

the plant kingdom sorted by what a plant has: tissue, vessels, seeds and flowers



The characters that do the sorting

- does it have a body divided into root, stem and leaf, or is it an undifferentiated thallus?
- does it have vascular tissue, the xylem and phloem that carry water and food? Plants that do are tracheophytes
- does it produce seeds, or does it reproduce by spores?
- if it has seeds, are they enclosed in a fruit or left naked?
- each question splits the kingdom once, and the four together produce the whole classification
- the sequence matters: each group has everything the ones before it had, plus the new feature

Seed plants _____

Pteridophyta _____

Bryophyta _____

Thallophyta _____



the groups stacked in order of increasing complexity: each rung adds a feature the one below lacks, first a differentiated body, then vascular tissue, then seeds

The main groups

Thallophyta

algae. Body is a thallus, not divided into root, stem or leaf. No vascular tissue, mostly aquatic. Spirogyra, Ulothrix, Chara

Bryophyta

the amphibians of the plant kingdom. Body is differentiated but there is still no vascular tissue, so they stay small and need water to reproduce. Moss, Marchantia

Pteridophyta

first with vascular tissue, so they grow larger. Still reproduce by spores and have no seeds. Ferns, Marsilea, Equisetum

Gymnosperms

first with seeds, but the seeds are naked, not enclosed in a fruit. Usually woody and perennial. Pine, Cycas, Cedar

Angiosperms

flowering plants, seeds enclosed in a fruit. Much the largest group, and the one most food comes from

the names carry the meaning: gymno means naked and angio means covered, both referring to the seed, so the two words tell you the difference without any memorising