

Living Things and Their Habitats

Science Knowledge Organiser Year 6 Term 1



Key Vocabulary

- Bacteria** – a single-celled micro-organism
- Characteristics** – special qualities or appearances that make an individual or group different to others
- Classify** – to sort things into different groups
- Exoskeleton** – a hard, outer casing on the outside of a body, which acts as a skeleton
- Invertebrates** – animals that do not have a backbone
- Micro-organism** – an organism seen only by using a microscope (e.g bacteria, mould etc)
- Non-vascular plants** – no root or stem; absorb water from their environment
- Species** – a group of animals that can reproduce to produce fertile offspring
- Taxonomist** – a scientist who classifies different living things into categories
- Vascular plants** – have a root and stem to transport nutrients
- Vertebrates** – animals that have a spine or backbone

Key Questions

- How are living things classified into broad groups, based on similarities and differences?
- Why are plants and animals classified based on specific characteristics?
- What are micro-organisms?
- Are all microbes harmful?

Key People

Carl Linnaeus – (1707 – 1778) a Swedish scientist, who believed it to be very important to have a standard system of classification. He published ‘Systema Naturae’, which described his system for classifying living things. Today, the Linnaean system is used to classify living things into a hierarchy, and new levels have been introduced.

Key Knowledge

What I should already know...

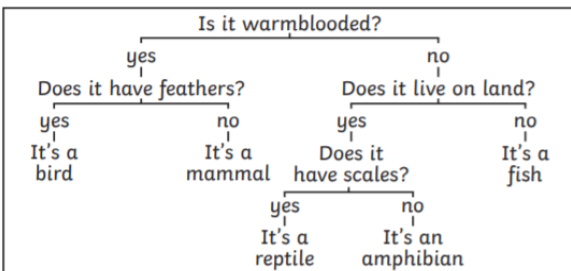
Year 4

- recognise that living things can be grouped in different ways
- to 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

What I will know by the end of the unit...

- Living things (including micro-organisms, plants and animals) are classified into broad groups according to common observable characteristics and based on similarities and differences
- We classify plants and animals to make sure they are named, grouped and identified correctly.
- Micro-organisms are living things too small to see with the naked eye. Viruses and bacteria are examples of micro-organisms.
- Not all microbes are harmful – some even help keep our bodies healthy!

Scientists, called Taxonomists, sort and group living things according to their similarities and differences.



Microorganisms

Microorganisms are viruses, **bacteria**, moulds and yeast. Some animals (dust mites) and plants (phytoplankton) are also **microorganisms**.

Microorganisms are very tiny living things that can only be seen using a **microscope**. They can be found in and on our bodies, in the air, in water and on objects around us.



More Key Knowledge

Living things can be **classified** by these eight levels. The number of living things in each level gets smaller until the one animal is left in its species level. This is how a dog would be classified.

Each group allows scientists to observe and understand the **characteristics** of living things more clearly. They group similar things together then split the groups again and again based on their differences.

Useful web links:

<https://www.bbc.co.uk/bitesize/topics/zn22pv4>

<https://www.bbc.co.uk/bitesize/topics/zfxsbk>

Domain: Eukarya

Kingdom: Animals

Phylum: Chordata

Class: Mammals

Order: Carnivore

Family: Canidae

Genus: Canis

Species: Lupus