

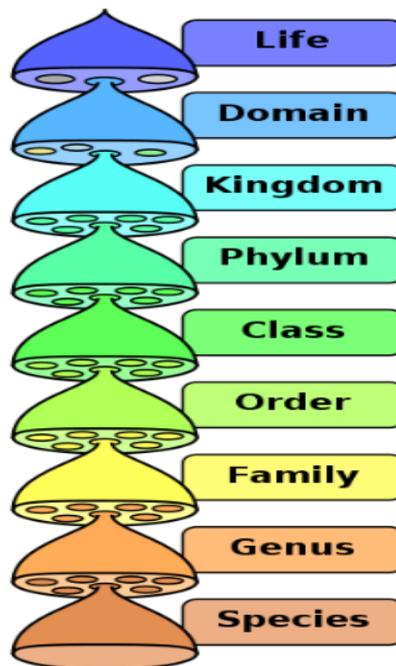
Diversity in Living Organisms

Some factors for classification:

Cell type	Eukaryotes	Genetic material surrounded by membrane
	Prokaryotes	No membrane
Cell organisation	Unicellular	One cell
	Multicellular	Many cells
Nutrition	Autotrophic	Making own food
	Heterotrophic	Depending on autotrophs for food
Reproduction	Sexual	Two parents needed
	Asexual	Single parent
Respiration	Aerobic	Requires oxygen
	Anaerobic	Does not require oxygen
Movement	Mobile	Have body parts for locomotion
	Immobile	Rooted to spot

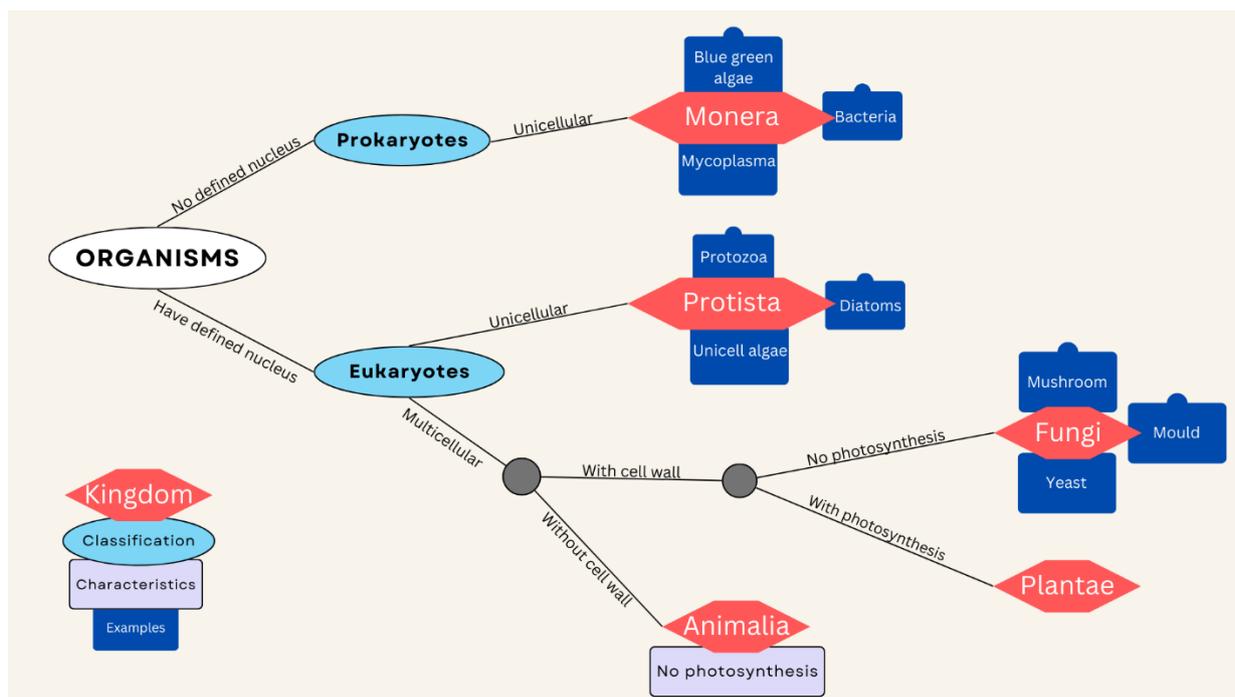
Main classifications

- a. Kingdom
- b. Phylum - for animals
Division - for plants
- c. Class
- d. Order
- e. Family
- f. Genus
- g. Species



