

# Langley Mill Church of England Infant School and Nursery – Curriculum Progression

## Science (page 1 of 2)



| Working Scientifically   |   |  |  |   |   |  |
|--|---|--|--|---|---|--|
| Pre-nursery  | Nursery   | Reception  | ELG  | Year 1  | Year 2  | Mastery & Greater Depth  |
| <ul style="list-style-type: none"> <li>Understands simple questions about ‘who’, ‘what’ and where. (CL)</li> </ul>                       | <ul style="list-style-type: none"> <li>Understand ‘why’ questions. Like: ‘why do you think the caterpillar got fat?’ (CL)</li> <li>Use all of their senses in hands-on exploration of natural materials. (UW)</li> <li>Talk about what they see, using a wide vocabulary. (UW)</li> <li>Explore how things work. (UW)</li> <li>Learn new vocabulary. (CL)</li> <li>Ask questions to find out more and check what has been said to them. (CL)</li> <li>Articulate their ideas in well formed sentences. (CL)</li> <li>Describe events in some detail. (CL)</li> <li>Use new vocabulary in different contexts. (CL)</li> <li>Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen. (CL)</li> </ul> | <ul style="list-style-type: none"> <li>Describe what they see, hear, and feel while they are outside. (UW)</li> </ul>              | <ul style="list-style-type: none"> <li>Make comments about what they have heard and ask questions to clarify their understanding. (PSED)</li> </ul>  | <ul style="list-style-type: none"> <li>Asks simple questions and recognises that they can be answered in different ways.</li> <li>Observes closely using simple equipment.</li> <li>Performs simple tests.</li> <li>Identifies and classifies.</li> <li>Uses their observations and ideas to suggest answers to questions.</li> <li>Gathers and records data to help in answering questions.</li> <li>Makes simple comparisons through observations.</li> <li>Uses simple scientific language.</li> <li>Uses IT to show their working.</li> <li>Makes accurate measurements.</li> <li>Records their findings using standard units.</li> <li>Shows their work using pictures, labels and captions.</li> <li>Finds out by watching, listening, tasting, smelling and touching.</li> <li>Talks about what they see, touch, smell, hear and taste.</li> </ul> | <ul style="list-style-type: none"> <li>Asks simple questions and recognises that they can be answered in different ways.</li> <li>Observes closely using simple equipment.</li> <li>Performs simple tests.</li> <li>Identifies and classifies.</li> <li>Uses their observations and ideas to suggest answers to questions.</li> <li>Gathers and records data to help in answering questions.</li> <li>Explores and observes in order to collect data and describes and compares findings.</li> <li>With help, suggests some ideas and questions and predicts what might happen.</li> <li>Uses more complex scientific language.</li> <li>Records findings in various formats using standard units, drawings, diagrams, photographs, simple prepared formats such as tables and charts, tally charts and displays.</li> <li>Says whether what happened was what was expected and draws simple conclusions to help answer questions.</li> <li>Organises things into groups.</li> <li>Finds simple patterns (or associations).</li> <li>Explains why it might not be fair to compare two things.</li> <li>Uses sight, touch, smell, hear or taste to help them answer questions</li> <li>Measure accurately using simple equipment.</li> </ul> | <ul style="list-style-type: none"> <li>Asks relevant questions and uses different types of scientific enquiries to answer them.</li> <li>Uses straightforward scientific evidence to answer questions or to support their findings.</li> <li>Makes systematic and careful observations and where appropriate, takes accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>Sets up simple practical enquiries, comparative and fair tests.</li> <li>Identifies differences, similarities or changes related to simple scientific ideas and processes.</li> <li>Uses results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</li> <li>Records findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.</li> <li>Gathers, records, classifies and presents data in a variety of ways to help in answer questions.</li> <li>Reports on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> </ul> |
| Plants   |   |  |  |   |   |  |
| <ul style="list-style-type: none"> <li>Explore and respond to different natural phenomena in their setting and on trips. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Plant seeds and care for growing plants. (UW)</li> <li>Understand the key features of the life cycle of a plant and an animal. (UW)</li> <li>Begin to understand the need to respect and care for the natural environment and all living things. (UW)</li> </ul>   | <ul style="list-style-type: none"> <li>Understand the effect of changing seasons on the natural world around them. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants. (UW)</li> <li>Understand some important process and changes in the natural world around them, including the seasons and changing states of matter. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Identifies and describes the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.</li> <li>Identifies and names a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen.</li> </ul>   | <ul style="list-style-type: none"> <li>Finds out and describes how plants need water, light and a suitable temperature to grow and stay healthy.</li> <li>Observes and describes how seeds and bulbs grow into mature plants.</li> </ul>  | <ul style="list-style-type: none"> <li>Identifies and describes the functions of different parts of flowering plants; roots, stem, leaves and flowers.</li> <li>Explores the part that flowers play in the life cycle of a flowering plant, including pollination, seed formation and seed dispersal.</li> <li>Investigates the way in which water is transported within plants.</li> <li>Describes what plants need to survive and link it to where they are found.</li> <li>Explains that plants grow and reproduce in different ways.</li> </ul>  |

