



Science at Wolsingham Primary School



Year 1						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	What is our body made up of?	What is a material?	What happens to the weather over the year?	What are plants?	What is special about animals and how can we sort them out?	Working Scientifically
	<p>To understand animals including humans (Inc. evolution and inheritance): 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>To investigate materials (Inc. states of matter): Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties of materials on the basis of their simple physical properties.</p>	<p>To understand seasonal change (Inc. the Earth's movement): Observe and describe weather associated with the seasons and how day length varies.</p> <p>Observe changes across the four seasons</p>	<p>To understand plants: Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals and invertebrates, and including pets).</p>	<p>To research and observe over time: Ask simple questions and recognising that they can be answered in different ways observing closely,</p> <p>To use equipment safely: Use simple equipment.</p> <p>To observe over time: Perform simple tests using their observations and ideas to suggest answers to questions.</p> <p>To seek patterns: Gather and record data to help in answering questions.</p>
Year 2						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	What do animals and humans need to stay alive?	What is special about materials?	Working Scientifically	How do plants grow healthily?	How can we sort animals?	Working Scientifically
	<p>To understand animals including humans (Inc. evolution and inheritance): Notice that animals, including humans, have</p>	<p>To investigate materials (Inc. states of matter): Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick,</p>	<p>To research and observe over time: Asking simple questions and recognising that they can be answered in different ways</p>	<p>To understand plants: Observe and describe how seeds and bulbs grow into mature plants.</p>	<p>To investigate living things and their habitats: Explore and compare the differences between things that are living, dead, and</p>	<p>To research and observe over time: Asking simple questions and recognising that they can be answered in different ways</p>

	<p>offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>observing closely, using simple equipment.</p> <p>To observe over time: Performing simple tests using their observations and ideas to suggest answers to questions.</p> <p>To seek patterns: Gathering and recording data to help in answering questions.</p>	<p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>things that have never been alive.</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<p>observing closely, using simple equipment.</p> <p>To observe over time: Performing simple tests using their observations and ideas to suggest answers to questions.</p> <p>To seek patterns: Gathering and recording data to help in answering questions.</p>
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Year 3/4 A

Working Scientifically

To research:

Asking relevant questions and using different types of scientific enquiries to answer them

To compare and recognize a fair test and observe over time:

Setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

To identify, group and classify:

Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

To seek patterns & solve problems:

Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further identifying differences, similarities or changes related to simple scientific ideas and processes

To solve problems:

Using straightforward scientific evidence to answer questions or to support their findings.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	What is light?	What is electricity?	What is a magnet?	How do animals and humans' bodies function correctly?	How do plants function?	What is a rock?
	<p>To investigate light and seeing: Recognise that they need light in order to see things and that the dark is the absence of light.</p>	<p>To understand electrical currents: Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts,</p>	<p>To understand forces and magnets: Compare how things move on different surfaces.</p> <p>Notice that some forces need contact between two</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own</p>	<p>To understand plants: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p>	<p>To investigate materials (Inc. states of matter): Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p>

	<p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of shadows change.</p> <p>Know who Thomas Edison was and about his life and work.</p>	<p>including cells, wires, bulbs, switches and buzzers.</p> <p>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.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p> <p>Know who Michael Faraday was and about his life and work.</p>	<p>objects, but magnetic forces can act at a distance.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>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>food; they get nutrition from what they eat.</p> <p>Identify that humans and some other animals have skeletons for support, protection and movement.</p> <p>To understand animals including humans (Inc. evolution and inheritance): Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>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>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>
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Year 3/4 B

Working Scientifically

To research:

Asking relevant questions and using different types of scientific enquiries to answer them

To compare and recognize a fair test and observe over time:

Setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

To identify, group and classify:

Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

To seek patterns & solve problems:

Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further identifying differences, similarities or changes related to simple scientific ideas and processes

To solve problems:

Using straightforward scientific evidence to answer questions or to support their findings.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	What is light?	What is sound?	What is a magnet?	How do animals and humans' bodies function correctly?	How do plants function?	What is a rock?
	<p>To investigate light and seeing: Recognise that they need light in order to see things and that the dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p>	<p>To investigate sound and hearing: Identify how sounds are made, associating some of them with something vibrating.</p>	<p>To understand forces and magnets: Compare how things move on different surfaces.</p> <p>Notice that some forces need contact between two objects, but magnetic</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food;</p>	<p>To understand plants: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Explore the requirements of plants for life and</p>	<p>To investigate materials (Inc. states of matter): Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p>

