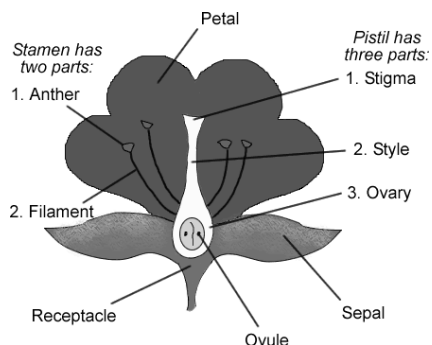


Class Notes <u>World of Plants</u> Ch. 22-25 Main Idea:		Name: _____ Period: _____ Date: _____		Notes:
What is a plant?		<ul style="list-style-type: none"> • Multicellular eukaryotes • Cell was made of cellulose • Develop from multicellular embryos • Do photosynthesis to get energy (autotrophs) <ul style="list-style-type: none"> • Examples: trees, moss, roses 		
What is the formula for photosynthesis and where does it occur?		<ul style="list-style-type: none"> • $6\text{H}_2\text{O} + 6\text{CO}_2 \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ • This reaction takes place in chloroplasts with the help of photosynthetic pigments such as chlorophyll. 		
What is the life cycle of plants?		Plants have an alternation of generations The diploid (2N) phase is the sporophyte -- makes the spores. The haploid (1N) phase is the gametophyte -- makes the gametes. For mosses, the gametophyte is the dominant form. For ferns, gymnosperms, and angiosperms the sporophyte is the dominant form.		
How are plants divided into groups?		Plants are divided into groups based on: <ol style="list-style-type: none"> 1. whether or not they have vascular conducting tissues. <u>Xylem</u> – moves water from the roots up to the leaves <u>Phloem</u> – moves sugars made in the leaves down to the roots. 2. whether or not they make seeds. 3. whether or not they have flowers. 		
Divisions of Plants		Examples	Characteristics	
Bryophytes (mosses)		Mosses Liverworts	<ul style="list-style-type: none"> • Bryophytes do not have special tissues to conduct food and water. • They rely on osmosis to move water around their bodies. Because of this, they don't get very tall. • They rely on water to be able to reproduce because the sperm swim through water to the eggs. 	
Seedless vascular plants (ferns)		Ferns	<ul style="list-style-type: none"> • Ferns are vascular -- they have xylem and phloem. • Xylem and phloem allow these plants to grow taller than mosses. • Ferns are seedless plants. They make spores. 	
Seed plants	Gymnosperms (cone bearers)	Pine trees Conifers Ginkgoes	<ul style="list-style-type: none"> • Have vascular tissue. • Make seeds. • Do not have flowers, but do have cones. • The 1N gametophyte stage is enclosed entirely within the 2N sporophyte structure 	
	Angiosperms (flowering plants)	Tulips Zinnias Cherry trees	<ul style="list-style-type: none"> • Have vascular tissue. • Make seeds. • Have flowers. • The 1N gametophyte stage is enclosed entirely within the 2N sporophyte structure. 	

What is the structure of a flower? How are seeds dispersed?



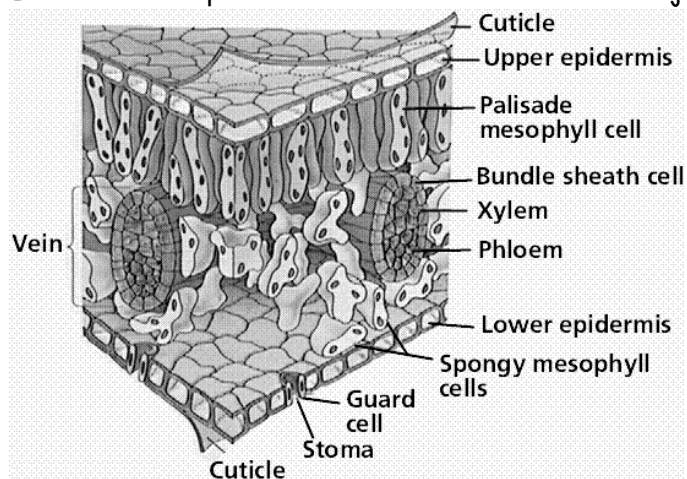
- Flowers contain ovaries which protect the egg.
- Somehow, sperm needs to get to the egg.
- Once the egg is fertilized, it turns into a seed.
- Somehow the seeds need to be dispersed – spread away from the parents.
- Seeds are dispersed by fruit, sticking to the fur of animals, or spread by the wind.

How are angiosperms further divided into 2 groups?

Monocots	Dicots
Single cotyledon	Two cotyledons
Parallel leaf veins	Branched leaf veins
Flower petals in 3's	Flower petals in 4's or 5's
Roots are fibrous	One big tap root

How do plants maintain homeostasis?

Each cell in the plant cross section below has its own job:



What other cool things can plants do?

Phototropism – movement of plants toward light

Gravitropism – roots move down and shoots grow up in response to gravity

Thigmotropism – plants respond to touch

Photoperiodism – plants respond to the amount of daylight

Summary:
