



# Alverton Curriculum Progression in Science

|                               | EYFS Links   | Year 1  | Year 2  | Year 3  | Year 4  | Year 5  | Year 6  |
|-------------------------------|--|---|---|---|---|---|---|
| <b>Working Scientifically</b> | <p><b><u>Speaking</u></b><br/> <b>30-50 Months:</b> I can question why things happen<br/> <b>ELG:</b> I can develop my own narrative and explanations by connecting ideas or events.</p> <p><b><u>Understanding</u></b><br/> <b>30-50 Months:</b> I can build up vocabulary that reflects the breadth of my experience.</p> <p><b><u>Playing and Exploring</u></b><br/>           I can show curiosity about objects, events and people.</p> <p>I can engage in an open-ended activity.</p> <p>I can take a risk, engage in new experiences and learn by trial and error.</p> <p>I can use senses to explore the world.</p> <p><b><u>Creating and Thinking Critically</u></b><br/>           I can find ways to solve problems/ find new ways to do things/ test my ideas.</p> <p>I can develop ideas of grouping, sequences, cause and effect.</p> <p>I can make links and notice patterns in my experience.</p> <p><b><u>Self Confidence and Self Awareness</u></b><br/> <b>ELG:</b> I can choose the resources I need for my chosen activity.</p> <p><b><u>Moving and Handling Being Imaginative</u></b><br/> <b>ELG:</b> I can handle equipment and tools effectively.</p> <p><b><u>The World</u></b><br/> <b>8-20 Months:</b> I can closely observe what animals, people and vehicles do.<br/> <b>30-50 Months:</b> I can comment and ask questions about aspects of my familiar world such as the place I live or the natural.<br/> <b>ELG:</b> I know similarities and differences in relation to</p> | <p>I can ask simple questions, and I understand that they can be answered in different ways.</p> <p>I can observe closely, using simple equipment.</p> <p>I can perform simple tests.</p> <p>I can identify features of objects, materials and living things and sort them.</p> <p>I can use my observations and ideas to suggest answers to questions.</p> <p>I can gather and record data to help me to answer questions.</p> | <p>I can ask simple questions, and I understand that they can be answered in different ways.</p> <p>I can observe closely, using simple equipment.</p> <p>I can perform simple tests.</p> <p>I can identify features of objects, materials and living things and sort them.</p> <p>I can use my observations and ideas to suggest answers to questions.</p> <p>I can gather and record data to help me to answer questions.</p> | <p>I can ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p> | <p>I can ask relevant questions and use different types of scientific enquiries to answer them.</p> <p>I can set up simple practical enquiries, comparative and fair tests.</p> <p>I can make accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers.</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>I can use straightforward scientific evidence to answer questions or to support my findings.</p> | <p>I can plan different types of scientific enquiries, including recognising and controlling variables where necessary.</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> <p>I can report and present 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.</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p> | <p>I can plan different types of scientific enquiries, including recognising and controlling variables where necessary.</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> <p>I can report and present 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 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|                                 | places, objects, materials and living things.<br><b>ELG:</b> I can make observations of animals and plants and explain why some things occur and talk about changes.   |   |  |  |   |   |  |
| <b>Plants</b>                   | <p>I can develop an understanding of growth.</p> <p>I can spot plants in EYFS outside area and school grounds.</p> <p>I can show care and concern for the environments.</p> <p>I can observe plants and explain why things occur and talk about changes.</p> <p>I can talk about some of the things I have observed, such as plants.</p> | <p>I can identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen.</p> <p>I can identify and describe the basic structure of a variety of common flowering plants, including trees.</p>  | <p>I can observe and describe how seeds and bulbs grow into mature plants.</p> <p>I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>  | <p>I can identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.</p> <p>I understand the requirements of plants for life and growth (light, water, nutrients from soil and room to grow) and how they vary from plant to plant.</p> <p>I can explain how water is transported within plants.</p> <p>I understand the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> |   |   |  |
| <b>Animals including Humans</b> | <p>I can identify different parts of my body</p> <p>I have some understanding of healthy food and the need for variety in my diet.</p> <p>I can show care and concern for living things.</p> <p>I can show an understanding of growth and change.</p> <p>I can talk about things they have observed, including animals.</p>              | <p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores .</p> <p>I can describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, and including pets).</p> <p>I can 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>I understand that animals, including humans, have offspring which grow into adults.</p> <p>I can describe the basic needs of animals, including humans, for survival.</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>                      | <p>I understand 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>I understand that humans and some animals have skeletons and muscles for support, protection and movement.</p>   | <p>I can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>I can identify the different types of teeth in humans and their simple functions.</p> <p>I can construct and interpret a variety of food chains, identifying producers, predators and prey.</p> | <p>I can describe the changes as humans develop to old age.</p> | <p>I can identify the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>I can recognise the impact of diet, exercise, drugs and lifestyle on the way my body functions.</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans.</p> |
| <b>Everyday Materials</b>       | <p>I can ask questions about the place I live.</p> <p>I can talk about why things happen and how things work.</p> <p>I can discuss the things I have observed such as natural materials.</p> <p>I can manipulate materials to achieve a desired effect.</p>  | <p>I can distinguish between an object and the material from which it is made.</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</p> <p>I can describe the simple physical properties of a variety of everyday materials.</p> <p>I can compare and group together a variety of everyday</p>  | <p>I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> |  |   |   |  |



