



# Backworth Park Primary School Knowledge and Skills Progression Grid Science

|      | Working Scientifically                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Plants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Animals Including Humans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Seasonal Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Everyday Materials                                                                                                                                                                                                                                                          |
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| EYFS | <p>Ask simple questions about their familiar world.</p> <p>Talk about how things happen and why eg shadow.</p> <p>Look closely at things they find.</p> <p>Talk about changes and begin to use some scientific vocab eg melting, freezing.</p> <p>Asks questions about aspects of their familiar world.</p> <p>Find out how things work by observations and experimentation.</p> <p>Generates a variety of ideas for testing (not always realistic).</p> <p>Explores simple recording of tests/experiments e.g. through pictures/images and video best' – simple comparative statement.</p> <p>Use scientific descriptive terms with increasing confidence.</p> | <p>Identify plants by using vocabulary such as tree, flower, bush, weed.</p> <p>Name some parts of a plant such as petal and leaf.</p> <p>Know that plants need water and sunlight to grow well</p> <p>Identify plants by using vocabulary such as tree, flower, bush, weed.</p> <p>Can name some common trees and flowers (daffodil, daisy, etc).</p> <p>Names parts of a plant (leaf, flower: stalk, root) and understands what is needed for a plant to grow (sun, water, soil,).</p> | <p>Show care and concern for living things and the environment.</p> <p>Talk about how we grow and change from being babies to children to adults and how our capabilities increase.</p> <p>Show care and concern for living things and the environment, such as our pet snail.</p> <p>Develops understanding of growth, decay and changes over time e.g. leaves outdoors.</p> <p>Makes close observations of animals and begins to understand the different habitats animals live in.</p> <p>Names parts of the body and the senses</p> | <p>Notice changes in the weather.</p> <p>Talk about how plants/ animals grow, die and decay.</p> <p>Know some nocturnal animals, why some animals hibernate eg hedgehogs.</p> <p>Names different types of weather; describing some positive/negative effects for our environment and ourselves.</p> <p>Know what happens within each season and how the weather changes.</p> <p>Understand ideas connected to light and dark – e.g. reflection, shadows, nocturnal animals etc.</p> | <p>Play and experience natural materials eg wood and talk about its properties eg strong for building.</p> <p>Notices similarities and differences in relation to objects and material.</p> <p>Sort a variety of objects into groups – size, colour, texture, function.</p> |



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| <p>Year 1</p> | <p>Ask simple questions when prompted.</p> <p>Suggest ways of answering a question.</p> <p>Make relevant observations.</p> <p>Conduct simple tests, with support.</p> <p>Use observations to suggest answers to questions.</p> <p>Recognise findings.</p> <p>Gather and record data.</p> <p>With prompting, suggest how findings could be recorded.</p> | <p>Identify and describe the basic structure of a variety of common flowering plant.</p> <p>Identify and name common wild and garden plants.</p> <p>Identify and name common animals.</p> <p>Identify deciduous and evergreen trees.</p> <p>Identify and describe the structure of plants and trees.</p> | <p>Identify and name a variety of common animals.</p> <p>Classify animal groups.</p> <p>Classify animals as carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of common animals.</p> <p>Identify and label basic parts of the human body.</p> <p>Identify which part of the body is associated with each sense.</p> | <p>Observe changes across the four seasons.</p> <p>Observe and describe the seasons.</p>                                                                                                                                                                                      | <p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials.</p> <p>Identify, name and describe the simple physical.</p> <p>Identify properties of a variety of everyday materials.</p> <p>Compare and group everyday materials.</p> |
|               | <p><b>Working Scientifically</b></p>                                                                                                                                                                                                                                                                                                                    | <p><b>Plants</b></p>                                                                                                                                                                                                                                                                                     | <p><b>Animals Including Humans</b></p>                                                                                                                                                                                                                                                                                                                         | <p><b>Living Things and their Habitats</b></p>                                                                                                                                                                                                                                | <p><b>Everyday Materials</b></p>                                                                                                                                                                                                                                                                           |
| <p>Year 2</p> | <p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Suggest answers to questions by observing, gathering and recording data.</p>                                                                       | <p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe what plants need to grow and stay healthy.</p>                                                                                                                                                         | <p>Notice that animals, including humans, have offspring which grow into adult.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival.</p> <p>Describe how humans can keep healthy by exercising.</p> <p>Describe how humans can keep healthy by eating different types of food.</p>                                   | <p>Compare things that are living, dead, and things that have never been alive.</p> <p>Understand habitats and where some plants and animals live.</p> <p>Understand habitats and how they provide basic needs of living things.</p> <p>Understand the term microhabitat.</p> | <p>Identify and compare the suitability of materials for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed.</p>                                                                                                                                     |



