<table>
<tr><th rowspan="2">Year One</th><th colspan="6">Knowledge Focus</th><th colspan="4">Working Scientifically Focus</th></tr>
<tr><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th><th>Week 8</th><th>Week 9</th><th>Week 10</th></tr>
<tr><td>Autumn</td><td colspan="6"><u>Materials</u>
Everyday Materials (Y1NC)
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.</td><td colspan="4"><u>Materials</u>
Pupils might work scientifically by: performing simple tests to explore questions, for example: ‘What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast’s leotard?’ (Y1 Everyday Materials Notes and Guidance)
KS1 Working Scientifically
observing closely, using simple equipment
using their observations and ideas to suggest answers to questions
asking simple questions and recognising that they can be answered in different ways</td></tr>
<tr><td>Winter</td><td colspan="5"><u>Seasonal Change</u>
Seasonal Change (Y1NC)
observe changes across the four seasons
observe and describe weather associated with the seasons and how day length varies.</td><td colspan="4"><u>Forces, Magnets and Electricity</u>
Push and Pull
KS1 Working Scientifically
gathering and recording data to help in answering questions
Non-National Curriculum
Drawing and labelling diagrams</td></tr>
<tr><td>Spring</td><td colspan="6"><u>Animals, including Humans</u>
Animals, Including Humans (Y1NC)
identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
identify and name a variety of common animals that are carnivores, herbivores and omnivores
describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)
identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</td><td colspan="4"><u>Habitats</u>
Investigate habitats in and around school and what plants and animals live there. (Y1NC Animals, Including Humans Notes and Guidance)
KS1 Working Scientifically
using their observations and ideas to suggest answers to questions
Non-National Curriculum
Drawing and labelling diagrams</td></tr>
<tr><td>Summer</td><td>Set up growing experiment</td><td colspan="5"><u>Plants and Growing</u>
Plants (Y1NC)
identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
identify and describe the basic structure of a variety of common flowering plants, including trees</td><td colspan="4"><u>Working Scientifically with Plants</u>
Pupils might work scientifically by: observing closely, perhaps using magnifying glasses, and comparing and contrasting familiar plants; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees. Pupils might keep records of how plants have changed over time, for example the leaves falling off trees and buds opening; and compare and contrast what they have found out about different plants. (Y1NC Plants Notes and Guidance)
KS1 Working Scientifically
identifying and classifying
gathering and recording data to help in answering questions
performing simple tests
observing closely, using simple equipment</td></tr>
</table>

