

# Year 6

## Unit: Living things and their habitats

### Intent:

To 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.

To give reasons for classifying plants and animals based on specific characteristics.

### Prior learning

Year 4 – Recognise that living things can be grouped in a variety of ways.

Year 4 – Explore and use classification keys to help group, identify and name a variety of living things.

Year 5 – Describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird.

Year 5 – Describe the life process of reproduction in some plants and animals.

### Later learning (not in Year 6)

KS3 – Differences between species.

### 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: Animalia**

jackal, clownfish, cat, dog, ladybird, rabbit, fox

**Phylum: Chordata**

jackal, clownfish, cat, dog, rabbit, fox

**Class: Mammalia**

jackal, cat, dog, rabbit, fox

**Order: Carnivora**

jackal, cat, dog, fox

**Family: Canidae**

jackal, dog, fox

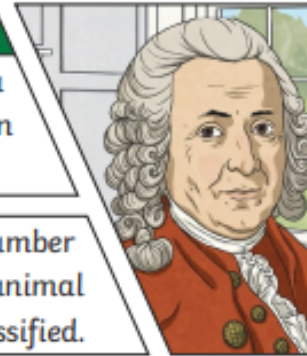
**Genus: Canis**

jackal, dog

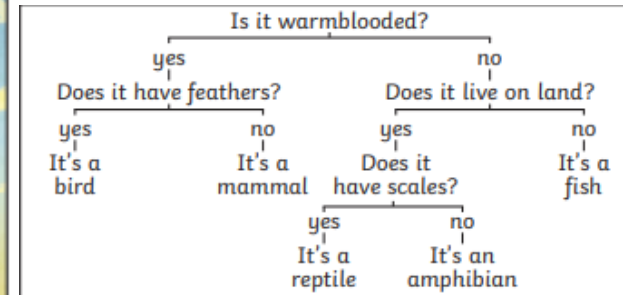
**Species: Lupus**

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.



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



### Key Questions:

What do you call the special qualities or appearances that make an individual or group of things different to others?

What is a taxonomist?

What is the Linnaeus System?

What do you call a series of questions about the characteristics of living things?

What type of species is a dog?

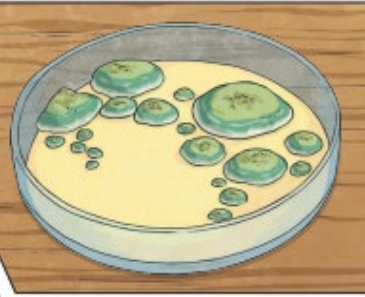
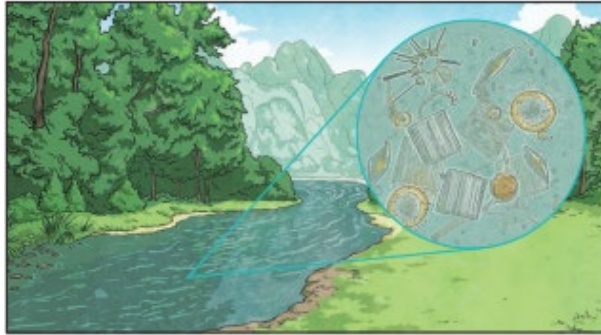
Which piece of equipment is used to view micro-organisms?

Name an example of a micro-organism.

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

Vocabulary	
<b>Bacteria</b>	A single-celled micro-organism.
<b>Characteristics</b>	Special qualities or appearances that make an individual or group of things different to others.
<b>Classify</b>	To sort things into different groups.
<b>Key</b>	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.
<b>Micro-organism</b>	An organism that can only be seen using a microscope, e.g., bacteria, mould, and yeast.
<b>Microscope</b>	A piece of equipment that is used to view very tiny (microscopic) things by magnifying their appearance.
<b>Species</b>	A group of animals that can reproduce fertile offspring.
<b>Taxonomist</b>	A scientist who classifies different living things into categories.