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|               | Record and communicate findings using simple scientific language.                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                         | Understand simple food chains.                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                          |
|               | <b>Working Scientifically</b>                                                                                                                                                                                                                                                                                                                     | <b>Plants</b>                                                                                                                                                                                                                                                                                                                                           | <b>Animals Including Humans</b>                                                                                                                                                                                                        | <b>Rocks</b>                                                                                                                                                                                                            | <b>Light</b>                                                                                                                                                                                                                                   | <b>Forces and Magnets</b>                                                                                                                                                                                                                                |
| <b>Year 3</b> | <p>Ask relevant questions when prompted.</p> <p>Set up simple, practical enquiries and comparative tests.</p> <p>Make systematic observations, gather and record data.</p> <p>With prompting, record, group and display evidence and report findings.</p> <p>With prompting, suggest conclusions, possible improvements or further questions.</p> | <p>Identify and describe the functions of different parts of flowering plants.</p> <p>Explore the requirements of specific plants for life and growth.</p> <p>Investigate how water is transported within plants.</p> <p>Explore the part that flowers play in plant life cycles.</p> <p>Understand pollination, seed formation and seed dispersal.</p> | <p>Identify how animals get nutrition from what they eat.</p> <p>Identify that humans and some other animals have skeletons and muscles.</p> <p>Identify functions of a skeleton and muscles.</p>                                      | <p>Compare and group together different kinds of rocks.</p> <p>Describe how fossils are formed when things that have lived are trapped in rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p> | <p>Recognise that we need light in order to see things and that dark is the absence of light</p> <p>Recognise that light from the sun can be dangerous and how to protect eyes.</p> <p>Understand, and find patterns, in shadow formation.</p> | <p>Compare how things move on different surfaces</p> <p>Group everyday materials on the basis of whether they are attracted to a magnet.</p> <p>Understand magnetic poles.</p>                                                                           |
|               | <b>Working Scientifically</b>                                                                                                                                                                                                                                                                                                                     | <b>Living Things and their Habitats</b>                                                                                                                                                                                                                                                                                                                 | <b>Animals Including Humans</b>                                                                                                                                                                                                        | <b>States of Matter</b>                                                                                                                                                                                                 | <b>Sound</b>                                                                                                                                                                                                                                   | <b>Electricity</b>                                                                                                                                                                                                                                       |
| <b>Year 4</b> | <p>Ask relevant questions and plan scientific enquiries to answer them.</p> <p>Set up simple and practical enquiries, comparative and fair tests.</p> <p>Make systematic and careful observations and measurements to answer questions.</p>                                                                                                       | <p>Group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environment change can pose dangers to living things.</p>                                                                                                                                                                            | <p>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>Construct and interpret a variety of food chains.</p> | <p>Compare and group materials as solids, liquids or gases.</p> <p>Understand the water cycle.</p> <p>Observe that changes in temperature cause some materials to change state.</p>                                     | <p>Identify how we hear sounds.</p> <p>Explore patterns in pitch and volume of sounds.</p>                                                                                                                                                     | <p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts.</p> <p>Recognise that a closed circuit is required for lamp to light in a simple series circuit.</p> |



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|               | Record and report on findings from enquiries.<br><br>Identify differences, similarities or changes related to simple scientific ideas and processes.<br><br>Use results.                                                                                                                                                                                                                   |                                                                                                                                                                           |                                                                                                                                           |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                   | Recognise common conductors and insulator.                                                                                                             |
|               | <b>Working Scientifically</b>                                                                                                                                                                                                                                                                                                                                                              | <b>Living Things and their Habitats</b>                                                                                                                                   | <b>Animals Including Humans</b>                                                                                                           | <b>Properties and Changes of Materials</b>                                                                                                                                                                                                                                | <b>Earth and Space</b>                                                                                                                                                                                                                            | <b>Forces</b>                                                                                                                                          |
| <b>Year 5</b> | With prompting, plan scientific enquiries, controlling variables where necessary.<br><br>Take measurements, repeating as necessary.<br><br>Record data.<br><br>Suggest further comparative or fair tests.<br><br>Report and present findings from enquiries.<br><br>With prompting, identify that not all results may be trustworthy.<br><br>Suggest how evidence can support conclusions. | Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.<br><br>Describe the life process of reproduction in some plants and animals. | Describe the changes as humans develop to old age.<br><br>Compare and group together everyday materials on the basis of their properties. | Understand how solutions are formed and separated.<br><br>Understand how to separate mixtures.<br><br>Use comparative and fair tests to explain reasons for particular uses of everyday materials.<br><br>Understand and demonstrate reversible and irreversible changes. | Describe the movement of the planets in the solar system, relative to the Sun.<br><br>Describe the movement of the Moon relative to the Earth.<br><br>Understand the effects of the Earth's rotation.<br><br>Explain effects of gravity on Earth. | Identify the effects of forces that act between moving surfaces.<br><br>Recognise that some mechanisms allow a smaller force to have a greater effect. |
|               | <b>Working Scientifically</b>                                                                                                                                                                                                                                                                                                                                                              | <b>Living Things and their Habitats</b>                                                                                                                                   | <b>Animals Including Humans</b>                                                                                                           | <b>Evolution and Inheritance</b>                                                                                                                                                                                                                                          | <b>Light</b>                                                                                                                                                                                                                                      | <b>Electricity</b>                                                                                                                                     |
| <b>Year 6</b> | Plan scientific enquiries to answer questions, controlling variables where necessary.                                                                                                                                                                                                                                                                                                      | Describe how and why living things are classified into broad groups.                                                                                                      | Identify and name main parts of human circulatory system, and describe their function.                                                    | Recognise fossils show how living things have changed over time.                                                                                                                                                                                                          | Recognise that light appears to travel in straight lines.                                                                                                                                                                                         | Understand effect of changing number and voltage of cells used in a circuit.                                                                           |



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|  | <p>Take measurements.</p> <p>Record data and results of increasing complexity.</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>Report and present findings from enquiries.</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> |  | <p>Recognise impact of diet, exercise, drugs and lifestyle on the way bodies function.</p> <p>Describe how nutrients and water are transported within animals, including humans.</p> | <p>Recognise living things produce offspring, but normally offspring are not identical to parents.</p> <p>Identify that living things adapt and that adaptation may lead to evolution.</p> | <p>Explain that, to see, light travels from light sources, reflects from objects then to our eyes.</p> <p>Explain why shadows have the same shape as the objects that cast them.</p> | <p>Compare and give reasons for variations in how components of a circuit function.</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p> |
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