


**Prior knowledge:**

Children have learned to identify and name a variety of plants and animals in their habitats, including micro-habitats.

**Key Vocabulary**

<b>characteristics</b>	The distinguishing features or qualities that are specific to a species.
<b>classification</b>	This is where plants or animals are placed into groups according to their similarities.
<b>environment</b>	An environment contains many habitats and these include areas where there are both living and non-living things.
<b>habitat</b>	The specific area or place in which particular animals or plants may live. 
<b>invertebrates</b>	Animals without a backbone e.g. insects, spiders, worms, slugs and snails.
<b>organism</b>	This is another word that can be used to mean 'living things'.
<b>species</b>	A group of similar animals or plants.
<b>specimen</b>	A particular plant or animal that scientists study to find out about its species.
<b>vertebrates</b>	Animals with a backbone, which can be separated into five main groups.

**Changes to the Environment**

Changes to the environment can be natural or caused by humans. Changes to an environment can have positive as well as negative effects. Examples of things that can change an environment:

**Natural changes**

- earthquakes
- storms
- floods
- droughts
- wildfires
- the seasons

**Human-made**

- deforestation
- pollution
- urbanisation
- the introduction of new animal or plant species to an environment
- creating new nature reserves.

Plants and animals rely on the environment to give them everything they need. Therefore, when habitats change, it can be very dangerous to the plants and animals that live there.



forest fire



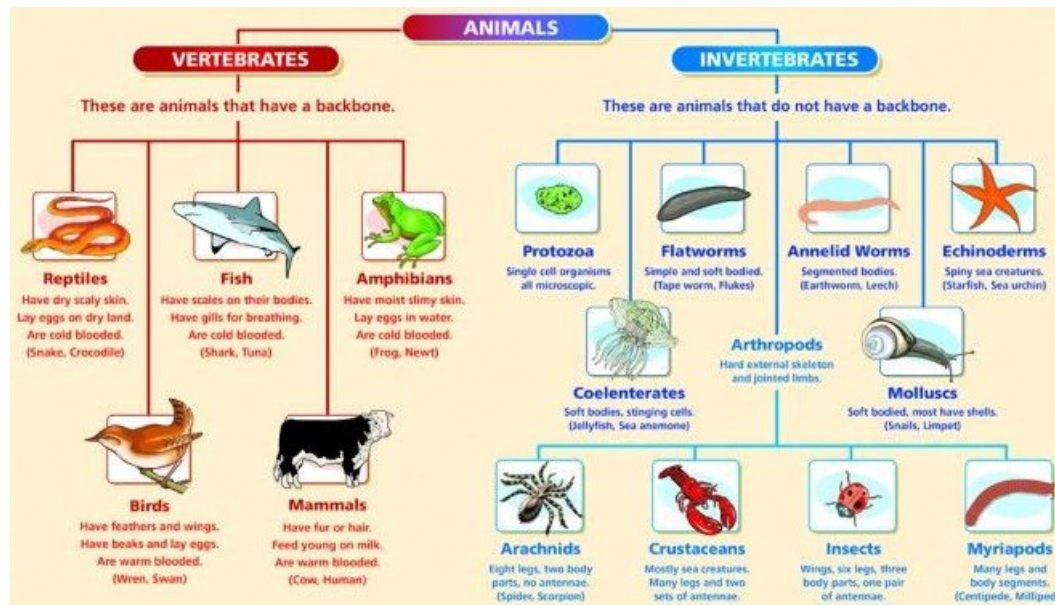
air pollution



flooding



water pollution



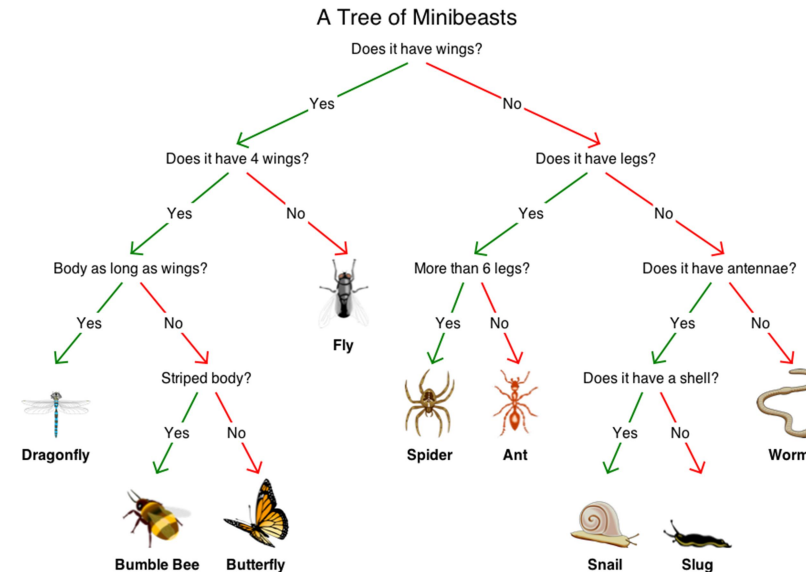
## Keys and Identification

Keys are used to identify different species. A key will usually ask questions based on easily identifiable features of an organism. Classification keys use questions to which there are only two answers – yes or no. They can be presented as a table of questions, or as a branching tree of questions. A Venn diagram is also a way of classifying animals.

### An example of a Venn diagram



### An example of a 'branched diagram'



## Famous Scientist - Maria Merian



Like most children, Maria Merian was fascinated by insects. She loved watching them and learning about them. But, she lived during a time when people believed insects were evil. People thought they were caused by the devil and anyone who liked them must be a witch. Maria set out to prove people wrong because she thought this idea was silly.

As a child, she secretly began keeping insects and amphibians and studying the process of metamorphosis. She was particularly fascinated with butterflies and moths and kept silkworms and other caterpillars. She painted beautiful paintings of the animals.

Maria eventually shared her paintings with others and became a famous artist and scientist. She helped people begin to understand that these animals were not dangerous or evil. She travelled to Africa and South America to study the animals there.

