

**Science: Living things and their habitats Year 4**

**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:**

- ❖ Recognise that living things can be grouped in a variety of ways.
- ❖ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.
- ❖ Recognise that environments can change and that this can sometimes pose dangers to living things.

**Prior learning:**

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common
- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)
- Identify and name a variety of plants and animals in their habitats, including microhabitats.

Links to other science topics:

Plants yr1/2  
Animals including humans  
Y1/Y2  
Living things and their habitats  
Y2 classifying  
Living things and their habitats  
year 5/6

**Disciplinary concepts:**

**Variation** – How might you group the living things?

**Adaptation** – How might the living thing have adapted to its environment?

**Cause and effect** - Why might the environment change? What has happened as a result of the change?

**Similarity and difference** – What are the similarities and differences between your groupings?

**Common misconceptions:**

Some children may think:

♣ the death of one of the parts of a food chain or web has no or limited consequences on the rest of the chain ♣ there is always plenty of food for wild animals ♣ animals are only land-living creatures ♣ animals and plants can adapt to their habitats, however they change ♣ all changes to habitats are negative. ♣ 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.

**Core Knowledge:**

Living things can be grouped (classified) in different ways according to their features. Classification keys can be used to identify and name living things.

Living things live in a habitat which provides an environment to which they are suited. These environments may change naturally e.g. through flooding, fire, earthquakes etc. Humans also cause the environment to change. This can be in a good way (i.e. positive human impact, such as setting up nature reserves) or in a bad way (i.e. negative human impact, such as littering). These environments also change with the seasons; different living things can be found in a habitat at different times of the year.

**Wider Knowledge:**

Life on Earth exists as a balance of living communities of organisms, interacting with each other and their physical environments. All living things depend on others for survival. ♣ Children could think about the different ways that zookeepers create more natural habitats for their animals. ♣ Living things are sensitive: they react to their environments. For example, humans take cover from the Sun, to prevent sunburn, while plants move towards it so they can make more food. ♣ Bees are great pollinators, carrying pollen from one flower to another. Once pollinated, a flower develops into fruit, which we can eat. Bees are vital for pollinating many commercial crops, such as tomatoes, peas, apples and strawberries. It would be very time consuming and costly to pollinate these plants in other ways. Bees make it much easier for farmers and keep the prices of these foods down.

**Working scientifically:** ♣ asking simple questions and using different types of scientific enquiries to answer them ♣ using their observations and ideas to suggest answers to questions ♣ performing simple tests ♣ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions

**End Goals:**

- To use a classification key to help group, identify and name a variety of living things – e.g. Can it fly, does it crawl, does it belong in...
- To identify different types of invertebrates and vertebrates
- To give an example of how environments can change and how it can potential pose a danger to living things -global warming, litter, oil spill, chemical pollution, deforestation and land development

**CPD:** Reach out CPD – Living things and habitats

**Enrichment:** Zoo Trip / Nature Walks / Pond Dipping

Science Association PLAN London Assessment Network