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Science: Living things and their habitats Year 2

Definition: Living things are made of cells, grow and develop, use energy, reproduce, respond to their environment and adapt.
Habitat (noun) The place where a particular organism lives, which provides all its basic needs for survival and reproduction.
Microhabitat (noun) a very small habitat, forming part of a much larger habitat.

Biology definition: The word **biology** is derived from the greek words /bios/ **meaning** /life/ and /logos/ **meaning** /study/ and is **defined** as the science of life and living organisms. An organism is a living entity consisting of one cell e.g. bacteria, or several cells e.g. animals, plants and fungi.

POS:

♣ explore and compare the differences between things that are living, dead and things that have never been alive
♣ identify that most living things live in habitats to which they are suites and describe how different habitats provide for the basic needs of different kinds od animals and plants, and how they depend on each other
♣ identify and name a variety of plants and animals in their habitats, including micro habitats
♣ 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

Prior learning EYFS:
Children can talk about the world around them and draw pictures familiar animals – pets / farm animals, plants
Children recognise familiar animals and plants
They will have had experience of the habitats around them – the outdoor area, flower beds and the allotment
They will have begun to look at similarities and differences of their school environment and the park.

Disciplinary concepts:
Function – what is the purpose of a habitat?
Similarity and Difference– what are the similarities and differences between habitats?
Variation – how are the living things within a habitat varied**?**

Links to other science topics:

Plants Y1/Y2
Animals including humans Y1/Y2
Living things and their habitats Y4
classifying

Common misconceptions: Children sometimes find it difficult to distinguish between homes and habitats. It helps to explain that a home is best thought of as a place of shelter for an organism, whereas a habitat must provide all its requirements for life. The children might assume that a habitat is unchanging, but most habitats alter considerably over time due to human involvement, changes in climate and seasonal variations. Some children might think that animals "choose" to live in certain places. In fact, they have adapted to live in particular habitats over millions of years.
Some children may think: plants and seeds are not alive as they cannot be seen to move, fire is living, arrows in a food chain mean 'eats'.

Core Knowledge:
All objects are either living, dead or have never been alive. Living things are plants (including seeds) and animals. Dead things include dead animals and plants and parts of plants and animals that are no longer attached e.g. leaves and twigs, shells, fur, hair and feathers (This is a simplification, but appropriate for Year 2 children.)
An object made of wood is classed as dead. Objects made of rock, metal and plastic have never been alive (again ignoring that plastics are made of fossil fuels).
Animals and plants live in a habitat to which they are suited, which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. The habitat provides the basic needs of the animals and plants – shelter, food and water.
Within a habitat there are different micro-habitats e.g. in a woodland – in the leaf litter, on the bark of trees, on the leaves. These micro-habitats have different conditions e.g. light or dark, damp or dry. These conditions affect which plants and animals live there. The plants and animals in a habitat depend on each other for food and shelter etc. The way that animals obtain their food from plants and other animals can be shown in a food chain.

Wider Knowledge:
Life is defined as any system capable of performing functions such as eating, metabolizing, excreting, breathing, moving, growing, reproducing, and responding to external stimuli. Much is known about life from points of view reflected in the various biological, or "life," sciences. These include anatomy (the study of form at the visible level), ultrastructure (the study of form at the microscopic level), physiology (the study of function), molecular biology and biochemistry (the study of form and function at chemical levels), ecology (the study of the relations of organisms with their environments), taxonomy (the naming, identifying, and classifying of organisms), ethology (the study of animal behaviour), and sociobiology (the study of social behaviour). Charles Robert Darwin was an English naturalist, geologist and biologist, best known for his contributions to the science of evolution. www.makingscience.royalsociety.org

Working scientifically: asking simple questions and recognising that they can be answered in different ways ♣ observing closely, using simple equipment ♣ performing simple tests ♣ identifying and classifying ♣ using their observations and ideas to suggest answers to questions ♣ gathering and recording data to help in answering questions

End Goals:
To be able to find a range of items outside that are living, dead and never lived and to name a range of animals and plants that live in a habitat and micro-habitats that they have studied
To explain how the features of these animals and plants make them suitable to the habitat, what the animals eat and how the plant provide shelter for them
To construct a food chain that starts with a plant and has the arrows pointing in the correct direction

CPD: Reach out CPD – Humans and other animals
Science Association PLAN London Assessment Network

Enrichment: Zoo Trip / Nature Walks / Pond Dipping