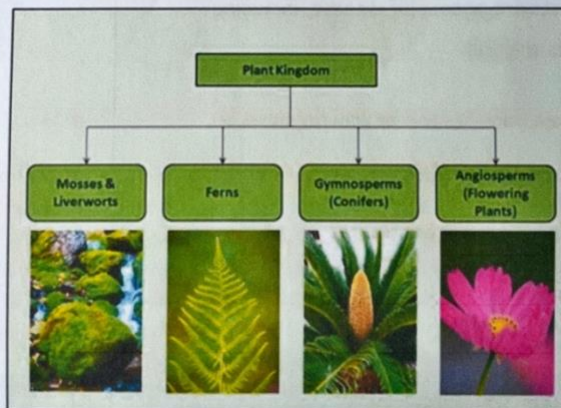


The Plant Kingdom (Plantae)

Plants are multicellular, eukaryotic organisms that use chlorophyll in specialised cellular structures called chloroplasts to capture sunlight energy and convert it into organic matter. We refer to plants as autotrophs ("self-feeders"). Plant cells possess a cell wall composed of cellulose and they store their carbohydrates as starch.

Some plants such as the cereal, maize, are flowering plants. Some, like pea and bean plants are herbaceous legumes and some are much simpler, such as mosses and ferns.



The Protist Kingdom (Protoctista)

Many protocista are microscopic single-celled organisms.

Some, like Amoeba, look like animal cells whilst others such as the alga, Chlorella, are more like plant cells. Some are more fungi-like, such as the slime molds.

Although most algae are unicellular, some such as seaweeds are multicellular. Some protists are agents of disease, including Plasmodium which causes malaria.

- Some protists are plant-like and can photosynthesise.
- Some absorb nutrients from decaying matter.
- Some hunt their food or act as parasites.



Amoeba



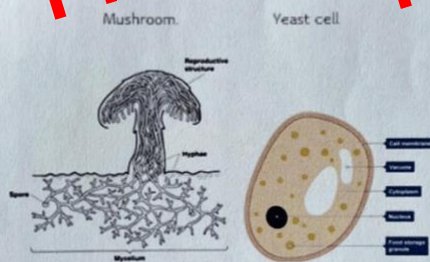
Chlorella



Plasmodium

The Fungi Kingdom (Fungi)

Fungi is the name given to a strange group of living things including mushrooms, toadstools, moulds, yeast and thousands of other wonderful things. Some, like mushrooms, are multicellular but some, like yeast, are unicellular. Their cells lack chlorophyll and so cannot perform photosynthesis. Fungi reproduce by spores carried in the air.



The cell walls of any fungus are composed of chitin (ki-tin).

The bodies of multicellular fungi are made up of thread-like structures called hyphae (high-fee). These hyphae can interconnect to form a tissue called mycelium. Their feeding is described as saprotrophic. This means that they feed on dead organic matter by secreting enzymes on to their food, digesting it externally and then absorbing the broken-down nutrients. They can store carbohydrates as glycogen, similar to animals. Mucor, a pin mould, is an example of a multicellular fungus.

The Animal Kingdom (Animalia)



The organisms classified into this kingdom are multicellular (have their DNA contained in a nucleus) and, because they do not have chlorophyll, are unable to photosynthesise. We call them heterotrophs, meaning "eater of others", because they must eat pre-existing organic matter (either plants or other animals) to sustain themselves. They store their carbohydrates as glycogen mainly in the liver and muscles. Examples include mammals like humans and insects such as the mosquito.

We usually divide the Animal Kingdom into two large groups, the vertebrates (with backbones) and the invertebrates (without backbones). Animals have tissues that are more complexly constructed than plants and unicellular organisms. Animals also possess nervous tissue, which has reached high stages of development into nervous systems and brains. Animals are able to move from place to place (locomote) using their muscular systems.