# Lab 13: Plant Diversity

## Name and Course Section:

## Procedure

*Spirogyra* 400X

*Chlamydomonas* 400X

multicellular alga

living moss

pine pollen 400X

living fern

flower

pine specimens

angiosperm pollen 400X

various fruit types

## Summary Questions

1. Why are plants and their algal relatives so important to all other living things on Earth?
2. Other than to understand the ecological function you described in #1, why are humans so interested in the study of plants?
3. Which trait do all plants have, but algae do not? What is the adaptive value of this trait?
4. What is the major reason that ferns are able to grow taller than nonvascular plants, like mosses?
5. In terms of biological gender, how are the typical cones of pine trees different from the typical flower of angiosperms?
6. Fill out the following table by placing a checkmark for each organism if it possesses the trait listed in each column. In column #2, write which of the 4 major groups of plants the plant belongs to. For “major plant group” refer to figure 13.4.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Plant** | **Major Plant Group** | **Waxy Cuticle** | **Vascular Tissue** | **Seeds & Pollen** | **Flowers & Fruit** |
| Green algae |  |  |  |  |  |
| Moss |  |  |  |  |  |
| Fern |  |  |  |  |  |
| Pine Tree |  |  |  |  |  |
| Oak Tree |  |  |  |  |  |
| Grass |  |  |  |  |  |
| Dandelion |  |  |  |  |  |

1. Explain the biological function of a fruit. Next, give an example of each of the following:
   1. A fruit that is found in the “fruit” section of a grocery store
   2. A fruit that is found somewhere other than the “fruit” section of a grocery store
   3. A fruit that is not sold at all at the grocery store because it is inedible (not just poisonous, but actually inedible):