Classification (5.5)

Binomial system of nomenclature (5.5.1)

- Created by Carl Linnaeus
- Everything given two latin names:
  - Genus followed by species (italics)
- Benefits of a scientific naming system include:
  - Allows international recognition of species
  - Easier to sort organisms by characteristics
  - Shows degree of relation (species share traits)
  - Allows predictions to be made

Taxonomic Classification (5.5.2)

TAXA	PLANT	ANIMAL
Kingdom	Plantae	Animalia
Phylum	Angiospermaphyta	Chordata
Class	Dicotyledoneae	Mammalia
Order	Ranales	Primate
Family	Ranunculacae	Hominidae
Genus	*Ranunculus*	*Homo*
Species	*acris*	*sapien*
Common Name	Buttercup	Human

Distinguish between plant phyla (5.5.3)

	Bryophyta *(mosses)*	**Filicinophyta** *(ferns)*	**Coniferophyta** *(woody trees)*	**Angiospermophyta** *(flowering plants)*
True leaves, roots & stems	No	Yes	Yes	Yes
Seeds	No	No	Yes	Yes
Flowers	No	No	No	Yes
Other Features	Rhizoids	Large fronds Rhizomes	Narrow leaves Woody stems	Seeds in fruits

Distinguish between animal (invertebrates) phyla (5.5.4)

	Symmetry	Body Layers	Segmented Body	Other Features
Porifera (*sponges)*	Asymmetric	None	No	Small holes to filter air/food Spicules for support
Cnidaria *(jellyfish, coral)*	Radial	2	No	Stinging cells (cnidocytes)
Platyhelminthes *(flatworms)*	Bilateral	3	No	No body cavity Soft and flattened shape
Annelida *(worms, leeches)*	Bilateral	3	Yes	Has ringed segmentation with some specialisation
Mollusca *(snails, octopi)*	Bilateral	3	No	May have a shell Extremely varied group
Arthropoda *(insects, spiders)*	Bilateral	3	Yes	Hard exoskeleton (chitin) Jointed appendages

Dichotomous Keys (5.5.5)

- A dichotomous key is a method of identification whereby a group of organisms are divided into two categories sequentially, until all organisms are individually identified