**Plant Unit Review Sheet—Spring 2014**

1. What specific type of plant-like protists is thought to be the ancestors of plants?green algae
2. Name four characteristics of ALL plants. Multicellular, autotrophic, eukaryotic, immobile
3. What is the age of the oldest plant fossils? 450 million years ago
4. What is the dominant generation in Bryophytes? gametophyte Vascular? sporophyte
5. Complete the chart below comparing monocots and dicots.

|  |  |  |
| --- | --- | --- |
|  | Monocots | Dicots |
| Seed leaves(#of cotyledons) | 1 | 2 |
| Leaf venation(veins) | parallel | net |
| Stems | Vascular bundles in a ring | Vascular bundles scattered |
| Roots | fibrous | taproot |
| Flowers | Multiples of 3 | Multiples of 4’s and 5’s |

1. Briefly describe each group of plants and give examples.

Nonvascular—a.k.a bryophytes, Ex: mosses, liverworts, hornworts

Seedless vascular—ferns, horsetails, club mosses

Gymnosperms—a.k.a. “conifers”, evergreens, Ex: pines, spruce, firs, redwoods

Angiosperms—a.k.s. “flowering plants” Ex: roses, sunflowers, fruit plants

1. From what type angiosperms do we get most grains? monocots
2. Be familiar with major types of seed dispersal mechanisms.wind—maple samaras, dandelions fur—hitchhikers, sweetgum balls
3. What do the seedless vascular use to reproduce? spores
4. Compare and contrast angiosperms—flowers 225,000 species and gymnosperms—cones, only about 600 species BOTH sporophyte is dominant generation and BOTH reproduce with seeds.
5. Name and describe the two types of vascular tissues.

Xylem—transports water and nutrients UP from the roots to rest of plant

Phloem—transports sugars from photosynthesis DOWN from leaves to rest of plant

1. Give the functions of

Roots—anchor plant and absorb water/nutrient

Stems—support upright growth and connects roots with leaves

Leaves—primary photosynthetic organ of vascular plants

1. What is the main function of root hairs. increase surface area for water and mineral absorption
2. How does fertilization occur in the flower of an angiosperm. Pollen “sticks” on the stigma, travels down the style to the ovary where the ovules are fertilized(pollinated). The ovules will then develop in to embryos within seeds.
3. Gametophyte plants produce\_gametes\_, whereas sporophyte plants produce\_spores\_.
4. Define: DEFINE USING NOTES OR GLOSSARY☺ germination, seed, stomata, cuticle, fruit, and transpiration.
5. Plant cells take in \_\_\_\_carbon dioxide\_\_gas and let out \_\_\_oxygen\_\_\_\_gas.
6. The study of plants is called\_\_\_botany\_\_\_.
7. Know the parts of a flower: DIAGRAM ON BACK PAGE OF NOTES☺

* Stamen
  + Anther
  + Filament
* Pistil/Carpal
  + Stigma
  + Style
  + Ovary
  + Ovule
* Sepal
* Petal

1. Give the stimulus for phototropism?light thigmotropism? Touch/direct contact gravitropism? Force of gravity(like roots)
2. What is the name given to the life cycle of plants?alternation of generations
3. Within the life cycle, tell whether the following stages are haploid or diploid:

Gametes haploid

Zygote diploid

Spores diploid

Sporophyte diploid

Gametophyte haploid