology: Organisms require a supply of energy and materials.</p> <p>Physics: The universe follows unbreakable rules that are all about forces, matter and energy</p> <p>Physics: Forces are different kinds of pushes and pulls that act on all the matter in the universe.</p>
<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between 2 objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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 <p>explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>
<p>Relevant Prior Learning</p> <p>Scientifically the children will not have covered forces before. They should however know what the word push and pull means and will be aware of what happens to a stationary object when it is pushed or pulled.</p>	<p>Relevant Prior Learning</p> <p>Children will know how a plant grows and the names for different parts of plants.</p>	<p>Relevant Prior Learning</p> <p>Children will have grown plants in Year 2 and know what conditions plants need to grow best. They will know the names of the different parts of a plant (year 1)</p>
<p>Expected Outcomes</p> <p>Children will know:</p> <p>the effect of pushing and pulling and how to make something speed up and slow down.</p> <p>How different surfaces affect movement</p> <p>That most forces act by contact but magnets do not</p> <p>The meaning of repel and attract, and that some materials are magnetic and others not</p> <p>Magnets have 2 poles (N and S)</p>	<p>Expected outcome</p> <p>Children will know:</p> <p>How a plant changes in appearance throughout the different seasons.</p> <p>That some trees lose their leaves and some don't and that this is called deciduous and evergreen</p>	<p>Expected outcome</p> <p>Children will know</p> <p>How water is transported around a plant</p> <p>How the leaves of the plant make food through photosynthesis</p> <p>The roles of different plant parts in reproduction</p> <p>The stages of the plant life cycle</p>

Spring term - the Power of Forces

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
The Power of Forces	Lesson 1 Starting to move	<p>Enquiry Type -</p> <p>NC: Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	Children will know that unless a force acts upon a stationary object it will not move	push, pull, twist, force	Table tennis balls, drinking straws, cotton wool balls, rubber bands, A4 sheets of strong card (such as from cereal packets), spinning tops, clockwork toys.
The Power of Forces	Lesson 2 Making something move	<p>Enquiry Type - Comparative and fair tests</p> <p>NC: Notice that some forces need contact between two objects but magnetic forces can act at a distance</p> <p>Working Scientifically: Setting up simple practical enquiries, comparative and fair tests</p>	Children will know that air can push an object to make it move	push, force, air, turns, fast, slow	Four different windmills, varying in size and material, paper, pins, wooden sticks, stop watches
The Power of Forces	Lesson 3 Sliding over different surfaces (Friction)	<p>Enquiry Type - Comparative and fair tests</p> <p>NC: To explore how objects move on different materials</p> <p>Working Scientifically: Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p>	Children will know that the type of surface will affect how well an object moved over it. They will use the word smooth and rough and link this to shorter and longer distances moved.	push, force, material, surface	Heavy objects such as photocopier paper, boards for ramps (such as mini whiteboards), rulers, object to slide on ramp, such as 100g weight, materials to cover ramps, such as felt, foam, fabric, sandpaper, tin foil, plastic, carpet, rubber matting, large open space, such as a hall, helter skelter.

Spring term - the Power of Forces

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
The Power of Forces	Lesson 4 Magnetic materials	<p>Enquiry Type - Grouping and classifying</p> <p>NC: 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</p> <p>Working Scientifically: Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	<p>Children will know that not all materials are magnetic</p> <p>Children will know the names of some magnetic materials and be able to say what they have in common.</p>	magnet, attracts, magnetic material, non-magnetic material, metal, non-metal	Sand or sawdust in a large container (a sand or water tray or stacking tray), small magnetic objects (paperclips, coins, cans, keys, cutlery), small non-magnetic objects (marbles, cubes, beads), sorting circles, large magnet, magnetic fishing rods (made using a garden cane, string and a magnet), fishing nets, digital cam-
The Power of Forces	Lesson 5 How strong are magnets?	<p>Enquiry Type - Comparative and fair tests</p> <p>NC: Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Working Scientifically: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	Children will know that different magnets have different strengths	magnet, attracts, magnetic material, non-magnetic material, metal, non-metal	<p>Bar magnets per pair, paper clips, rulers, a range of magnetic objects of different weights (such as keys, cutlery, scissors, cans, tins), paper, measuring scales.</p> <p>Simple experiment—measuring the relative strength of magnets linked to how many magnets can be moved or</p>
The Power of Forces	Lesson 6 Repelling and attracting	<p>Enquiry Type -</p> <p>NC: Observe how magnets attract or repel each other and attract some materials and not others; describe magnets as having two poles; predict whether two magnets will attract or repel each other, depending on which poles are facing</p> <p>Working Scientifically: Making systematic and careful observations</p>	<p>Children will know why 2 magnets may repel or attract one another</p> <p> Children will know that magnets have 2 poles (N&S)</p>	north pole, south pole, attract, repel, magnet	Bar magnets with poles labelled, a good range of different types of magnets, such as bar, disc with the poles unmarked or covered, iron filings, petri dishes.