<table>
<tr><th rowspan="2">Year Two</th><th colspan="6">Knowledge Focus</th><th colspan="4">Working Scientifically Focus</th></tr>
<tr><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th><th>Week 8</th><th>Week 9</th><th>Week 10</th></tr>
<tr><td>Autumn</td><td colspan="6"><u>Materials</u>
Uses of Everyday Materials (Y2NC)
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.</td><td colspan="4"><u>Materials</u>
Pupils might work scientifically by: comparing the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs); observing closely, identifying and classifying the uses of different materials, and recording their observations. (Y2NC Uses of Everyday Materials Notes and Guidance)
KS1 Working Scientifically
observing closely, using simple equipment
using their observations and ideas to suggest answers to questions
asking relevant questions and using different types of scientific enquiries to answer them</td></tr>
<tr><td>Winter</td><td colspan="5"><u>Energy</u>
Fundamentals of Energy
Pre-KS2 light, sound and movement (Non-National Curriculum)</td><td colspan="3"><u>Forces, Magnets and Electricity</u>
Investigate gravity and friction (Non-National Curriculum)
KS1 Working Scientifically
gathering and recording data to help in answering questions
performing simple tests
Non-National Curriculum
Drawing and labelling diagrams</td><td></td></tr>
<tr><td>Spring</td><td colspan="6"><u>Animals and Habitats</u>
Animals, including Humans (Y2NC)
notice that animals, including humans, have offspring which grow into adults
find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
explore and compare the differences between things that are living, dead, and things that have never been alive (Y2NC Living Things and their Habitats)
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. (Y2NC Living Things and their Habitats)</td><td colspan="4"><u>Habitats</u>
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 (Y2NC Living Things and their Habitats)
identify and name a variety of plants and animals in their habitats, including microhabitats (Y2NC Living Things and their Habitats)
KS1 Working Scientifically
using their observations and ideas to suggest answers to questions
Non-National Curriculum
Drawing and labelling diagrams</td></tr>
<tr><td>Summer</td><td>Set up growing experiment</td><td colspan="5"><u>Plants and Growing</u>
Plants (Y2NC)
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.</td><td colspan="4"><u>Working Scientifically with Plants</u>
Pupils might work scientifically by: observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy. (Y2 Plants Notes and Guidance)
KS1 Working Scientifically
identifying and classifying
gathering and recording data to help in answering questions
performing simple tests
observing closely, using simple equipment</td></tr>
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<table>
<tr><th rowspan="2">Year Three</th><th colspan="6">Knowledge Focus</th><th colspan="4">Working Scientifically Focus</th></tr>
<tr><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th><th>Week 8</th><th>Week 9</th><th>Week 10</th></tr>
<tr><td>Autumn</td><td colspan="6"><u>Solids, Liquids and Gases</u>
• compare and group materials together, according to whether they are solids, liquids or gases (Y4NC States of Matter)
• 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) (Y4NC States of Matter)</td><td colspan="4"><u>Materials</u>
Rocks (Y3NC)
• 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
• recognise that soils are made from rocks and organic matter.
LKS2 Working Scientifically
• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
• asking relevant questions and using different types of scientific enquiries to answer them</td></tr>
<tr><td>Winter</td><td colspan="3"><u>Light</u>
Light (Y3NC)
• 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.</td><td colspan="3"><u>Forces, Magnets and Electricity</u>
Forces and Magnets (Y3NC)
• compare how things move on different surfaces
• notice that some forces need contact between two 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 two poles
• predict whether two magnets will attract or repel each other, depending on which poles are facing.
LKS2 Working Scientifically
• recording findings using simple scientific language, drawings, labelled diagrams, ~~keys, bar charts~~, and tables
• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</td><td colspan="1"></td></tr>
<tr><td>Spring</td><td colspan="6"><u>Human Body</u>
• Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Y3 NC Animals, including Humans)</td><td colspan="4"><u>Habitats</u>
Identify the nutrition and resources in different global habitats which help keep animals alive (Y3 NC Animals, including humans).
LKS2 Working Scientifically
• 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
• identifying differences, similarities or changes related to simple scientific ideas and processes</td></tr>
<tr><td>Summer</td><td colspan="2">Set up growing experiment</td><td colspan="4"><u>Plants</u>
Plants (Y3NC)
• 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
• explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</td><td colspan="4"><u>Working Scientifically with Plants</u>
Investigate the way in which water is transported within plants (Y3NC Plants)
LKS2 Working Scientifically
• setting up simple practical enquiries, comparative and fair tests
• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
• 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
• using straightforward scientific evidence to answer questions or to support their findings.</td></tr>
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<table>
<tr><th rowspan="2">Year Four</th><th colspan="6">Knowledge Focus</th><th colspan="4">Working Scientifically Focus</th></tr>
<tr><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th><th>Week 8</th><th>Week 9</th><th>Week 10</th></tr>
<tr><td>Autumn</td><td colspan="6"><u>Water Cycle</u>
• Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Y4 NC States of Matter)</td><td colspan="4"><u>Materials</u>
Compare and group materials together, according to whether they are solids, liquids or gases. (Y4 NC States of Matter)
LSK2 Working Scientifically
• making systematic and careful observations and, where appropriate, ~~taking accurate measurements using standard units~~, using a range of equipment, ~~including thermometers and data loggers~~
• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
• using straightforward scientific evidence to answer questions or to support their findings.</td></tr>
<tr><td>Winter</td><td colspan="3"><u>Sound</u>
Sound (Y4NC)
• 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 from the sound source increases.</td><td colspan="3"><u>Forces, Magnets and Electricity</u>
Electricity (Y4NC)
• 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 the lamp 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 lights in a simple series circuit
• recognise some common conductors and insulators, and associate metals with being good conductors
LSK2 Working Scientifically
• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</td><td colspan="2"></td></tr>
<tr><td>Spring</td><td colspan="6"><u>Health and Diet in Animals and Humans</u>
Animals, including Humans (Y4NC)
• 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
• construct and interpret a variety of food chains, identifying producers, predators and prey.</td><td colspan="4"><u>Habitats</u>
Recognise that environments can change and that this can sometimes pose dangers to living things. (NC Y4 Living Things and their Habitats)
LKS2 Working Scientifically
• 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
• using straightforward scientific evidence to answer questions or to support their findings.
• identifying differences, similarities or changes related to simple scientific ideas and processes</td></tr>
<tr><td>Summer</td><td>Set up growing experiment</td><td colspan="5"><u>Classifying Plants</u>
• Recognise that living things can be grouped in a variety of ways. (Y4 NC Living Things and their Habitats)
• Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 NC Living Things and their Habitats)</td><td colspan="4"><u>Work Scientifically with Plants</u>
Plant a variety of seeds and bulbs. Classify the plant that results (Non-National Curriculum)
LKS2 Working Scientifically
• setting up simple practical enquiries, comparative and fair tests
• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
• 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
• using straightforward scientific evidence to answer questions or to support their findings.</td></tr>
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Year Five	Knowledge Focus						Working Scientifically Focus			
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Autumn	<u>Solutions and Solubility</u> • know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution **(Y5NC Properties and changes of materials)** • demonstrate that dissolving, mixing and changes of state are reversible changes **(Y5NC Properties and changes of materials)** • explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. **(Y5NC Properties and changes of materials)**						<u>Materials</u> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets **(Y5 NC Properties and changes of materials)** **UKS2 Working Scientifically** • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		
Winter	<u>Earth and Space</u> Earth and Space (Y5NC) • 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 movement of the sun across the sky. • explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object **(Y5 NC Forces)**				<u>Forces, Magnets and Electricity</u> • Identify the effects of air resistance, water resistance and friction. **(Y5NC Forces)** • Recognise that some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect. **(Y5NC Forces)** **UKS2 Working Scientifically** • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • identifying scientific evidence that has been used to support or refute ideas or arguments.				
Spring	<u>Life Cycles and Classification</u> Animals Including Humans (Y5 NC) • describe the changes as humans develop to old age. Living Thing and their Habitats (Y5NC) • Describe the differences in the life cycle of a mammal, an amphibian, an insect and a bird. • describe the life process of reproduction in some ~~plants and~~ animals						<u>Habitats</u> They might observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow **(Y5NC Living Things and their Habitats Notes and Guidance)** **UKS2 Working Scientifically** • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		
Summer	Set up growing experiment	<u>How Plants Live and Reproduce</u> • Describe the life process of reproduction in some plants ~~and animals.~~ **(Y5 NC Living Things and Their Habitats).**					<u>Work Scientifically with Plants</u> They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. **(Y5NC Living Things and their Habitats Notes and Guidance)** **UKS2 Working Scientifically** • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		

