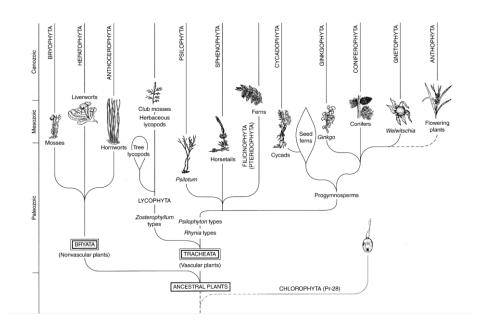
Kingdom Plantae

Why are plants important? Take notes		

Characteristics of Plants

- All plants:
 - o are multicellular eukaryotes
 - o have cells with a cell wall and chloroplasts
 - o are sessile
 - o display an alternation of generations life cycle



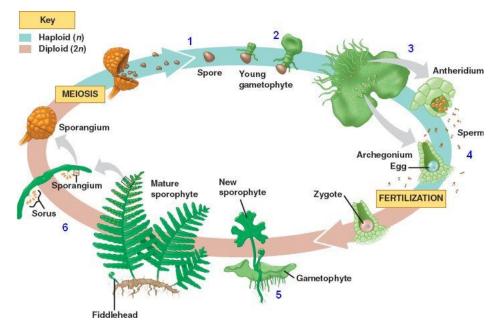
Bryophytes

Name the three types of bryophytes (A)	Seta Foot
In what types of environments are you m Antheridium:	
Antneriaium:	Lifecycle of a Bryophyte archegonia with eggs (n) plant (2n) plant (2n) plant (2n)
Sporangium:	mature gametophyte plant (2n) sporangium (2n) sporangium (2n) sporangium (2n) stalk (2n) stalk (2n) biploid gametophyte generation sporangium (2n) spor
Rhizoid:	young gametophyte plant (n) germination spore (n) spores (n)

The Evolution of the Sporophyte

What 2 key evolutionary adaptations did sporophy	ytes develop that bryo	ophyte gametophytes lacked?
(1)		
(2)		
Lycophytes and Pterophtes: The Fern	S	
Describe the 3 main parts of a fern sporophyte		sporophyte (2n)
Frond:		spotophyte (Ell)
Phizomo	gam	etophyte (n)
Rhizome:		
	J	rootlets
Sori:	rhiz	oids
		e)
		PARTS OF A FERN
	Frond The whole fern leaf; blade and stalk.	Axis – rachis The stalk within the blade.
	Blade The expanded,	Pinna – leaflet
What are the main limitations for ferns?	leafy part of the frond.	A primary division of the blade.
		Pinnule – subleaflet A division of the pinna.
	Stalk — Sti The stalk belo the blade.	
	Rhizom	Fiddlehead (Crozler)
		After Sir all all all all all all all all all al
What is the difference between a rhizoid and a roo	ot?	
What is the advantage of fronds over gametophyt	e "leaves"?	
This is the davantage of frontas over gametophyt	c .caves .	

Lifecycle of a Fern



Gymnosperms: The Naked Seed Plants

What has happened to the gametophyte generation of gymnosperms?

What is contained in a seed?	
What is the advantage of seeds over spor	res?
What is the main limitation of gymnospe	rms?





Pollen grains contain microscopic male gametophytes that produce sperm Pine cones contain structures called **ovules**. Each ovule holds a tiny female gametophyte.



When an ovule is pollinated, it develops into a **seed**

Angiosperms: The Flowering Plants

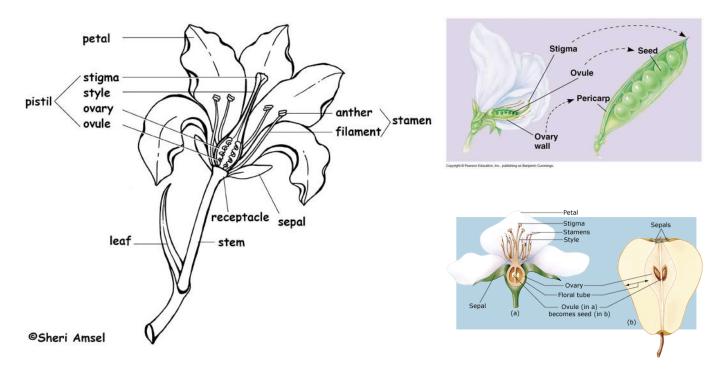
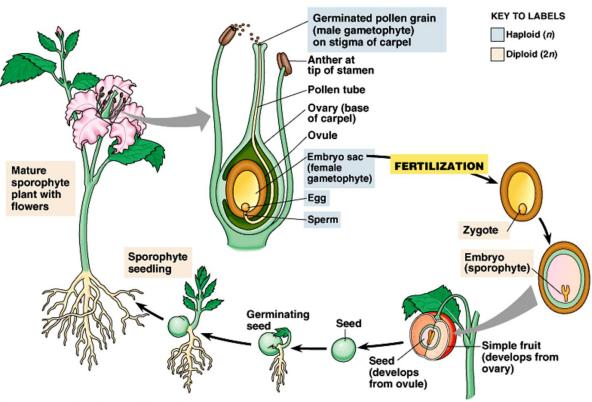


Figure 38.1 Simplified overview of angiosperm life cycle



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What is the main difference between gymnosperm ovules and angiosperm ovules?
What is the main advantage for angiosperms of producing flowers?
Why does evolution favour fewer pollinating species over many for each species of plant?
Why do some angiosperms produce fruits or nuts?
Use your textbook to answer the following two questions: What is a cotyledon?
Name the two main sub-groups of flowering plants

