# Buglawton Primary School
*Be the Best We Can*

| Topic: Living things and their habitats | Subject: Science | Year: 6 | Term: Summer |
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## What should I already know?

- 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.
- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- Describe the life process of reproduction in some plants and animals.

### What will I know and by the end of the unit?

- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.
- Give reasons for classifying plants and animals based on specific characteristics.

### What will I be able to do by the end of the unit?

- Can give examples of animals in the five vertebrate groups and some of the invertebrate groups
- Can give the key characteristics of the five vertebrate groups and some invertebrate groups
- Can compare the characteristics of animals in different groups
- Can give examples of flowering and non-flowering plants
- Can use classification materials to identify unknown plants and animals
- Can create classification keys for plants and animals
- Can give a number of characteristics that explain why an animal belongs to a particular group

## Key Vocabulary

| characteristics | Special qualities or appearances that make an individual or group of things different to others. |
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| classify | To sort things into different groups. |
| taxonomist | A scientist who classifies different living things into categories. |
| key | A key is a series of questions about the characteristics of living things. A key is used to identify a living thing or decide which group it belongs to by answering 'yes' or 'no' questions. |

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



Is it warmblooded?
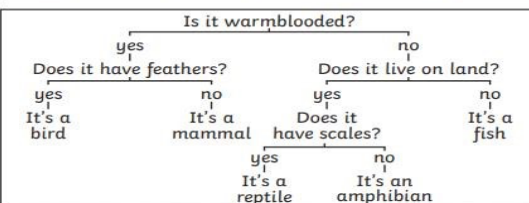
## Classification

In 1735, Swedish Scientist Carl Linnaeus first published a system for **classifying** all living things. An adapted version of this system is still used today: The Linnaeus System.

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.

| Domain: Eukarya | jackal, clownfish, cat, dog, ladybird, daisy, rabbit, fox |
|---|---|
| Kingdom: Animals | jackal, clownfish, cat, dog, ladybird, rabbit, fox |
| Phylum: Chorodata | jackal, clownfish, cat, dog, rabbit, fox |
| Class: Mammals | jackal, cat, dog, rabbit, fox |
| Order: Carnivore | jackal, cat, dog, fox |
| Family: Canidae | jackal, dog, fox |
| Genus: Canis | jackal, dog |
| Species: Lupus | dog |

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.
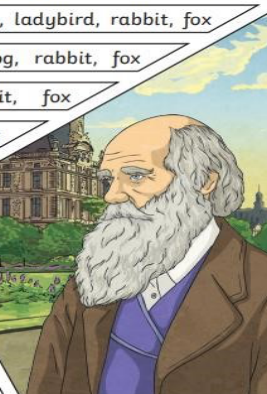
## Key Vocabulary

| bacteria | A single-celled **microorganism**. |
|---|---|
| microorganism | An organism that can only be seen using a **microscope**, e.g. **bacteria**, mould and yeast. |
| microscope | A piece of equipment that is used to view very tiny (**microscopic**) things by magnifying their appearance. |
| species | A group of animals that can reproduce to produce fertile offspring. |

## 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.



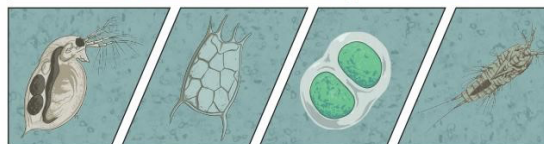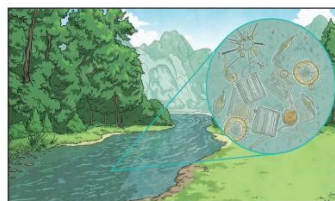| Helpful Microbes | Harmful Microbes |
|---|---|
| Bacteria – cheese | Bacteria – salmonella is a bacterium that can lead to food poisoning |
| Yeast – wine | Virus – chicken pox and flu are examples of viral diseases |
| Bacteria – yoghurt | Fungi – athlete's foot |
| Yeast – bread dough | Bacteria – plaque |
| Penicillium fungi - antibiotics | Fungi - mould |

## Agreed Real-life outcome:

Create an imaginary animal which has features from one or more groups.