Tahsili Bio (Plants) Cheat Sheet

by TheGoldenClover via cheatography.com/201551/cs/42917/

Non-Vascular Plants

character-istics	lack vascular tissue - nutrients travel by diffusion
Non Vascular Plant Groups	mosses (bryophyta) - Hornworts (anthocerophta) - Liverwort (hepaticophyta)
mosses	simple photosynthetic leaf like structures, and re a major component of **peat** which is used as fuel
Hornwort	one large chloroplast per cell, symbiotic relationship with cyanobacteria
Liverwort	groundcovers that grow parallel to the ground, one of the simplest plants
environment	they grow in very dark, moist areas

Vascular Seed Plants

Gymnosperms	have naked seeds not enclosed in a fruit
Gymnosperm Types	Coniferophyta - Ginkophyta - Gnetophyta - Cycadophyta
Cycadophyta	delicate stems with storge tissue
Gnetophyta	produces Ephedrin that is used in decongestants and antihistamines
Ginkophyta	fan shaped leaves - foul odor
coniferophyta	evergreen trees that have needle like leaves
Angiosperm	have seeds enclosed in a fruit
Angiosperm Classification	Monocotylodons (petals in multiples of 3) - Dicoty-lodons (flowers in multiples of 4 or 5)

Plant Tissue

types of plant tissue	meristematic - dermal - vascular
meristematic tissue	contains cells that divide actively in the plant's lifetime
types of merist-ematic tissue	Apical Meristems - Intercalary Meristems - Lateral Meristems
Apical Meristems	specialized zones of growth in the tips
Intercalary Meristems	responsible for growth after trimming
Lateral Meristems	responsible for growth upwards (shoot) and downwards (root)
Dermal Tissue	trichomes - Stomata - Root hairs
trichomes	produce a barrier against nature
Stomata	small openings that allow the transfer of materials inside and outside the leaves
Vascular Tissue	Xylem - Phloem
Xylem	transport of water and materials
Phloem	transport of carbohydrates

Flowering Plants

flower	the main reproductive organ
components	sepal - petal - stamen - pistil
sepal	green and protect the flower
petal	colorful and attract pollinators
stamen	male reproductive organ made of filaments and anther, and produce pollen
pistil	female reproductive organ made of the ovary, style, and stigma
stigma	pollen destination site
style	forms a tube connecting the stigma and ovary

Seedless Vascular Plants

Character-istics	larger than nonvascular plants - vascular bundle present (phloem and Xylem) - have a strobilus - reproduce through spores
Lycophyta	are epiphytes - remains are used as fuel
Lycophyta types	Selangiella - Lycopodium
Pterophyta	include dryopteridacae (wood ferns) and Equisetacae (horsetails)
wood ferns	short gametophyte stage - spores may develop without fertiliztion - gametophytes are very small - sporophytes form rhizomes (underground stems for storage)
horsetail	contain silica - hollow stems with scaly leaves

Plant Cells

Characteristics	cell wall present - contain chloroplast
Cell Types	Parenchyma - Collenchyma - Sclerenchyma
parenchyma cells	can divide and repair - store substances - have chloroplasts
collenchyma cells	can divide - provide elasticity and rigidity
Sclerenchyma	cannot divide (dead cells) - provide support - aid in transport
Sclerenchyma subtypes	fibres - sclereids

Plant Hormones

Auxin	first hormone discovered - responsible for apical dominance - produced in active apical areas
Ethylene	the only gaseous hormone - affects fruit ripening - transported by phloem
Gibber-ellins	transported by vascular tissue - promotes cellular elongation - affects germination of seeds - dwarf plants lack gibberellins
Cytokinin	promotes growth

Responses

Nastic response	temporary responses to external stimuli (venus flytrap closing)
Tropism	the directed movement of a plant in response to a stimulus (positive = towards stimulus, negative = away)
types of tropism	phototropism - gravitropism - thigmotropism
thigmo-tropism	growth in response to contact

Structural Differences in Flowering Plants

Complete	has all 4 components of a flower	
Incomplete	lacks one or more component	
Perfect	contains both male and female organs	Ex: sunflower
Imperfect	contains only one reproductive organ	Ex: Palm Tree
Monocots	trimerous	
dicots	tetramerous or pentmerous	