

# KNOWLEDGE PROGRESSION YEAR GROUP OVERVIEW – Science (Biology)

## Science: Biology

At both key stages the knowledge progression takes full account of the National Curriculum's Biology strands of:

- Living things and their habitats
- Animals, including humans
- Plants
- Evolution and inheritance

Skills are dependent on specific knowledge. A skill is the capacity to perform and in order to perform a deep body of knowledge needs to be acquired and retained.

Knowledge statements should be what pupils retain for ever. In other words, this knowledge is within their long-term memory and will be retained.

When considering pupils' improvement in subject specific vocabulary, pupils could be provided with a knowledge organiser which contains all words used for geography for their age group.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>All living things and their habitats</b></p> <p><b>EYFS</b> 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.</p>		<ul style="list-style-type: none"> <li>• Classify things by living, dead or never lived</li> <li>• Know how a specific habitat provides for the basic needs of things living there (plants and animals)</li> <li>• Match living things to their habitat</li> <li>• Name some different sources of food for animals</li> <li>• Know about and explain a simple food chain</li> </ul>		<ul style="list-style-type: none"> <li>• Use classification keys to group, identify and name living things</li> <li>• Know how changes to an environment could endanger living things</li> </ul>	<ul style="list-style-type: none"> <li>• Know the life cycle of different living things e.g. mammal, amphibian, insect and bird</li> <li>• Know the differences between different life cycles</li> <li>• Know the process of reproduction in plants</li> <li>• Know the process of reproduction in animals</li> </ul>	<ul style="list-style-type: none"> <li>• Classify living things into broad groups according to observable characteristics and based on similarities and differences</li> <li>• Know how living things have been classified</li> <li>• Give reasons for classifying plants and animals in a specific way</li> </ul>
<p><b>Animals, including humans</b></p> <p><b>EYFS</b> Explore the natural world around them, making observations and drawing pictures of animals and plants.</p>	<ul style="list-style-type: none"> <li>• Know the name of parts of the human body that can be seen</li> <li>• Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds</li> <li>• Know and classify animals by what they eat (carnivore, herbivore and omnivore)</li> <li>• Know how to sort by living and non-living things</li> </ul>	<ul style="list-style-type: none"> <li>• Know the basic stages in a life cycle for animals, (including humans)</li> <li>• Know why exercise, a balanced diet and good hygiene are important for humans</li> </ul>	<ul style="list-style-type: none"> <li>• Know about the importance of a nutritious, balanced diet</li> <li>• Know how nutrients, water and oxygen are transported within animals and humans</li> <li>• Know about the skeletal and muscular system of a human</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and name the parts of the human digestive system</li> <li>• Know the functions of the organs in the human digestive system</li> <li>• Identify and know the different types of human teeth</li> <li>• Know the functions of different human teeth</li> <li>• Use and construct food chains to identify producers, predators and prey</li> </ul>	<ul style="list-style-type: none"> <li>• Create a timeline to indicate stages of growth in humans</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and name the main parts of the human circulatory system</li> <li>• Know the function of the heart, blood vessels and blood</li> <li>• Know the impact of diet, exercise, drugs and lifestyle on health</li> <li>• Know the ways in which nutrients and water are transported in animals, including humans</li> </ul>

<p><b>Plants</b></p> <p><b>EYFS</b></p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants.</p>	<ul style="list-style-type: none"> <li>• Know and name a variety of common wild and garden plants</li> <li>• Know and name the petals, stem, leaves and root of a plant</li> <li>• Know and name the roots, trunk, branches and leaves of a tree</li> </ul>	<ul style="list-style-type: none"> <li>• Know and explain how seeds and bulbs grow into plants</li> <li>• Know what plants need in order to grow and stay healthy (water, light &amp; suitable temperature)</li> </ul>	<ul style="list-style-type: none"> <li>• Know the function of different parts of flowering plants and trees</li> <li>• Know how water is transported within plants</li> <li>• Know the plant life cycle, especially the importance of flowers</li> </ul>			
<p><b>Evolution and Inheritance</b></p>						<ul style="list-style-type: none"> <li>• Know how the Earth and living things have changed over time</li> <li>• Know how fossils can be used to find out about the past</li> <li>• Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents)</li> <li>• Know how animals and plants are adapted to suit their environment</li> <li>• Link adaptation over time to evolution</li> <li>• Know about evolution and can explain what it is</li> </ul>

KEY:

living things

habitats and environment

food, nutrition and food chains

life cycles and reproduction

plants

animals and humans

exercise, a balanced diet

evolution and changes over time (link to Chemistry - Rocks)

## **KNOWLEDGE PROGRESSION YEAR GROUP OVERVIEW – Science (Biology)**