# Langley Mill Church of England Infant School and Nursery – Curriculum Progression

## Science (page 2 of 2)



### Animals, including Humans

|  |   |  |  |   |  |   |
|--|---|--|--|---|--|---|
| <ul style="list-style-type: none"> <li>Explore and respond to different natural phenomena in their setting and on trips. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Makes healthy choices about food, drink, activity and toothbrushing. (PD)</li> <li>Understand the key features of the life cycle of a plant and an animal. (UW)</li> <li>Begin to understand the need to respect and care for the natural environment and all living things. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Know and talk about the different factors that support their overall health and wellbeing. For example, physical activity, toothbrushing, amount of screen time, good sleep routines and being a safe pedestrian. (PSED)</li> </ul> | <ul style="list-style-type: none"> <li>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. (PSED)</li> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Identifies and names a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.</li> <li>Identifies and names a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>Describes and compares the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals, and invertebrates, including pets).</li> <li>Identifies, names, draws and labels basic parts of the human body and say which part of the body is associated with each sense.</li> </ul> | <ul style="list-style-type: none"> <li>Notifies that animals, including humans have offspring which grow into adults.</li> <li>Finds out about and describes the basic needs of animals, including humans for survival (water, food, air).</li> <li>Describes the importance for humans of exercise, eating the right amounts of different food types, and hygiene.</li> <li>Describes the life cycle of some living things (e.g. egg to chicken)</li> </ul> | <ul style="list-style-type: none"> <li>Constructs and interprets a variety of food chains, identifying producers, predators and prey.</li> <li>Identifies 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.</li> <li>Identifies that humans and some animals have skeletons and muscles for support, protection and movement.</li> </ul> |
|--|---|--|--|---|--|---|

### Living Things and Habitats

|  |  |  |  |   |  |  |
|--|--|--|--|---|--|--|
| <ul style="list-style-type: none"> <li>Explore and respond to different natural phenomena in their setting and on trips. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Understand the key features of the life cycle of a plant and an animal. (UW)</li> <li>Begin to understand the need to respect and care for the natural environment and all living things. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Recognise some environments that are different to the one in which they live. (UW)</li> <li>Understand the effect of changing seasons on the natural world around them. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants. (UW)</li> <li>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Sorts living and non-living things.</li> </ul> | <ul style="list-style-type: none"> <li>Explores and compares the differences between things that are living, dead and things that have never been alive.</li> <li>Identifies 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.</li> <li>Identifies and names a variety of plants and animals in their habitats including micro-habitats.</li> <li>Describes 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.</li> </ul> | <ul style="list-style-type: none"> <li>Recognises that environments can change and that this can sometimes pose dangers to living things.</li> <li>Identifies and names a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups.</li> </ul> |
|--|--|--|--|---|--|--|

### Everyday Materials

|   |  |   |   |  |  |   |
|---|--|---|---|--|--|---|
| <ul style="list-style-type: none"> <li>Explore materials with different properties. (UW)</li> <li>Explore natural materials, both indoors and outdoors. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Explore collections of materials with similar and/or different properties. (UW)</li> <li>Explore and talk about the different forces they can feel. (UW)</li> <li>Talk about the differences between materials and changes they notice. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Explore the natural world around them. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Understand some important process and changes in the natural world around them, including the seasons and changing states of matter. (UW)</li> </ul> | <ul style="list-style-type: none"> <li>Distinguishes between an object and the material from which it is made.</li> <li>Identifies and names a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li> <li>Describes the simple physical properties of a variety of everyday materials.</li> <li>Compares and groups together a variety of everyday materials on the basis of their simple physical properties.</li> <li>Finds out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul> | <ul style="list-style-type: none"> <li>Identifies and compares the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard.</li> <li>Compares how things move on different surfaces.</li> <li>Describes the properties of different materials using words like; transparent, opaque, flexible etc.</li> <li>Sorts materials into groups and say why they have sorted them in that way.</li> <li>Says which materials are natural and which are man-made.</li> <li>Explains how materials are changed by heating and cooling.</li> <li>Identifies which materials cannot be changed back after being heated, cooled, bent, stretched or twisted.</li> <li>Explains how materials are changed by bending, twisting and stretching.</li> </ul> | <ul style="list-style-type: none"> <li>Sets up a simple test to explore the differences between materials.</li> <li>Sets up a test to explore whether or not materials are attracted to magnets.</li> <li>Sets up a test to explore whether or not a material will float or sink.</li> <li>Compares the properties of materials in different situations e.g. floating in salty water, magnetism in water.</li> <li>Describes what it means to reverse a change.</li> <li>Describes which changes can be reversed.</li> <li>Describes which changes cannot be reversed.</li> </ul> |
|---|--|---|---|--|--|---|