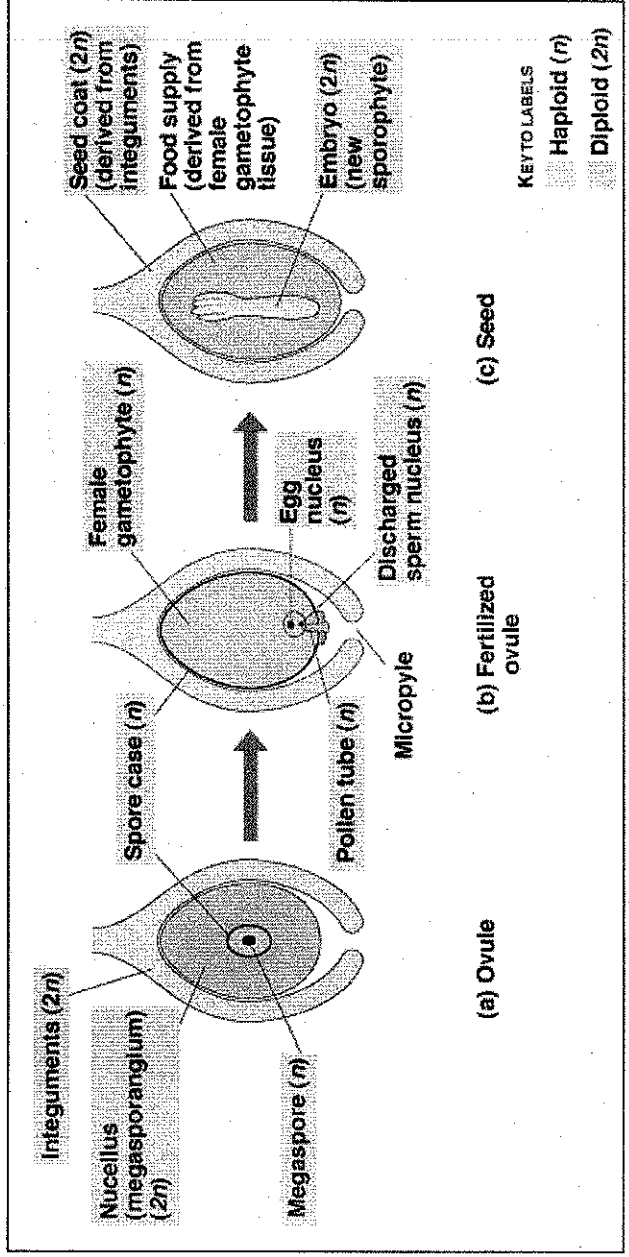
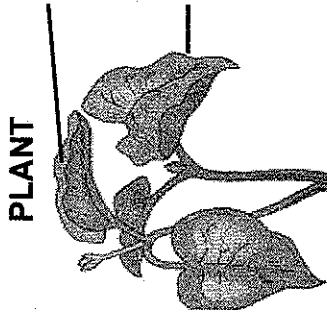


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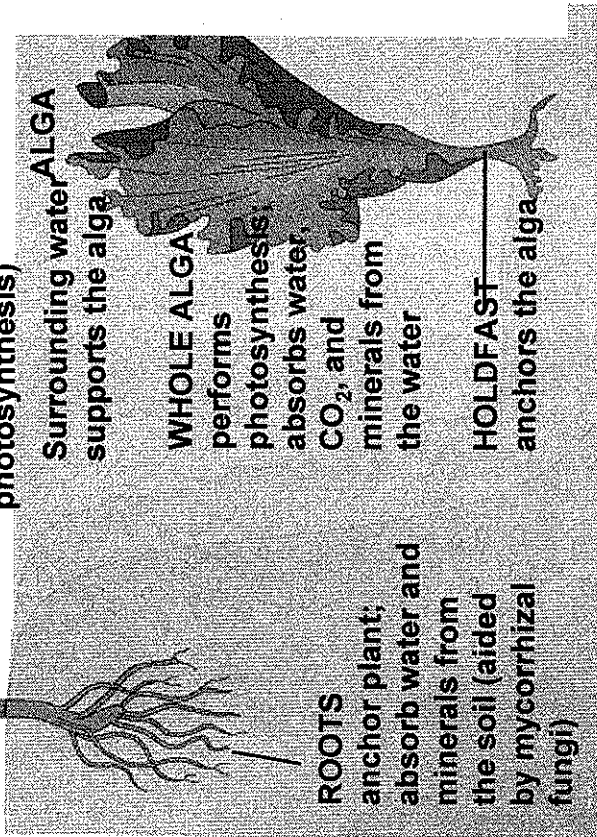
Land adaptations



