

General characteristics:
 - cell walls contain cellulose
 - chloroplasts for photosynthesis contain chlorophyll

4 main phyla:
 - mosses, ferns, gymnosperms, angiosperms

Mosses:
 - 3 main classes: mosses, liverworts, hornworts
 - no vascular tissue
 - small, live near water

Ferns:
 - 3 main classes: club mosses, horsetails, ferns
 - have vascular tissue (xylem and phloem), contain lignin
 - true roots, stems, leaves
 - rhizomes, spores and fronds

Dec 3-9:25 AM

Gymnosperms
 - 4 main classes, most important: Conifers
 - seeds are in cones
 - Seeds: what are they? Where are they?
 Why have them? What to do with them?
 - Conifers:
 - specialized leaves (how? Why?)

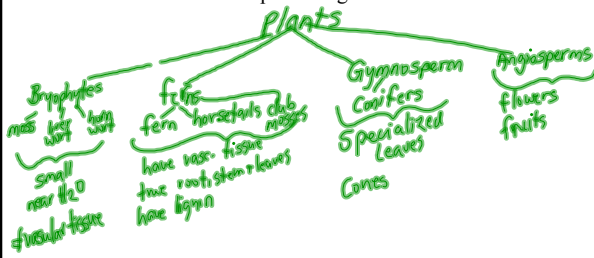
Angiosperms
 - seeds from flowers
 - Flowers: What are they? Why have them?
 What used for?
 - Seeds in fruit
 - Fruit: What is it? Why have it?
 - Monocots vs. Dicots

Dec 3-9:30 AM

Review Questions

p. 575: MC # 1, 5, 6, 9
 # 13, 14, 15, 18, 22, 23, 24, 27, 28, 29,

Create a graphic organizer showing the relationships between all the divisions and classes of the plant kingdom.



Dec 3-9:33 AM

1. b
 5. d
 6. b
 9. c
13. Botanists divide the plant kingdom into four groups based on water-conducting tissues, seeds, and flowers.
14. Because they lack vascular tissue, bryophytes draw up water by osmosis.
15. Bryophytes depend upon the presence of water to complete their life cycle, because the only way the sperm can reach the egg is to swim through standing water or dew.
18. The evolution of lignin made the cell walls of plants rigid. This enabled plants to grow upright and reach great heights.
22. Features of conifers that suggest they evolved to live in dry habitats include long, thin needles to reduce the surface area of their leaves; the leaves' waxy outer covering; and the placement of leaf openings in cavities in the surface of the leaves to reduce water loss by evaporation.
23. Angiosperms contain the most living species.
24. Fruits attract and are eaten by animals that spread the seeds enclosed in the fruits widely, increasing the ranges that the angiosperms inhabit.
27. Vascular tissue supports a tall plant and carries water and nutrients from the soil to its upper regions. Thus, ferns, which have vascular tissue, grow tall, whereas moss plants cannot grow tall, because they lack vascular tissue. Plants require a method to transport water and nutrients throughout the plant body in order to survive.
28. She needs to provide constant moisture for the mosses and liverworts and protection from too much sun.
29. Student answers should reflect the concept that angiosperms have protected seeds and many ways in which the seeds can be dispersed, which increase the chances of survival.

Dec 3-9:56 AM