Spring Term—Our Changing World

Module	Lesson Structure	National Curriculum Objectives	Expected Outcome		Resources
<p>Our Changing World</p> <p>Biology</p> <p><i>Organisms</i></p>	<p>Revision/ Revisit—Lesson 1,2,3</p> <p>Then</p> <p>Lesson 4</p>	<p>Enquiry type: Observation over time</p> <p>LO: I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>LO: I can describe the time of year that I am most likely to find particular berries and flowers.</p> <p>WS: I can record findings and present data using simple scientific language, written and oral explanations, diagrams, pictures, keys, bar charts and tables.</p>	<p>Observation over time</p> <p>Spring term observations</p>		<p>Photographs of trees</p> <p>Photographs of gardens</p> <p>Balls of string</p> <p>Lolly sticks</p> <p>Large hoops</p>

Spring term - How does your garden grow?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
How does your garden grow?	Lesson 1 &2 Plants and leaves	<p>Enquiry Type - Exploration</p> <p>NC: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Working Scientifically: Asking relevant questions and using different types of scientific enquiries to answer them</p>	<p>Children will know the names of different plant parts and what their function is</p> <p>Children will know what leaves have in common</p>	<p>plant, roots, stem, trunk, leaf/leaves, flower, function, question</p>	<p>flowering plant in a pot, such as a geranium, sticky notes or index cards</p>
How does your garden grow?	Lesson 3 Why do plants have leaves?	<p>Enquiry Type - Carrying out comparative and fair tests</p> <p>NC: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Working Scientifically: Setting up simple practical enquiries, comparative and fair tests (Lesson 3); gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	<p>Children will know how to organize a fair test</p> <p>Children will know that without leaves, plants cannot grow</p>	<p>investigation, question, fair test, change, measure, leaf/leaves, features, function, leaflet, stalk, veins, surface, edge, lobes, tip, food</p>	<p>KWL display, plants, e.g. busy lizzie, geranium or primula (two plants for Challenge 1; three plants for Challenge 2 and four for Challenge 3)</p>
How does your garden grow?	Lesson 4 Plant roots	<p>Enquiry Type - Grouping and classifying</p> <p>NC: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Working Scientifically: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	<p>Children will know what the function of roots is</p> <p>Children will know how different plants' roots have similarities.</p>	<p>root, root hair, water, nutrients, anchor, support</p>	<p>A plant, in a pot, which has had its roots removed, a range of seedlings, such as peas, broad or runner beans (one set per group with a minimum of one seedling between two pupils), magnifiers (one per child), other examples of plant roots, a pot-bound plant, KWL display</p>

Spring term - How does your garden grow?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
How does your garden grow?	Lesson 5 How is water transported around a plant?	<p>Enquiry Type - Observing over time</p> <p>NC: Investigate the way in which water is transported within plants</p> <p>Working Scientifically: Using results to draw simple conclusions and suggest improvements, new questions</p>	Children will know that water is transported through plants to reach the different parts	root, stem, petals, trunk, predict/prediction, water, nutrients	Prepared carnations and celery, one white carnation, magnifying glasses (one per child), red and blue food colouring, containers, celery with leaves, carnations (one carnation and one stalk of celery both with the stem divided per group)
How does your garden grow?	Lesson 6 Plant stems	<p>Enquiry Type - Observing over time and using secondary sources of information</p> <p>NC: Investigate the way in which water is transported within plants</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Working Scientifically: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	Children will know the function of the stem	root, stem, trunk, leaf, predict/prediction, water, nutrients, explanation	Celery, carnations and challenge diagrams from Lesson 5, magnifiers, sharp knife (teacher use only), large paper, pens, pencils, scissors, glue, camera KWL display; access to computers would be helpful