LEAF
performs photosynthesis

CUTICLE
reduces water loss; **STOMATA** allow gas exchange

STEM
supports plant (and may perform photosynthesis)



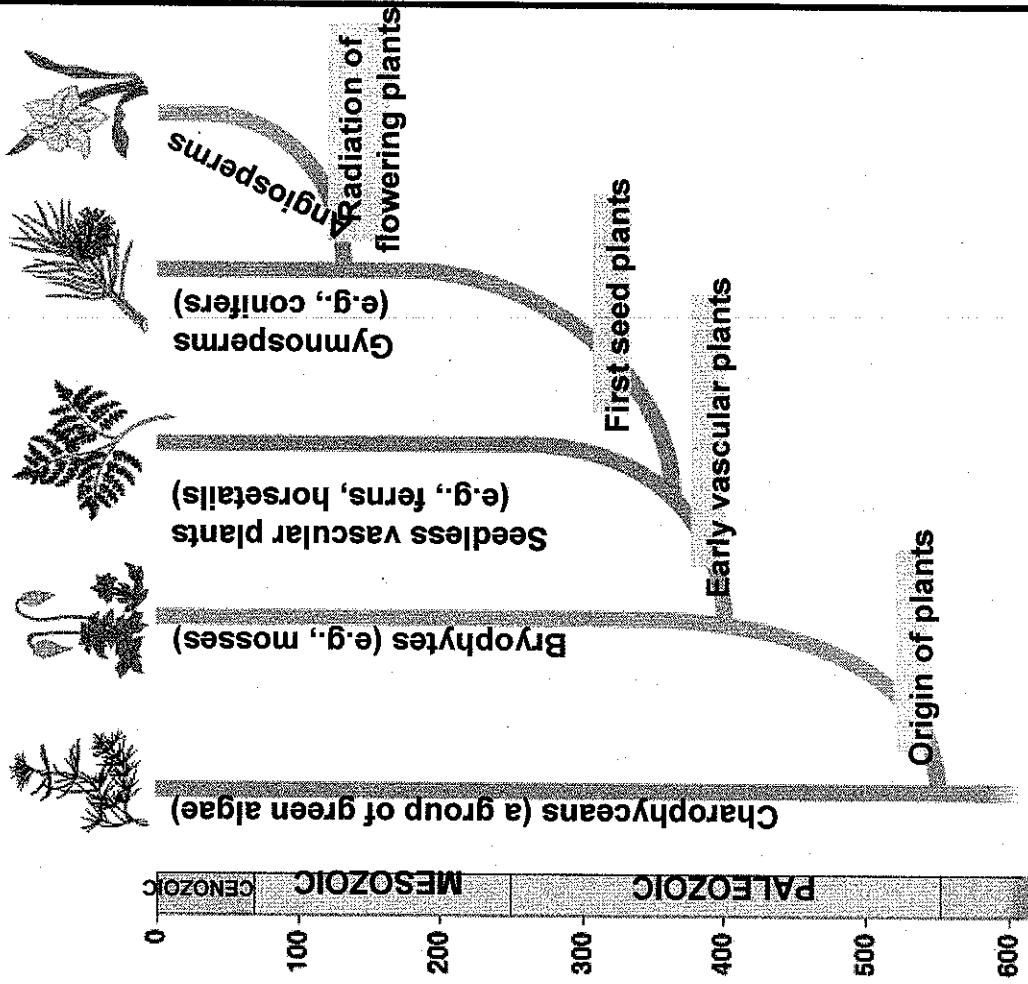
ROOTS
anchor plant; absorb water and minerals from the soil (aided by mycorrhizal fungi)

Surrounding water ALGA
supports the alga

WHOLE ALGA
performs photosynthesis; absorbs water, CO₂, and minerals from the water

HOLDFAST
anchors the alga

Plant phylogeny



0 100 200 300 400 500 600
PALEOZOIC MESOZOIC CENOZOIC



Bryophytes (e.g., mosses)



Seedless vascular plants (e.g., ferns, horsetails)



Gymnosperms (e.g., conifers)



Angiosperms
Radiation of flowering plants

First seed plants

Early vascular plants

Origin of plants

Charophyceans (a group of green algae)

