

GROUPING LIVING THINGS (BIOLOGICAL CLASSIFICATION)

The *order of classification* for all living things is as follows.

Kingdom
Phylum
Class
Order
Family
Genus
Species

Mnemonic to remember this order:

Kings Play Chess On Flimsy Glass Squares

At each level, the similarities between the members of the group increases.

i.e. At the lowest level (species), all members are very much alike.

Generally, the scientific name includes the genus and species.

e.g. Dog - *Canis familiaris*.
Human - *Homo sapien*.
Bottle-nose dolphin - *Tursiops truncatus*.

At the first level there are *five kingdoms* - animals, plants, fungi, protists, and monera.

Animals

- Eat other organisms to get energy (are dependent on them).

Plants

- Make their own food by *photosynthesis* using sunlight.

carbon dioxide + water + energy → food (sugars) + oxygen

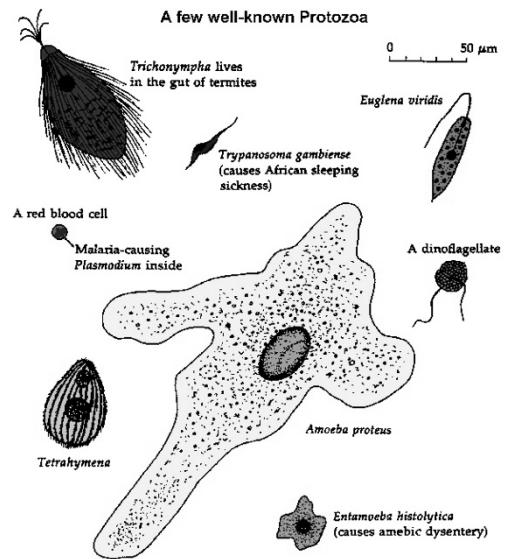
Fungi

- Mushrooms, toadstools, bread mould, yeasts.
- Don't photosynthesise (no **chlorophyll**) so they grow on dead material.
- Reproduce by **spores**.
- Most are **decomposers** - they breakdown dead material.
- Some are **parasites** - they grow on living things and get their nutrients.
e.g. Ringworm on humans, powdery mildew on plants.



Protists

- Most are single-celled organisms; some are multi-celled (seaweed).
- Algae - photosynthesise but have no roots, stems or leaves like plants.



Monera

- Bacteria, blue-green algae.
- All are single-celled.
- Bacteria breakdown dead material; can cause diseases.

LOOKING AT MONERA

Helpful Bacteria

- Good bacteria in our intestines fights off bad bacteria such as salmonella.
- Bacteria on the skin and in the mouth also fights bad bacteria and protects us.
- Bacteria in the gut gives the body vitamin K.
- Cheese and yoghurt is made by bacteria that curdles milk and separates it into solid and liquid.

- Bacteria makes soil healthy by breaking down dead matter to provide nutrients for plants.

Harmful Bacteria

- Cause food poisoning by spoiling food.
- Cause diseases such as cholera, meningitis, tetanus and legionnaire's disease.
- Causes diseases in plants and animals.