Kingdoms: Five accepted kingdoms

- a. Monera
- b. Protista
- c. Fungi
- d. Plantae
- e. Animalia



Kingdoms	Characteristics	Examples
Monera	<ul style="list-style-type: none"> • No defined nucleus (Prokaryotes) • Unicellular • Autotrophic or Heterotrophic • Aerobic or Anaerobic • Chemosynthetic or Photosynthetic 	Bacteria Blue-green algae Mycoplasma
Protista	<ul style="list-style-type: none"> ○ Have defined nucleus (Eukaryotes) ○ Unicellular ○ Have hair or whip like structures ○ Autotrophic or Heterotrophic 	Protozoa Unicellular algae Diatoms
Fungi	<ul style="list-style-type: none"> • Eukaryotes • Multicellular • Heterotrophic, Saprophytic or Parasitic • Aerobic 	Yeasts Moulds Mushrooms
Plantae	<ul style="list-style-type: none"> ○ Eukaryotes (with cell walls) ○ Multicellular ○ Autotrophic ○ Immobile ○ Photosynthetic ○ Aerobic 	
Animalia	<ul style="list-style-type: none"> • Eukaryotes (without cell walls) • Multicellular • Heterotrophic • Mobile • Aerobic 	

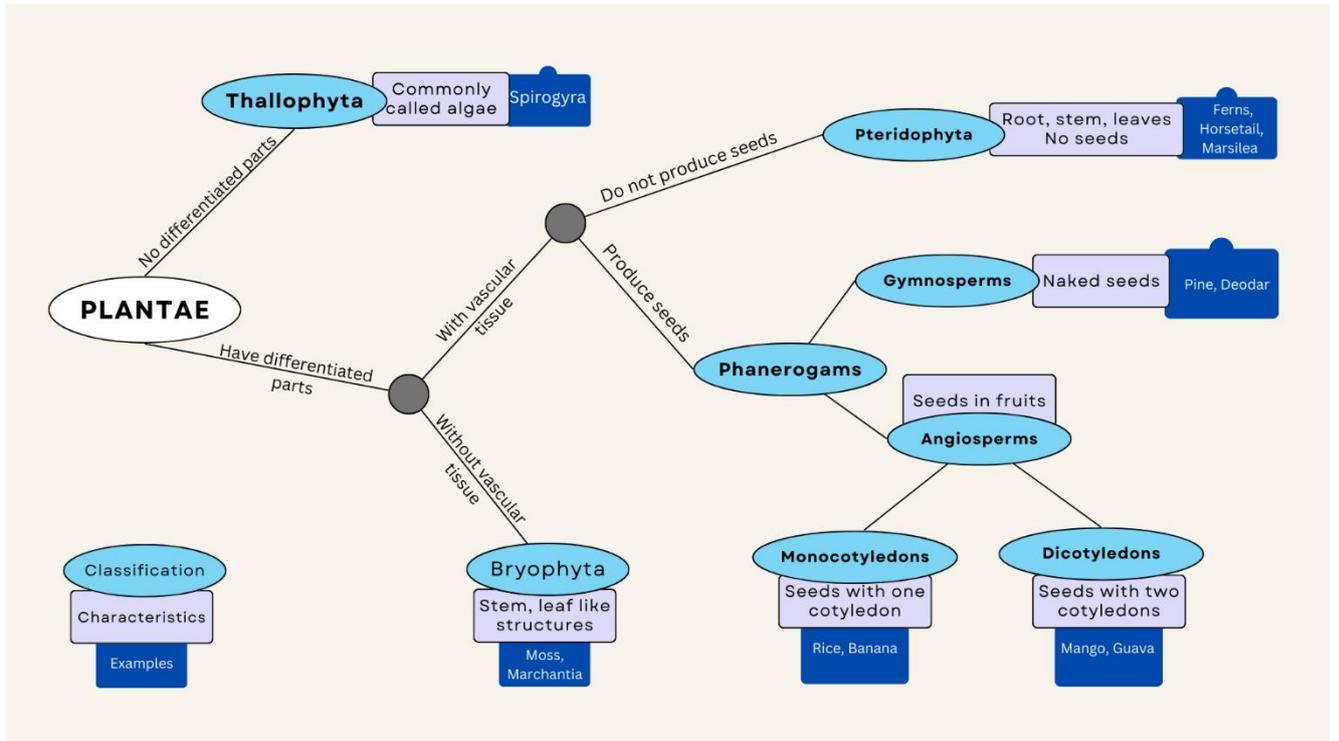
Factors for Classification of Plants

Body parts	Differentiated	Cannot distinguish parts
	Non-differentiated	Can distinguish parts
Tissues	Without vascular tissues	For conduction of water and other substances
	With vascular tissues	
Seed production	Do not produce seeds	Hidden reproductive organs
	Produce seeds	Seeds do propagation
Type of seeds	Open seeds	No need for fruits
	Enclosed seeds	Inside fruits
Seed embryo	One cotyledon	Cotyledon is the nutritious part that provides food for the seedling
	Two cotyledons	

Plantae Classifications

Classification	Characteristics	Examples
Thallophyta	<ul style="list-style-type: none"> • No well differentiated body • Aquatic • Commonly called algae 	Spirogyra Ulothrix Cladophora Ulva
Bryophyta	<ul style="list-style-type: none"> ○ Have stem and leaf-like structures ○ No vascular tissues for water conduction 	Moss (Fanaria) Marchantia
Pteridophyta	<ul style="list-style-type: none"> • Have roots, stem and leaves • Have vascular tissues for water conduction • Have no proper reproductive organs (seeds) 	Ferns Horsetail Marsilea

Seed producing plants belong to category Phanerogams



Animalia Classifications

