



Whole School Progression Document:

Subject: Science

| | Reception: | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| <p>Working Scientifically (Questioning, Predicting, Concluding, Observing, Identifying & Classifying, Measuring, Testing, Recording)</p> | <p>I can answer 'how' and 'why' questions about my experiences and in response to events.</p> <p>I can develop my own explanations by connecting ideas or events</p> <p>I can work as part of a group or class, and understand and follow the rules.</p> <p>I can take account of other's ideas about how to organise an activity.</p> <p>Exceeding: They are familiar with basic scientific concepts such as floating, sinking, experimentation.</p> | <p>I can perform simple tests.</p> <p>I can ask simple questions and recognise that they can be answered in different ways.</p> <p>I can gather and record data to help answer a question.</p> <p>I can identify and classify.</p> <p>I can observe carefully using simple equipment.</p> <p>I can record data in a table.</p> <p>I can record data in simple ways (Venn diagram & chart)</p> <p>I can suggest what I have found out.</p> | <p>I can ask simple questions and recognise that they can be answered in different ways.</p> <p>I can gather and record data to help answer a question.</p> <p>I can observe closely using simple equipment.</p> <p>I can perform a simple test.</p> <p>I can record data in different ways (flow diagram, table, tally chart, bar chart).</p> <p>I can use observations to suggest answers to questions.</p> <p>I can use simple measurements to gather data.</p> <p>I can use their observations and ideas to suggest answers to questions.</p> | <p>I can gather and record data.</p> <p>I can identify changes related to scientific ideas.</p> <p>I can identify the correct type of enquiry to answer a question.</p> <p>I can make careful observations.</p> <p>I can make predictions for further values.</p> <p>I can make systematic and careful observations and measurements.</p> <p>I can measure using beakers and syringes.</p> <p>I can present information in a branching key.</p> <p>I can provide an oral explanation of findings.</p> <p>I can record data in different ways (table, bar chart, drawings).</p> <p>I can report on findings from enquiries.</p> <p>I can set up a comparative test.</p> <p>I can set up a simple fair test.</p> <p>I can set up a simple practical enquiry.</p> <p>I can use evidence to answer questions.</p> <p>I can use results to draw simple conclusions.</p> <p>I can use straightforward scientific evidence to answer</p> | <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can identify differences, similarities or changes related to simple scientific ideas.</p> <p>I can identify the correct type of enquiry to answer a question.</p> <p>I can make systematic and careful measurements with a data logger.</p> <p>I can record findings using drawings and labelled diagrams</p> <p>I can report on findings from enquiries, including oral and written explanations, using straightforward scientific evidence.</p> <p>I can set up a comparative test.</p> <p>I can set up a fair test.</p> <p>I can set up a simple practical enquiry.</p> <p>I can use a scientific enquiry to answer a question.</p> <p>I can use a take accurate measurements with a thermometer and/or a data logger.</p> <p>I can use evidence to support findings.</p> <p>I can use results to draw simple conclusions.</p> <p>I can use results to make predictions.</p> | <p>I can communicate data using a scatter graph.</p> <p>I can evaluate an enquiry in terms of the amount of trust one can have in it.</p> <p>I can explain findings.</p> <p>I can explain the degree of trust in results.</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>I can measure accurately using a thermometer.</p> <p>I can plan a fair-test; identifying the control variables.</p> <p>I can plan a scientific enquiry that will answer a question.</p> <p>I can record data within tables and a line graph.</p> <p>I can report and present findings from enquiries, including conclusions, causal relationships and explanations.</p> <p>I can take accurate measurements using a stopwatch and/or a data-logger.</p> <p>I can use evidence to refute or support an idea.</p> <p>I can use scientific diagrams and labels.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> | <p>I can explain the degree of trust can be had in results.</p> <p>I can identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>I can make a key to classify.</p> <p>I can use predictions to plan a fair-test; recognising and controlling variables.</p> <p>I can plan a scientific enquiry to answer a questions.</p> <p>I can plan pattern-seeking enquiry.</p> <p>I can present findings from an enquiry.</p> <p>I can record data in a table and line graph.</p> <p>I can report causal relationships.</p> <p>I can take repeat measurements of data with precision using a data-logger.</p> <p>I can use scientific evidence to support or refute on idea.</p> <p>I can use test results to make predictions to set up further comparative tests.</p> |



