

Living things and their habitats

Year 4 Science Summer

What we should know at the end of the unit

All living things, which can also be called organisms, have to do certain things to stay alive. These are the life processes:

- movement
- respiration
- sensitivity
- growth
- reproduction
- excretion
- nutrition

Living things can be grouped according to different criteria (where they live, what type of organism they are, what features they have).

- Habitats can change throughout the year and this can have an effect on the plants and animals that live there.
- Humans can have positive and negative effects on the environment:

Positive effects: nature reserves, ecological parks

Negative effects: litter, urban development

What we are going to learn (LOs)

To identify pond/seashore animals using a key.

To use yes/no questions to sort animals found in a water habitat.

To classify vertebrates into groups using their key characteristics.

To recognise characteristics of some of the main invertebrate groups.

To give examples of positive and negative ways in which humans change the environment.

To plan a litter survey.

To carry out a litter survey, collecting and presenting data.

To research and present information about the impact of litter on animals.

Key vocabulary

Organisms	This is another word that can be used to mean 'living things'.
Life processes	The things living things do to stay alive.
Respiration	A process where plants and animals use oxygen gas from the air to help turn their food into energy.
Sensitivity	The way living things react to changes in their environment.
Reproduction	The process through which young are produced.
Excretion	The process by which living things get rid of waste products.
Nutrition	The process of obtaining food to provide living things with energy to live and stay healthy.
Habitat	The specific area or place in which particular animals or plants may live.
Environment	An environment contains many habitats and these include areas where there are both living and non-living things.

5 Groups of Vertebrates

Fish



- Cold-blooded
- Gills
- Scales and fins
- Lay eggs or live birth in water

Amphibians



- Cold-blooded
- Gills and lungs
- Thin moist skin
- Lay jelly-like eggs in water

Reptiles



- Cold-blooded
- Lungs
- Scales
- Lay leathery eggs on land or live birth

Birds

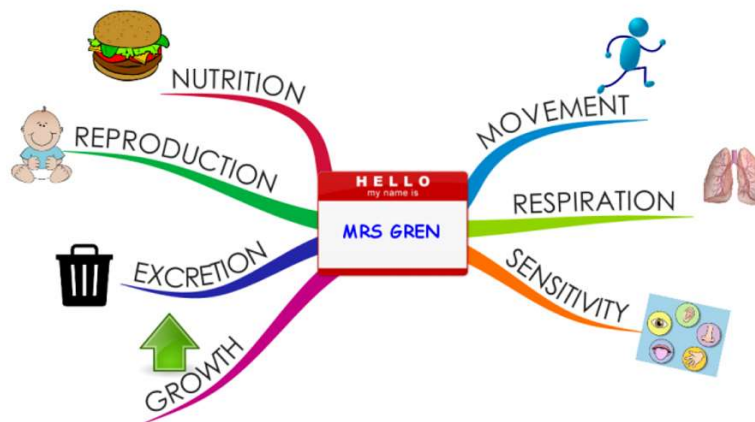


- Warm-blooded
- Lungs
- Feathers
- Lay hard eggs on land

Mammals



- Warm-blooded
- Lungs
- Hair
- Live birth and feed young milk

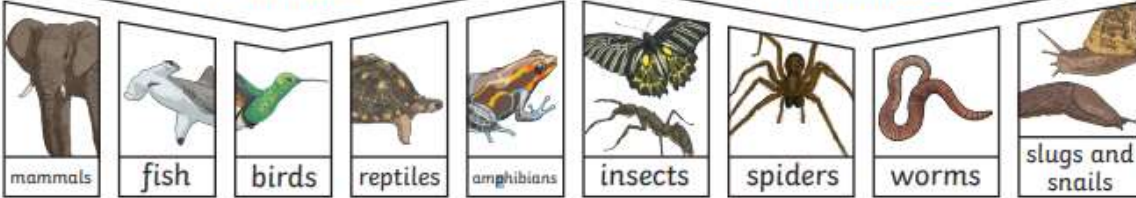


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Animals can be grouped in lots of different ways based upon their **characteristics**.

vertebrates

invertebrates

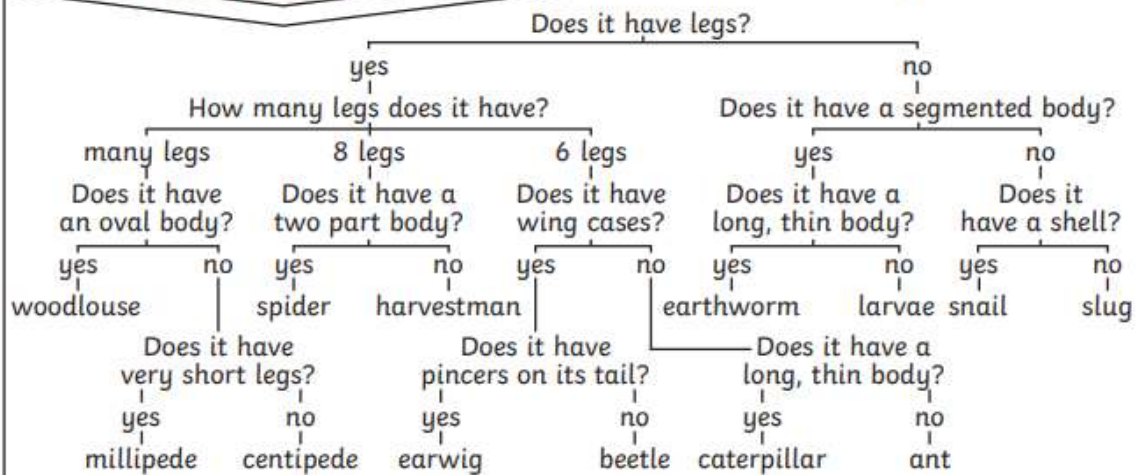


Vertebrates can be separated into five broad groups.

You could sort **invertebrates** you might see around school in different ways, such as in this example. The vast majority of living things on the planet are **invertebrates**.

You can use **classification** keys to help group, identify and name a variety of living things. Here is an example of a **classification** key:

Invertebrate Classification Key



Changes to the environment

- Changes to an environment can be natural or caused by humans.
- Changes to an environment can have positive as well as negative effects. Here are some examples of things that can change an environment:
 - earthquakes
 - storms
 - floods
 - droughts
 - wildfires
 - the seasons
 - deforestation
 - pollution
 - urbanisation
 - the introduction of new animal or plant species to an environment.



Key vocabulary

Endangered species	A plant or animal where there are not many of their species left and scientists are concerned that the species may become extinct.
Extinct	When a species has no more members alive on the planet, it is extinct.
Classification	This is where plants or animals are placed into groups according to their similarities.
Vertebrates	Animals with a backbone.
Invertebrates	Animals without a backbone.
Specimen	A particular plant or animal that scientists study to find out about its species.
Characteristics	The distinguishing features or qualities that are specific to a species.