Summer Modules

How Does Your Garden Grow?	Our Changing World	Rock Detectives
<p>Key Concepts Delivered - Biology</p> <p>Biology: Organisms require a supply of energy and materials.</p> <p>Physics: The universe follows unbreakable rules that are all about forces, matter and energy</p> <p>Physics: Forces are different kinds of pushes and pulls that act on all the matter in the universe.</p>	<p>Key Concepts Delivered -</p> <ul style="list-style-type: none"> Biology 	<p>Key Concepts Delivered -</p> <p>Chemistry: All matter (stuff) in the universe is made of tiny building blocks.</p> <p>Chemistry: Materials (properties and changes):</p>
<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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 formation and seed dispersal 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers 	<p>National Curriculum Objectives</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock <p>recognise that soils are made from rocks and organic matter</p>
<p>Relevant Prior Learning</p> <p>Children will have begun this module in Spring term. A thorough evaluation of their understanding of plants parts, function of leaves, stem, and the transportation of water is essential</p>	<p>Relevant Prior Learning</p> <p>Children will know how a plant grows and the names for different parts of plants.</p>	<p>Relevant Prior Learning</p> <p>Children will have an understanding of different rocks from their own experiences.</p> <p>They will know that rocks are hard.</p> <p>Through geography, children will know how volcanoes produce new rock when magma comes from the earth's core, cools and makes new rock.</p>
<p>Expected Outcomes</p> <p>Children will know</p> <p>How water is transported around a plant</p> <p>How the leaves of the plant make food through photosynthesis</p> <p>The roles of different plant parts in reproduction</p> <p>The stages of the plant life cycle</p>	<p>Expected outcome</p> <p>How a plant changes in appearance throughout the different seasons.</p> <p>That some trees lose their leaves and some don't and that this is called deciduous and evergreen</p>	<p>Expected outcome</p> <p>Children will know the properties of different rock</p> <p>They will know the relationship with specific soil types and understand how fossils have formed over time</p> <p>They will know the name of specific rock types and also based on their properties how they are used within the local environment</p>

Summer Term—How does your garden grow?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
How does your garden grow?	Lesson 7 New plants (Life cycle)	<p>Enquiry Type Using secondary sources of information</p> <p>Working scientifically links: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p> <p>NC: Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>Working Scientifically: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	Children will know the stages of a plant's life cycle	seed, germination, seedling, growth, mature plant, flowering, pollination, seed formation, fruit	Apple, sharp knife (teacher use only), scissors, glue
How does your garden grow?	Lesson 8 Flowers	<p>Enquiry Type Grouping and classifying</p> <p>NC: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p> <p>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	Children will know the names and functions of plant parts. They will label these on a diagram.	flower, bud, petal, sepal, carpel, stamen, pollen, reproduce	Three different types of flowers (such as snowdrop, peony, wallflower, sweet pea, lily, foxglove, two of each type per group of six pupils), magnifiers, 'sticky cards' (see preparation notes), tweezers, if available
How does your garden grow?	Lesson 9 Pollination The importance of bees	<p>Enquiry Type Using secondary sources</p> <p>NC: Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>Working Scientifically: Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	Children will know the process of insect pollination	bee, nectar, pollen, pollination, reproduce, sepal, petal, carpel, stamen (anther, filament, stigma, style, ovary for Challenge 3)	Props for pollination role play: cut out petal, sepal and antennae card shapes attached to cardboard headbands, containers for the pollen grains, such as a plastic bottles or yoghurt pots for the stamen, small circular objects or spheres to act as pollen grains, such as ping pong balls, Styrofoam balls, Velcro dots, milk bottle lids, woolly hats for the stigma, video camera

Summer Term—How does your garden grow?

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
How does your garden grow?	Lesson 10 Seed dispersal	<p>Enquiry Type Using secondary sources</p> <p>NC: Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p> <p>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	Children will know the specific ways in which a seed is dispersed and the names for these methods.	seed, fruit, dispersal, animal, wind, water and self-dispersal, explosion, sprinkling, competition	Collection of seeds, range of reclaimed and modelling materials which may include small boxes, yoghurt pots and other containers, tubes, a range of papers and card, components for technology projects such as wheels, gears, cotton reels, polystyrene balls, fabric, feathers and other trimmings, pipe-cleaners, hooks, Velcro, balloons, plastic bags, bubble wrap,tape, glue, string,
How does your garden grow?	Lesson 11 Do plants need leaves?	<p>Enquiry Type Carrying out comparative and fair tests</p> <p>NC: Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers</p> <p>Working Scientifically: Using results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests</p>	Children will know the importance of leaves on a plant and write a conclusion based on their investigation	leaf, food, water, air, light, observations, draw conclusions	Coloured pens/ pencils/highlighters (two colours per pair), the plants from the investigations set up in Lesson 3, What would happen if a plant lost its leaves? Children's logs of observations, KWL display

