

The Five Kingdoms

The five kingdom proposal was introduced by Robert Whittaker in 1968 as a way to categorise all organisms.

Living organisms are divided into five kingdoms:

- Prokaryotae
- Protoctista
- Fungi
- Plantae
- Animalia

Prokaryotae

- Unicellular and Microscopic.
- Non-membrane bound (no nuclear membrane, no ER, no mitochondria).
- Cell wall made of murein.
- Examples: Bacteria or Cyanobacteria (photosynthesising bacteria).

Protoctista

- Mainly small eukaryotic organisms.
- Many live in aquatic environments.
- This is usually the kingdom where organisms which aren't animals, plants or fungi go.
- Examples: Algae, slime moulds and the malaria causing Plasmodium.

Fungi

- Eukaryotic
- Multicellular
- Cell wall made of chitin.
- The members of this kingdom don't possess photosynthetic pigments and are therefore heterotrophic.
- Examples: Mushroom, Mold, Puffball

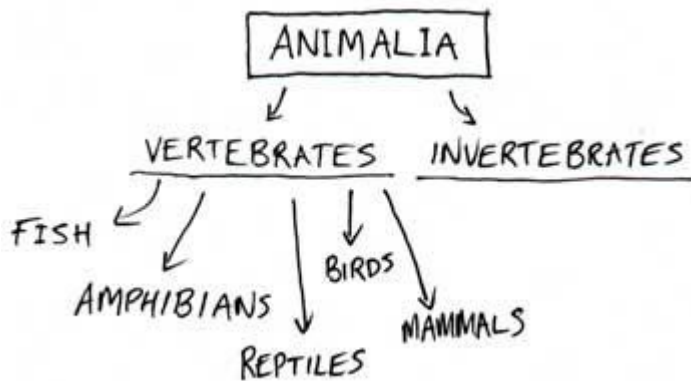
Plantae

- Eukaryotic
- Multicellular
- Cell wall made of cellulose.
- Members of the plantae group contain photosynthetic pigment and gain their energy through it and are therefore autotrophic.

Animalia

- Eukaryotic

- Multicellular
- Heterotrophic
- The members of this kingdom can be split into two groups, vertebrates and invertebrates. The diagram below shows the different subsections of the animalia



The vertebrate subsection of the animalia kingdom can be split again into five different sections:

- Fish
- Amphibians
- Reptiles
- Birds
- Mammals

Kingdom	Number of Cells	Type of Cells	How they gain their energy?	Do they move?	Examples
Prokaryotae	Unicellular	Prokaryotic	Some Heterotrophic, Some Autotrophic	Some	Bacteria, Cyanobacteria
Protoctista	Mainly Unicellular	Eukaryotic	Some Heterotrophic, Some Autotrophic	Some	Amoeba
Fungi	Multicellular	Eukaryotic	Heterotrophic	Mainly not	Mushroom, Mold, Puffball
Plantae	Multicellular	Eukaryotic	Autotrophic	No	Trees, Flowering Plants
Animalia	Multicellular	Eukaryotic	Heterotrophic	Yes	Bird, Human, Cow