



Science Breadth Map

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Animals including Humans <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 •Plus Working Scientifically Objectives 	Forces & Magnets <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 •Plus Working Scientifically Objectives 	Light <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 •Find patterns in the way that the size of shadows change •Plus Working Scientifically Objectives 	Light <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 •Find patterns in the way that the size of shadows change (Continued) •Plus Working Scientifically Objectives 	Rocks <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 •Recognise that soils are made from rocks and organic matter •Plus Working Scientifically Objectives 	Plants <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 •Plus Working Scientifically Objectives
Year 3 Concepts Covered	❖ Understand Animals & Humans ❖ Work Scientifically	❖ Understand Movement, Forces & Magnets ❖ Work Scientifically	❖ Understand Light & Seeing ❖ Work Scientifically	❖ Understand Light & Seeing ❖ Work Scientifically	❖ Understand Evolution & Inheritance ❖ Investigate Materials ❖ Work Scientifically	❖ Understand Plants ❖ Work Scientifically

Year 4 (Cycle C)	<p>Sound</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Electricity</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Animals including Humans</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Living Things & their Habitats</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>States of Matter</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>States of Matter</p> <ul style="list-style-type: none"> •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 (Continued) •Plus Working Scientifically Objectives
Year 4 (Cycle C) Concepts Covered	<ul style="list-style-type: none"> ❖ Investigate Sound & Hearing ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Understand Electrical Circuits ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Understand Animals & Humans ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Living Things ❖ Understand Evolution & Inheritance ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Materials ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Materials ❖ Work Scientifically

Year 5 (Cycle C)	<p>Sound</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Electricity</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Animals including Humans</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>Living Things & their Habitats</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>States of Matter</p> <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	<p>States of Matter</p> <ul style="list-style-type: none"> •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 (Continued) •Plus Working Scientifically Objectives
Year 5 (Cycle C) Concepts Covered	<ul style="list-style-type: none"> ❖ Investigate Sound & Hearing ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Understand Electrical Circuits ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Understand Animals & Humans ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Living Things ❖ Understand Evolution & Inheritance ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Materials ❖ Work Scientifically 	<ul style="list-style-type: none"> ❖ Investigate Materials ❖ Work Scientifically

Year 6	Light <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	Electricity <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	Living Things & their Habitats <ul style="list-style-type: none"> •Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals •Give reasons for classifying plants and animals based on specific characteristics •Plus Working Scientifically Objectives 	Evolution & Inheritance <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	Animals including Humans <ul style="list-style-type: none"> •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 •Plus Working Scientifically Objectives 	Animals including Humans <ul style="list-style-type: none"> •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 (Continued) •Plus Working Scientifically Objectives
Year 6 Concepts Covered	❖ Understand Light & Seeing ❖ Work Scientifically	❖ Understand Electrical Circuits ❖ Work Scientifically	❖ Understand Plants ❖ Investigate Living Things ❖ Work Scientifically	❖ Understand Plants ❖ Understand Evolution & Inheritance ❖ Work Scientifically	❖ Understand Animals & Humans ❖ Work Scientifically	❖ Understand Animals & Humans ❖ Work Scientifically



Science- Working Scientifically Breadth Map

Year 3/4	Year 5/6
<ul style="list-style-type: none">• Asking relevant questions and using different types of scientific enquiries to answer them• Setting up simple practical enquiries, comparative and fair tests• Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers• 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 results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions• Identifying differences, similarities or changes related to simple scientific ideas and processes• Using straightforward scientific evidence to answer questions or to support their findings.	<ul style="list-style-type: none">• Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary• Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs• 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 a degree of trust in results, in oral and written forms such as displays and other presentations• Identifying scientific evidence that has been used to support or refute ideas or arguments