	<p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of shadows change.</p> <p>Know who Thomas Edison was and about his life and work.</p>	<p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p> <p>Know who Alexander Graham Bell was and about his life and work.</p>	<p>forces can act at a distance.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>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>they get nutrition from what they eat.</p> <p>Identify that humans and some other animals have skeletons for support, protection and movement.</p> <p>To understand animals including humans (Inc. evolution and inheritance): Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</p> <p>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>
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Year 4/5 A

Working Scientifically

To research and observe over time:

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.

To compare and recognise a fair test:

Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

To identify, group and classify:

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.

To compare and recognise a fair test:

Using test results to make predictions to set up further comparative and fair tests.

To seek patterns:

Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations.

To research:

Identifying scientific evidence that has been used to support or refute ideas or arguments.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	Does the Earth move in space?	How can materials be changed, mixed and separated?	What is electricity?	What is a force?	Can we group living things? What impact do they have on each other?	What does life processes mean?
	<p>To understand the Earth's movement in space (Inc. seasonal change): Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p>	<p>To investigate materials (Inc. states of matter): Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Observe that some materials change state when they are heated or</p>	<p>To understand electrical currents: Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p>	<p>To understand forces and magnets: Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p>	<p>To investigate living things and their habitats: Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group identify and name a variety of living things in</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p>

	<p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night. And the apparent movement of the sun across the sky.</p>	<p>cooled, and measure or research the temperature at which this happens in degrees Celsius ($^{\circ}\text{C}$).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>To investigate materials (Inc. states of matter): 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.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including</p>	<p>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.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p> <p>Know who Michael Faraday was and about his life and work.</p>	<p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p>Know who Isaac Newton was and about his life and work.</p>	<p>their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Describe the life process of reproduction in some plants and animals.</p> <p>Describe the changes as humans develop to old age.</p>
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changes associated with burning and the action of acid on bicarbonate of soda.

Year 4/5 B

Working Scientifically

To research and observe over time:

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.

To compare and recognise a fair test:

Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

To identify, group and classify:

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.

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	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	Does the Earth move in space?	How can materials be changed, mixed and separated?	What is sound?	What is a force?	Can we group living things? What impact do they have on each other?	What does life processes mean?
	<p>To understand the Earth's movement in space (Inc. seasonal change): Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night. And the apparent movement of the sun across the sky.</p>	<p>To investigate materials (Inc. states of matter): Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>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).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p>To investigate materials (Inc. states of matter): Compare and group together everyday materials on the basis of their properties, including their</p>	<p>To investigate sound and hearing: Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p> <p>Know who Alexander Graham Bell was and about his life and work.</p>	<p>To understand forces and magnets: Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p>Know who Isaac Newton was and about his life and work.</p>	<p>To investigate living things and their habitats: Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p> <p>Describe the changes as humans develop to old age.</p>

		<p>hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes</p> <p>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.</p>				
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Year 6						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Title	How does an electrical circuit work?	How does light travel?	How do living things function?	Can we classify all living things?	Who was Charles Darwin?	Working Scientifically
	<p>To understand electrical currents: Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p>	<p>To investigate light and seeing: Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Identify and name the main parts of the human circulatory system, and describe the functions of</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Describe how living things are classified into broad groups according to common observable characteristics and based</p>	<p>To understand animals including humans (Inc. evolution and inheritance): Recognise that living things have changed over time and that fossils provide information about living</p>	<p>To research and observe over time: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p>

	<p>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.</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>seen because they give out or reflect light into the eye.</p> <p>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.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>the heart, blood vessels and blood.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> <p>Identify that humans and some other animals have muscles for support, protection and movement.</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>	<p>on similarities and differences, including micro-organisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	<p>things that inhabited the Earth millions of years ago.</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p> <p>Know who Charles Darwin was and about his life and work.</p>	<p>To observe over time: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>To pattern seek and identify, group and classify: 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 results, in oral and written forms such as displays and other presentations.</p> <p>To research: Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>
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