# Chulmleigh Academy Trust - Science

| Topic: Living things and their habitats | Year: 4 | Strand: Biology |
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## What should I already know?

Animals can be grouped into **vertebrates** (and then further into fish, reptiles, amphibians, birds and mammals) and **invertebrates**

Animals can be grouped into **carnivores, herbivores** and **omnivores**

The differences between the teeth of **carnivores** and **herbivores**.

The names of some common wild and garden plants and **deciduous** and **evergreen** trees.

Examples of **habitats** (including **microhabitats**) and the animals and plants that can be found there.

Living things depend on each other to survive.

How land use has changed over time and the effects this has on the **environment** (e.g. **urban** development)

## Vocabulary

| biomes | a natural area of **vegetation** and animals |
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| carnivore | an animal that eats meat |
| classification key | a system which divides things into groups or types |
| criteria | a factor on which something is judged |
| deciduous | trees that lose leaves in the autumn every year |
| environment | all the circumstances, people, things, and events around them that influence their life |
| evergreen | a tree or bush which has green leaves all the year round |
| excretion | the process of eliminating waste from the body |
| food chain | a series of living things which are linked to each other because each thing feeds on the one next to it in the series |
| habitat | the natural **environment** in which an animal or **plant** normally lives or grows |
| herbivore | an animal that only eats plants |
| invertebrate | a creature that does not have a spine, for example an insect, a worm, or an octopus |
| life processes | There are seven processes that tell us that living things are alive |
| microhabitat | a small part of the **environment** that supports a **habitat**, such as a fallen log in a forest |
| minibeast | a small **invertebrate** animal such as an insect or spider |
| nutrition | the process of taking food into the body and absorbing the nutrients in those foods |
| omnivore | person or animal eats all kinds of food, including both meat and **plants** |
| organism | a living thing |
| reproduction | when an animal or plant produces one or more individuals similar to itself |
| respiration | process of respiring; breathing ; inhaling and exhaling air |
| sensitivity | responding to the external environment |
| urban | belonging to, or relating to, a town or city |
| vegetation | **plants**, trees and flowers |
| vertebrate | a creature which has a spine |

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

### How can living things be grouped?

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**
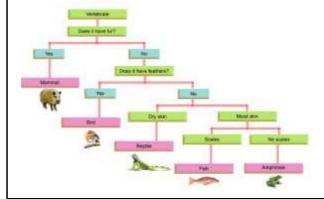growth
**reproduction**
**excretion**
**nutrition**



Living things can be grouped according to different **criteria** (where they live, what type of **organism** they are, what features they have). For example, a camel can belong in a group of **vertebrates,** a group of animals that live in the desert, and a group of animals that have four legs.

### What is a **classification key**?

A **classification key** is a tool that is used to group living things to help us identify them.



### How can **environments** change?

**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

## Investigate!

Complete Venn diagrams to show if living things can be grouped into two or more groups.
Use **criteria** to sort living things in a Carroll diagram.

Sort **vertebrate** and **invertebrate** animals into groups, describing their key features. Use a **classification key** to identify which group of **vertebrates** animals belong to and then create your own.

Sort plants into groups (e.g. flowering plants and non-flowering plants) and then create a **classification key** to help others identify plants.

Carefully observe **minibeasts** in a **microhabitat** and use a **classification key** to identify them. Use simple computer software programmes to create a branching **classification key**.

Explore examples of human impact (both positive and negative) on **environments**.