

Key Vocabulary

organism	A living thing such as an animal or plant.
excretion	The process of removing waste matter from an organism.
reproduction	The process of producing offspring. This can happen sexually or asexually.
living	Something alive now that moves, grows, breathes, eats, excretes and reproduces.

Carolus Linnaeus

Carl Linnaeus was a Swedish botanist who created the first system of classifying **organisms** into groups based on their physical features or characteristics. This method became known as the Linnaean system or taxonomy.

He suggested that the **living** world could be divided into three main kingdoms: plants, animals and minerals.

The idea of the Linnaean system is still used to classify animals and plants today but no longer includes minerals. He did not include microorganisms as he did not know of their existence.

Basic Conditions for Life

	Food	Shelter	Air	Water	Space	Light
Animals	Eaten for energy and nutrients.	A place to eat, sleep and raise young. Plants offer shelter to many animals.	Lungs, skin or gills are used to breathe.	Every organism requires water to survive.	Varies from animal to animal.	Animals can be active in the day or at night.
Plants	Plants make their own food through the process of photosynthesis.	Can benefit from shelter against severe weather.	Carbon dioxide and oxygen is required to make and use food.	Absorbed through the roots and transported via the stem.	Overcrowding can prevent growth.	Plants need light to make their own food.

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coniferous	Trees that produce cones and do not produce flowers. Many evergreen trees are conifers.
warm-blooded	Animals that can keep their body temperature warmer than their environment.
cold-blooded	Animals that need the environment around them to help regulate their body temperature.
crustaceans	Organisms that have a hard exoskeleton, two pairs of antennae and mainly live in water.
annelids	Segmented worms with long, soft bodies and no legs.
echinoderms	Marine invertebrates that have arms or spines coming from the centre of their body.
molluscs	Organisms with soft bodies and tentacles on their heads.

Types of Microorganisms

Microorganisms are very small **organisms** or infectious agents that can only be seen using a microscope.

Some microorganisms are harmful and cause disease. Many are helpful and play a vital role in supporting life on Earth and in keeping humans healthy. They exist in and on our bodies, as well as in the air, water and on objects.

Microorganisms include bacteria, viruses and fungi but some animals (e.g. dust mites) and plants (e.g. phytoplankton) are also microorganisms.

Bacteria	Viruses	Fungi
Can be shaped like a rod, sphere or spiral.	Smaller than bacteria and often spherical or rod-shaped.	Often grow in tube-shaped filaments.
Can be helpful in the human digestive system.	Require a host organism to survive.	Some types are edible.
Can cause food poisoning and other infections.	Can cause the common cold.	Can cause skin infections.