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|   |   | materials on the basis of their simple physical properties.  |   |  |  |  |   |
| <b>Seasonal Changes</b>                 | <p>I can develop an understanding of change.</p> <p>I can observe and explain why things may occur (e.g leaves falling off trees, changes in weather).</p> <p>I can comment and question about the place I live or the natural world.</p>   | <p>I can observe changes across the four seasons.</p> <p>I can observe and describe weather associated with the seasons and how day length varies.</p> |   |  |  |  |   |
| <b>Living Things and Their Habitats</b> | <p>I can comment and ask questions about the place I live or the natural world.</p> <p>I can show care and concern for living things and the environment.</p> <p>I can talk about things I have observed such as plants and animals.</p> <p>I can notice features of objects in their environment.</p> <p>I can comment and asks questions about my familiar world.</p> |  | <p>I can explore and compare the difference between things that are living, dead, and things that have never been alive.</p> <p>I understand that most things live in habitats to which they are suited and I can 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>I can identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>I can 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>I recognise that living things can be grouped in a variety of ways.</p> <p>I can explore and use classification keys to help group, identify and name a variety of living things in the local and wider environment.</p> <p>I recognise that environments can change and that this can sometimes pose dangers to living things.</p> | <p>I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>I can describe the life process of reproduction in some plants and animals.</p> | <p>I can plan different types of scientific enquiries, including recognising and controlling variables where necessary.</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.</p> <p>I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> <p>I can report and present 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.</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p> |
| <b>Rocks</b>                            |   |  |   | <p>I can compare and group together different kinds of rocks on the basis of their simple physical properties.</p> <p>I can describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>I recognise that soils are made from rocks and organic matter.</p> |  |  |   |



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| Light              | <p>I can develop an understanding of change.</p> <p>I can comment and question about the place I live or the natural world.</p>   |  |  | <p>I recognise that we need light in order to see things and that dark is the absence of light.<br/>I notice that light is reflected from surfaces.</p> <p>I recognise that light from the sun can be dangerous and that there are ways to protect our eyes.</p> <p>I recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>I can find patterns in the way that the size of shadows change.</p>   |   |   | <p>I understand that light appears to travel in straight lines.</p> <p>I can 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.</p> <p>I can 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>I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p> |
| Forces and Magnets | <p>I know about similarities and differences in relation to places, objects, materials and living things.</p> <p>I can talk about the features of my own immediate environment and how environments might vary from one another.</p> <p>I can make observations of animals and plants and explain why some things occur, and talk about change.</p> |  |  | <p>I can compare how things move on different surfaces.<br/>I understand that some forces need contact between two objects and some forces act at a distance.</p> <p>I understand how magnets attract or repel each other and attract some materials and not others.</p> <p>I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and I can identify some magnetic materials.</p> <p>I can describe magnets as having two poles.</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> |   | <p>I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>I recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> |   |
| States of Matter   |   |  |  |   | <p>I can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>I understand that some materials change state when they are heated or cooled and I can measure the temperature at which this happens in degrees Celsius.</p> <p>I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> |   |   |



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| <p><b>Sound</b></p>                               | <p>I can develop an understanding of change.</p> <p>I can comment and question about the place I live or the natural world.</p>                  |  |  |  | <p>I recognise that vibrations from sounds travel through a medium to the ear.</p> <p>I can identify how sounds are made, associating some of them with something vibrating.</p> <p>I recognise that sounds get fainter as the distance from the sound source increases. I can find patterns between the pitch of a sound and features of the object that produced it.</p> <p>I can find patterns between the pitch of a sound and the strength of the vibrations that produced it.</p>   |  |   |
| <p><b>Electricity</b></p>                         | <p>I may have some understanding that objects need electricity to work.</p> <p>I may understand that a switch will turn something on or off.</p> |  |  |  | <p>I can identify common appliances that run on electricity.</p> <p>I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>I can 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>I understand that a switch opens and closes a circuit and I associate this with whether or not a lamp lights in a simple series circuit.</p> <p>I recognise some common conductors and insulators, and I associate metals with being good conductors.</p> |  | <p>I 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>I can 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>I can use recognised symbols when representing a simple circuit in a diagram.</p> |
| <p><b>Properties and Changes of Materials</b></p> |  |  |  |  | <p>I can compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal) and response to magnets.</p> <p>I understand how some materials will dissolve in a liquid to form a solution, and I can describe how to recover a substance from a solution.</p>  |  |   |





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|                                  |  |  |  |  |  | <p>I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>I can demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>I can 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> |  |
| <b>Earth and Space</b>           | <p>I can develop an understanding of change.</p> <p>I can observe and explain why things may occur (e.g leaves falling off trees, changes in weather).</p> <p>I can comment and question about the place I live or the natural world</p> |  |  |  |  | <p>I can describe the movement of the Earth relative to the Sun in the solar system. I can describe the movement of the Moon relative to the Earth.</p> <p>I can describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>   |  |
| <b>Evolution and Inheritance</b> |  |  |  |  |  | <p>I recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>  |  |