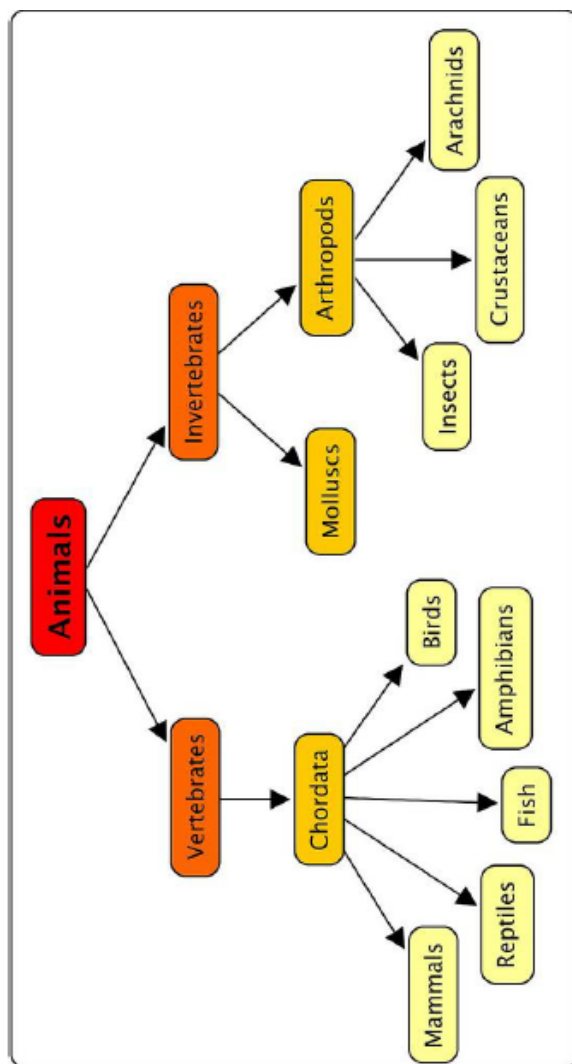


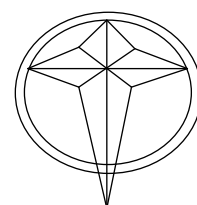
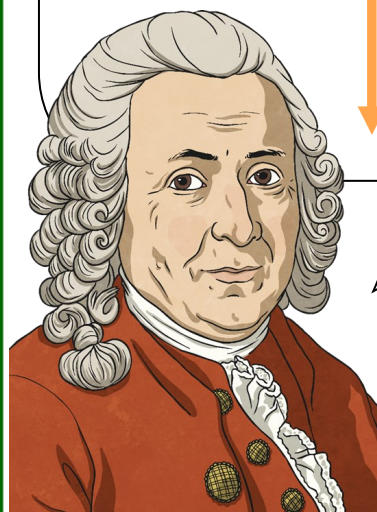
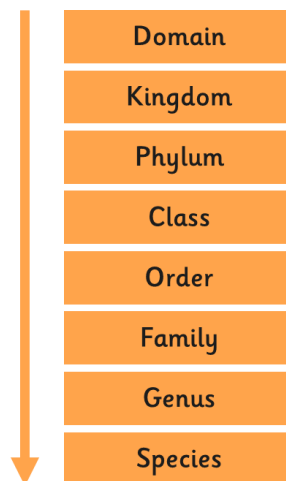
# Year 6—Living Things and Their Habitats Knowledge Organiser

