



# Science - Living Things: Classifying big and small

Who is Carl Linnaeus and how did he contribute to our understanding of living things?

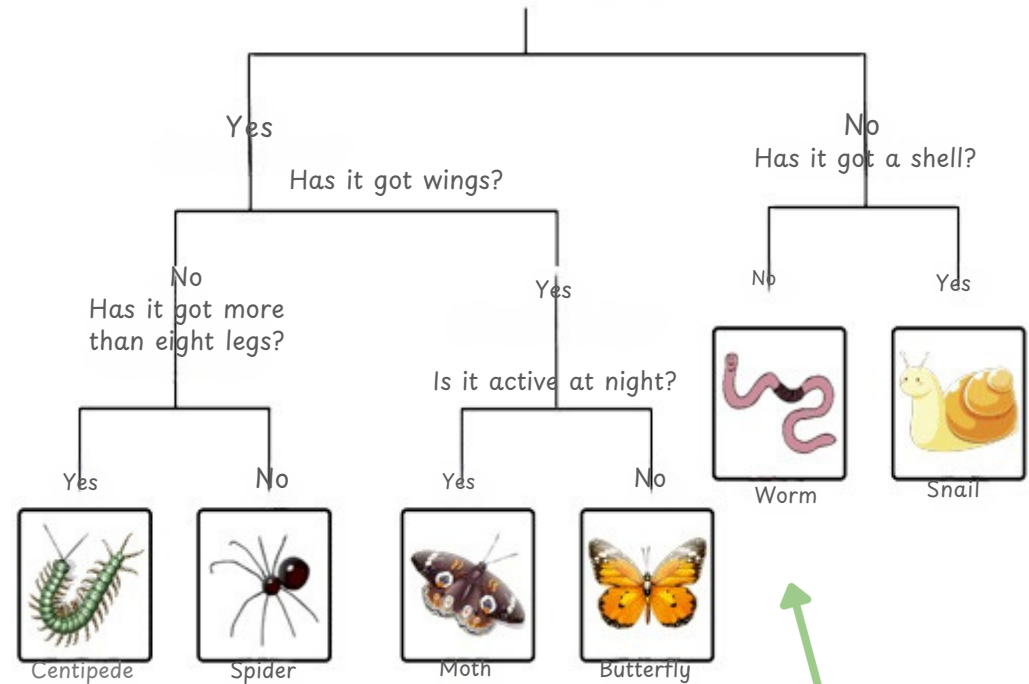


## Key Vocabulary

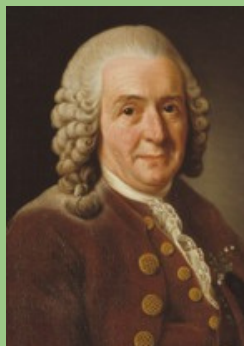
<b>Characteristic</b>	A feature that allows something to be sorted into a group.
<b>Classify</b>	To group something based on similarities.
<b>Linnaean system</b>	A system created by Carl Linnaeus to classify living things according to shared characteristics.
<b>Classification key</b>	A diagram used to sort organisms using their similarities and differences.
<b>cold-blooded</b>	Animals that rely on external sources, like the Sun, to control their body temperature (e.g. fish, amphibians and reptiles).
<b>micro-organism</b>	A microscopic living thing (e.g. bacteria, protists and some fungi).
<b>organism</b>	A living thing
<b>Warm-blooded</b>	Animals that can control their body temperature internally (e.g. mammals and birds).

**Classification keys** can be used to sort and **classify** living things. They can use questions or statements.

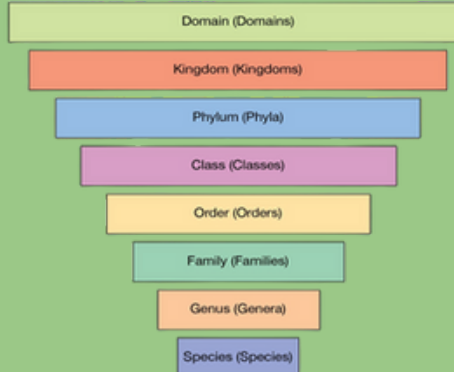
Has the mini-beast got legs?



**Carl Linnaeus** developed the Linnaean system for sorting and classifying living things according to shared characteristics. His scientific process involved observing, recording the information and making conclusions.



How animals are classified



A **branching key** is a type of classification key used to identify organisms. The animals and plants are sorted into their correct groups by **asking yes or no questions**. By answering these questions about the **characteristic** of an organism you are led in a specific direction through the chart, that will lead you to the name of the organism you are investigating.



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## Vertebrates: animals with a backbone.

Fish	Amphibians	Reptiles	Birds	Mammals
<ul style="list-style-type: none"> <li>Wet scales.</li> <li>Soft eggs.</li> <li>Cold-blooded.</li> <li>Gills.</li> </ul>	<ul style="list-style-type: none"> <li>Moist skin.</li> <li>Jelly-coated eggs.</li> <li>Cold-blooded.</li> <li>Gills/lungs/breathe through skin.</li> </ul>	<ul style="list-style-type: none"> <li>Dry scales.</li> <li>Leathery eggs.</li> <li>Cold-blooded.</li> <li>Lungs.</li> </ul>	<ul style="list-style-type: none"> <li>Feathers.</li> <li>Hard-shelled eggs.</li> <li>Warm-blooded.</li> <li>Lungs.</li> </ul>	<ul style="list-style-type: none"> <li>Fur.</li> <li>Produce milk.</li> <li>Warm-blooded.</li> <li>Lungs.</li> </ul>

## Invertebrates: animals without a backbone.

Worms	Snails	Spiders (arachnids)	Insects
<ul style="list-style-type: none"> <li>Soft bodied.</li> <li>Segmented.</li> </ul> 	<ul style="list-style-type: none"> <li>Soft bodied.</li> <li>External shell.</li> </ul> 	<ul style="list-style-type: none"> <li>Exoskeleton.</li> <li>Two body segments.</li> <li>Eight legs.</li> </ul> 	<ul style="list-style-type: none"> <li>Exoskeleton.</li> <li>Three body segments.</li> <li>Six legs.</li> <li>Two pairs of wings (mostly.)</li> </ul> 

## Plants

Mosses	Ferns	Conifers	Flowering plants
<ul style="list-style-type: none"> <li>Simple leaves.</li> <li>No roots.</li> <li>Spores.</li> </ul>	<ul style="list-style-type: none"> <li>Feathery leaves (fronds.)</li> <li>Roots.</li> <li>Spores.</li> </ul>	<ul style="list-style-type: none"> <li>Needle-like leaves.</li> <li>Roots.</li> <li>Seeds in cones.</li> </ul>	<ul style="list-style-type: none"> <li>Broad or long leaves.</li> <li>Roots.</li> <li>Seeds (often in fruits.)</li> <li>Flowers.</li> </ul>

**Micro-organisms:** organisms that are too small to see with the naked eye, including bacteria, protists and some fungi. Bacteria are classified according to their shape:

Spherical	Rod bacteria	Comma	Spiral	Corkscrew
		