Summer Term—Our Changing World

Module	Lesson Structure	National Curriculum Objectives	Expected Outcome	Vocabulary	Resources
<p>Our Changing World</p> <p>Biology</p> <p><i>Organisms</i></p>	<p>Revisit elements from Lesson 1,2,3 and 4</p> <p>Lesson 5</p>	<p>Enquiry Type—Observation over time</p> <p>LO: I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>LO: I can describe the part flowers play in the life cycle of flowering plants.</p> <p>I can observe how often insects visit flowering plants.</p> <p>WS: I can record findings and present data using simple scientific language, written and oral explanations, diagrams, pictures, keys, bar charts and tables.</p>	<p>Children will know how plants and trees appear within the local area at a specific time of the year.</p> <p>Children will know the term deciduous and evergreen</p>	<p>Evergreen, deciduous, season</p>	<p>Photographs of trees</p> <p>Photographs of gardens</p> <p>Balls of string</p> <p>Lolly sticks</p> <p>Large hoops</p>

Summer Term—Rock Detectives

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Rock Detectives	Lesson 1 Rock types	<p>Enquiry Type Grouping and classifying</p> <p>NC: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Working Scientifically: Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables</p>	Children will know how rocks are different and how to compare and contrast them based on properties and appearance	rock, stone, pebble, sandstone, granite, chalk, limestone, marble, pumice, texture, crystal, granule, properties, rough, smooth, hard, soft	A collection of rocks, including samples of sandstone, sand, granite, chalk, limestone, marble and pumice, magnifiers, microscopes, weighing scales
Rock Detectives	Lesson 2 Classifying rocks based on properties and key	<p>Enquiry Type Grouping and classifying</p> <p>NC: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Working Scientifically: Asking relevant questions and using different types of scientific enquiries to answer them</p>	<p>Children will know how to use a key</p> <p>Children will know one rock type from another</p>	sandstone, granite, chalk, limestone, marble, pumice, rough, smooth, hard, soft, rock, stone, pebble, texture, particle, properties	A collection of rocks, including samples of sandstone, granite, chalk, limestone, marble, pumice.
Rock Detectives	Lesson 4 Porous and non porous Permeable/non permeable	<p>Enquiry Type Carrying out simple and comparative fair tests</p> <p>NC: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>Working Scientifically: Setting up simple practical enquiries, comparative and fair tests</p>	Children will know which rocks are impermeable	absorb, absorption, waterproof, permeable, non-permeable, permeability	A collection of rocks (same as those tested in Lesson 4), water droppers/pipettes, magnifiers, stopwatches or simple timers, lump of hardened clay

Summer Term—Rock Detectives

Module	Snap Science recommended lessons	National Curriculum Objectives	Expected outcome	Vocabulary	Suggested Resources
Rock Detectives	Lesson 6 How do rocks change over time?	<p>Enquiry Type Observing change over time</p> <p>NC: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Recognise that soils are made from rocks and organic matter</p> <p>Working Scientifically: Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Recognise that soils are made from rocks and organic matter</p>	Children will know that over time rocks weather and change in appearance.	weathering, erosion, hardness	Magnifiers, digi- cameras and other recording equipment
Rock Detectives	Lesson 7 How is soil made?	<p>Enquiry Type Grouping and classifying</p> <p>NC: Recognise that soils are made from rocks and organic material</p> <p>Working Scientifically: Using straightforward scientific evidence to answer questions, or to support their findings</p>	<p>Children will know how soil is forms</p> <p>Children will know how rocks are broken down</p> <p>Children will know what organic matter is.</p>	weather, weathering, frost, beach, cliff, rock, stone, pebble, particle, rock names, soil types such as soil, clay, sandy, loam, peat, organic material	Sets of numbered soil samples: sandy soil, heavy clay soil, chalky soil, loam rich soil (including organic material), local soil, peat compost, magnifiers and microscopes
Rock Detectives	Lesson 9/10 Fossil formation	<p>Enquiry Type Grouping and classifying</p> <p>NC: Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> <p>Working Scientifically: Identifying differences, similarities or changes related to simple scientific ideas and processes</p>	Children will know what a fossil is, how it is formed and what they can show u	fossil, fossilise, remains, types of fossils such as trilobite, starfish, sea urchin, ammonite	Fossil kit/collection containing replica fossils of a variety of types, such as starfish, trilobite, ammonite, including fossilised wood and plant matter, reference books and other secondary sources of information, magnifiers and microscopes