Rowan	Working Scientifically Focus Y4			Working Scientifically Focus Y5			Working Scientifically Focus Y6			
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Autumn	<u>Materials</u> Compare and group materials together, according to whether they are solids, liquids or gases. **(Y4 NC States of Matter)** **LSK2 Working Scientifically** • making systematic and careful observations and, where appropriate, ~~taking accurate measurements using standard units~~, using a range of equipment, ~~including thermometers and data loggers~~ • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • using straightforward scientific evidence to answer questions or to support their findings.			<u>Materials</u> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets **(Y5 NC Properties and changes of materials)** **UKS2 Working Scientifically** • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations			<u>Materials</u> give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic **(Y5NC Properties and Changes of Materials)**			Consolidation Week
Winter	<u>Forces, Magnets and Electricity</u> **Electricity (Y4NC)** • 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 the lamp 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 lights in a simple series circuit • recognise some common conductors and insulators, and associate metals with being good conductors **LSK2 Working Scientifically** • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables			<u>Forces, Magnets and Electricity</u> **Electricity (Y6NC)** • associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches • use recognised symbols when representing a simple circuit in a diagram. **UKS2 Working Scientifically** • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • identifying scientific evidence that has been used to support or refute ideas or arguments.		<u>Forces, Magnets and Electricity</u> • Identify the effects of air resistance, water resistance and friction. **(Y5NC Forces)** • Recognise that some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect. **(Y5NC Forces)**			
Spring	<u>Habitats</u> Recognise that environments can change and that this can sometimes pose dangers to living things. **(NC Y4 Living Things and their Habitats)** **LKS2 Working Scientifically** • 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 • using straightforward scientific evidence to answer questions or to support their findings.			<u>Habitats</u> They might observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow **(Y5NC Living Things and their Habitats Notes and Guidance)** **UKS2 Working Scientifically** • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations			<u>Habitats</u> • describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including ~~microorganisms, plants and~~ animals **(Y6 NC Living things and their Habitats)** • give reasons for classifying ~~plants and~~ animals based on specific characteristics **(Y6 NC Living things and their Habitats)**			Consolidation Week
Summer	<u>Work Scientifically with Plants</u> Plant a variety of seeds and bulbs. Classify the plant that results **(Non-National Curriculum)** **LKS2 Working Scientifically** • setting up simple practical enquiries, comparative and fair tests • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • 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 • using straightforward scientific evidence to answer questions or to support their findings.			<u>Work Scientifically with Plants</u> They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. **(Y5NC Living Things and their Habitats Notes and Guidance)** • **UKS2 Working Scientifically** • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations			<u>Working Scientifically with Plants</u> cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope **(KS3 Biology Cells and Organisation)** •			Consolidation Week