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| | | | | questions or to support their findings. | | | |
| Biology: Plants | I can make observations of animals and plants and explain why some things occur. | <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 plants including roots, stem/trunk, leaves and flowers.</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 plants; roots, stem, leaves and flowers.</p> <p>I can explore the requirements of plants for life and growth and how they vary from plant to plant.</p> <p>I can investigate the ways in which water is transported within plants.</p> <p>I can explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p> | | | |
| Biology: Animals, including Humans | I can make observations of animals and plants and explain why some things occur. | <p>I can identify and name a variety of common animals that are birds, fish, amphibians, reptiles 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.</p> <p>I can identify, name draw and label the basic parts of the human body and say which parts of the body is associated with each sense.</p> | <p>I can notice that animals, including humans, have offspring which grow into adults</p> <p>I can find out about and 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 can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <p>I can identify 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>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 from birth to old age.</p> | <p>I can identify and name the main parts of the human circulatory system, and explain 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 their bodies function</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans.</p> |



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| <p>Biology: Living Things and their Habitats</p> | <p>I can talk 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 explore and compare the differences between things that are living, dead, and things that have never been alive</p> <p>I can 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>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 can 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 their local and wider environment</p> <p>I can 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 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</p> <p>I can give reasons for classifying plants and animals based on specific characteristics</p> |
| <p>Biology: Evolution and Inheritance</p> | | | | | | | <p>I can 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 recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</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> |
| <p>Chemistry: Materials (including rock, states of matter and changes)</p> | <p>I can explore characteristics of everyday objects</p> <p>I can talk about similarities and differences between objects or materials.</p> <p>Exceeding: I know the</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, water and rock.</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</p> | <p>I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>I can describe in simple terms how fossils are formed when</p> | <p>I can compare and group materials together, according to whether they are solids, liquids or gases</p> <p>I can 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>I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity, and response to magnets</p> <p>I can understand that some materials will dissolve in liquid to</p> | |



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| | <p>properties of some materials and can suggest some of the purposes they are used for.</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 materials on the basis of their physical properties.</p> | <p>materials can be changed by squashing, bending, twisting and stretching.</p> | <p>things that have lived are trapped within rock</p> <p>I can recognise that soils are made from rocks and organic matter.</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> | <p>form a solution, and describe how to recover a substance from a solution</p> <p>I can use 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> | |
| <p>Physics: Seasonal Changes</p> | <p>I can talk about changes.</p> | <p>I can observe and describe weather associated with the seasons and how day length varies.</p> <p>I can observe changes across the four seasons.</p> | | | | | |
| <p>Physics: Light</p> | | | | <p>I can recognise that they need light in order to see things and that dark is the absence of light</p> <p>I can notice that light is reflected from surfaces</p> <p>I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>I can recognise that shadows are formed when the light from</p> | | | <p>I can recognise 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> |



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| | | | | <p>a light source is blocked by a solid object</p> <p>I can find patterns in the way that the sizes of shadows change.</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> |
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| <p>Physics: Forces and Magnets</p> | | | | <p>I can compare how things move on different surfaces</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>I can observe 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 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 can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p> |
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| <p>Physics: Electricity</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 can 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>I can recognise some common conductors and insulators, and associate metals with being good conductors.</p> | | <p>I can 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>Physics: Sound</p> | | | | | <p>I can identify how sounds are made, associating some of them with something vibrating</p> <p>I can recognise that vibrations from a sound travel through a medium to the ear.</p> <p>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 volume of a sound and the strength of the vibrations that produced it.</p> <p>I can recognise that sounds get fainter as the distance from the sound source increases.</p> | | |



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| Physics: Earth and Space | | | | | | <p>I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system</p> <p>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> | |
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