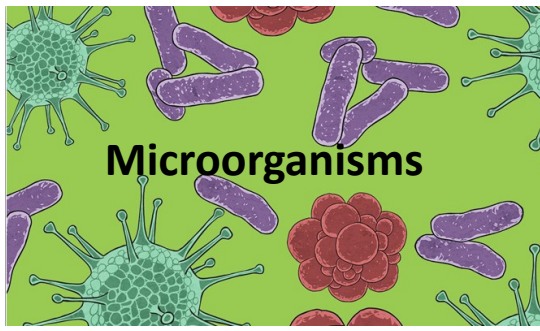
What? (Key Knowledge)	
Grouping living things	
Animals can be put into one of two groups	Vertebrates or Invertebrates
Vertebrates	
Vertebrates	Are animals with a backbone
There are 5 ways Vertebrates can be grouped	<ul style="list-style-type: none"> <li>• Fish</li> <li>• Amphibians</li> <li>• Reptiles</li> <li>• Birds</li> <li>• Mammals</li> </ul>
How to spot a Fish	<ul style="list-style-type: none"> <li>• Breathes with gills/lays eggs in water/has fins and scales/its body temperature changes</li> </ul>
How to spot an Amphibian	<ul style="list-style-type: none"> <li>• Born with gills then develops lungs/lays eggs in water/damp skin/body temperature changes</li> </ul>
How to spot a Reptile	<ul style="list-style-type: none"> <li>• Breathes with lungs/lays eggs on land/dry scaly skin/body temperature changes</li> </ul>
How to spot a Bird	<ul style="list-style-type: none"> <li>• Breathes with lungs/lays eggs with hard shells/has feathers/steady body temperature</li> </ul>
How to spot a Mammal	<ul style="list-style-type: none"> <li>• Breathes with lungs/babies are born live/body hair or fur/steady body temperature/feeds babies milk</li> </ul>
Invertebrates	
Invertebrates	Invertebrates are animals with no backbones.
There are 3 ways Invertebrates can be grouped	<ul style="list-style-type: none"> <li>• Insects</li> <li>• Arachnids</li> <li>• Molluscs</li> </ul>
How to spot an Insect	<ul style="list-style-type: none"> <li>• 3 body sections/6 legs</li> </ul>
How to spot an Arachnid	<ul style="list-style-type: none"> <li>• 2 body sections/8 legs</li> </ul>
How to spot a Mollusc	<ul style="list-style-type: none"> <li>• Slimy foot/Often have a shell</li> </ul>
Deciding which animal or plant is which	
Key Features to distinguish between animals	<ul style="list-style-type: none"> <li>• Invertebrate or Vertebrate</li> <li>• Mammal/Reptile/Fish/Amphibian/Bird</li> <li>• Colour</li> <li>• Length</li> <li>• Number of legs</li> <li>• Number of body segments</li> <li>• Distinguishing features</li> <li>• Habitat</li> </ul>
Key Features to distinguish between plants	<ul style="list-style-type: none"> <li>• Flowering or Non-Flowering</li> <li>• Grass/cereal/garden shrub/deciduous/algae/coniferous/fern</li> <li>• Colour</li> <li>• Height</li> <li>• Number of flowers</li> <li>• Fruit bearing or not</li> <li>• Distinguishing features</li> <li>• Usual location</li> </ul>
Scientists we need to know about	
3 facts about Carl Linnaeus	<ul style="list-style-type: none"> <li>• Born in Sweden on 23rd May 1707</li> <li>• A leading light in the field of Taxonomy</li> <li>• Famous for developing the first system to classify animals effectively.</li> </ul>

## Classification



I'm Carl Linnaeus. Living things can be classified by these levels in my system:



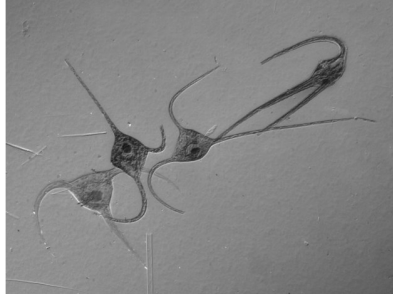


## What are micro-organisms?

Microorganisms are very tiny living things. They are so small that they are not visible to the naked eye, so a microscope is needed to see them.

Microorganisms can be found all around us. They can live on and in our bodies, in the air, in water and on the objects around us. They can be found in almost every habitat on Earth .

Some plants and animals are micro-organisms. For example the dust mite and plankton:

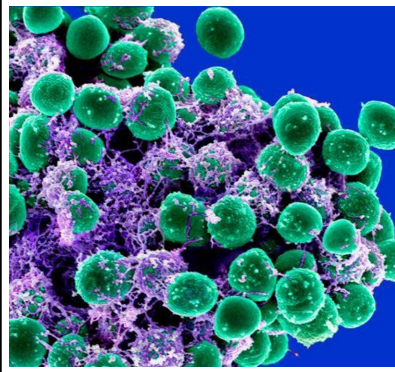


Plankton are microscopic organisms drifting in fresh or sea water, including plants and animals.

Other microorganisms are fungi, such as mould, yeast and Penicillium:

Bacteria are single-celled microorganisms. Bacteria are found in diverse habitats all over the Earth.

This image was produced by a scanning electron microscope. It shows a clump of staphylococcus epidermidis bacteria that is typically found growing on human skin, usually harmlessly



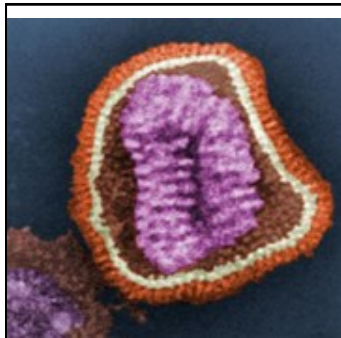
Mould is the common word for any fungus that grows on food or other materials.



Penicillium fungus is used to make the antibiotic penicillin.



Yeast is a microscopic fungus that can be used to raise bread dough.



An influenza virus particle. This micro-organism could cause you to have the flu. Sometimes viruses are called micro-organisms but they aren't really alive. They are infectious agents that replicate inside the cells of living things. Scientists disagree on whether to call viruses micro-organisms. Let's call them unusual micro-organisms.

### **Harmful micro-organisms:**

- The fungi that grows on our food (mould)
- Chicken pox caused by a virus
- Influenza virus
- Food poisoning caused by bacteria that grow on uncooked or undercooked food

### **Helpful micro-organisms:**

- Yeast is added to bread dough to make it rise
- Antibiotics made from fungi kill infections from bacteria
- Yoghurt is made by milk that has been soured by bacteria
- Bacteria are used to ferment milk as part of the cheese making process.