



algae to angiosperms, one generation always shrinking into the other

Plant kingdom, the five groups

- grouped by whether vascular tissue is present, whether seeds are produced, and whether that seed sits naked or enclosed
- the ladder runs Algae, Bryophytes, Pteridophytes, Gymnosperms, Angiosperms, roughly the order each trait first appears

Five groups, one defining leap each

Algae

simplest, mostly aquatic, no true root, stem or leaf

Bryophytes

first land plants, still need water to fertilise

Pteridophytes

first plants with real vascular tissue

Gymnosperms

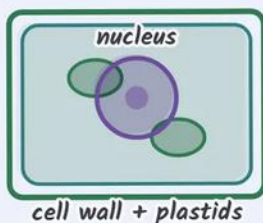
first to make seeds, but naked, with no fruit around them

Angiosperms

flowering, seed enclosed inside a fruit

Algae, key features

- chlorophyll-bearing, a thallus body: no true root, stem or leaf
- primarily aquatic, fresh or marine
- reproduce vegetatively (fragmentation), asexually (spores) and sexually, ranging from isogamous (identical gametes) to oogamous (a large non-motile egg and a small motile male gamete)
- form the base of most aquatic food chains and release close to half the world's oxygen through photosynthesis



a boxy, walled cell with plastids inside and the nucleus at the centre