Year Six	Knowledge Focus						Working Scientifically Focus			
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Autumn	<u>Basic Particle Theory</u> • Use knowledge of solids, liquids and gases to decide how mixtures might be separated through filtering, sieving and evaporation. **(Y5 NC properties and changes of materials).** KS3 Chemistry The Particulate Nature of Matter Pupils should be taught about: • the properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure. • changes of state in terms of the particle model.						<u>Materials</u> • give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic **(Y5NC Properties and Changes of Materials)** UKS2 Working Scientifically • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		
Winter	<u>Light</u> Light (Y6NC) • recognise that light appears to travel in straight lines • use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye • 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.						<u>Forces, Magnets and Electricity</u> Electricity (Y6NC) • associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches • use recognised symbols when representing a simple circuit in a diagram. UKS2 Working Scientifically • recording data and results of increasing complexity using scientific diagrams ~~and labels, classification keys, tables, scatter graphs, bar and line graphs~~ • identifying scientific evidence that has been used to support or refute ideas or arguments.		
Spring	<u>Animals, Humans and Change Over Time</u> Animals, Including Humans (Y6NC) • identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • describe the ways in which nutrients and water are transported within animals, including humans. Evolution and Inheritance (Y6NC) • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.						<u>Habitats</u> • describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including ~~microorganisms, plants and~~ animals **(Y6 NC Living things and their Habitats)** • give reasons for classifying ~~plants and~~ animals based on specific characteristics **(Y6 NC Living things and their Habitats)** UKS2 Working Scientifically • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		
Summer	Set up growing experiment	<u>Basic Cell Theory</u> • describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants ~~and animals~~ **(Y6 NC Living things and their Habitats)** • give reasons for classifying plants ~~and animals~~ based on specific characteristics **(Y6 NC Living things and their Habitats)** KS3 Biology Cells and Organisation • cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope • the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts • the similarities and differences between plant and animal cells					<u>Working Scientifically with Plants</u> Cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope **(KS3 Biology Cells and Organisation)** UKS2 Working Scientifically • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		

Early Years:

Autumn – Animals and Humans

Winter – Materials

Spring – Seasonal Change

Summer – Plants

Pre Y1 units in different order to fit in with themes.