




## Scientific Skills Progression

\*Note: It is expected that children and adults should use the vocabulary from previous year groups as they progress and where appropriate.

By the end of ...	<p style="text-align: center;"><b>LIVING THINGS AND THEIR HABITATS</b></p> 	Year group taught in
<p style="text-align: center;"><b>Key Stage 1</b></p>	<ul style="list-style-type: none"> <li>• Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>• 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</li> <li>• Identify and name a variety of plants and animals in their habitats, including micro-habitats</li> <li>• 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.</li> </ul> <p><b>Vocabulary children should use:</b>  living, dead, never been alive, move, grow, feed, have offspring/young/babies, name local habitats e.g. a pond/woodland/meadow, name micro habitats e.g. under a log/ on stony path/under bushes, damp/wet/dry, dark/light, hot/warm/cool/cold, use comparatives e.g. hotter, suited/suitable, basic needs, depend, food, food chain, shelter</p> <p><b>Vocabulary adults should use:</b>  reproduce, seashore, woodland, ocean, rain forest, micro habitat, conditions, sources of food</p>	<p style="text-align: center;"><b>Year 2</b></p>
<p style="text-align: center;"><b>Key Stage 2</b></p>	<ul style="list-style-type: none"> <li>• Recognise that living things can be grouped in a variety of ways</li> <li>• Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> <li>• Recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul> <p><b>Vocabulary children should use:</b>  classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrates, name some invertebrates, human impact, name positive human impact, name negative human impact</p> <p><b>Vocabulary adults should use:</b>  life processes</p>	<p style="text-align: center;"><b>Year 4</b></p>



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	<ul style="list-style-type: none"> <li>Describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird</li> <li>Describe the life process of reproduction in some plants and animals.</li> </ul> <p><b>Vocabulary children should use:</b>            life cycle, reproduction, sexual, asexual, germination, pollination, seed formation, seed dispersal, pollen, stamen, stigma, plantlets e.g. spider plant, runners e.g. strawberry plant, mammal, amphibian, insect, bird, fish, reptile, eggs, live young</p>	<p><b>Year 5</b></p>
	<ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and difference, including micro-organisms, plants, and animals.</li> <li>Give reasons for classifying plants and animals based on specific characteristics.</li> </ul> <p><b>Vocabulary children should use:</b>            organism, micro-organism, fungus, mushrooms, classification keys, environment, fish, amphibians, reptiles, birds, mammals, vertebrates, invertebrate, name some invertebrates, arachnid, mollusc, insect, crustacean</p>	<p><b>Year 6</b></p>
<p><b>Key Stage 3</b></p>	<p><b>Cells and organisation</b></p> <ul style="list-style-type: none"> <li><i>Explore</i> cells as the fundamental unit of living organisms, including how to observe, interpret and record cell structure using a light microscope</li> <li><i>Recognise</i> the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria, and chloroplasts</li> <li><i>Recognise</i> the similarities and differences between plant and animal cells</li> <li><i>Recognise</i> the role of diffusion in the movement of materials in and between cells</li> <li><i>Describe</i> the structural adaptations of some unicellular organisms</li> <li><i>Recognise</i> the hierarchical organisation of multicellular organisms: from cells to tissues to organs to systems to organisms.</li> </ul>	<p><b>Year 7, 8 or 9</b></p>



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	<p><b>Cellular respiration</b></p> <ul style="list-style-type: none"> <li>• <b>Recognise</b> aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life</li> <li>• <b>Describe</b> a word summary for aerobic respiration</li> <li>• <b>Describe</b> the process of anaerobic respiration in humans and micro-organisms, including fermentation, and a word summary for anaerobic respiration</li> <li>• <b>Identify</b> the differences between aerobic and anaerobic respiration in terms of the reactants, the products formed and the implications for the organism.</li> </ul>	
	<p><b>Relationships in an ecosystem</b></p> <ul style="list-style-type: none"> <li>• <b>Recognise</b> the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops</li> <li>• <b>Recognise</b> the importance of plant reproduction through insect pollination in human food security</li> <li>• <b>Recognise</b> how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.</li> </ul>	