Biology 11: Angiosperm

Purpose: To examine and compare the structure of monocots and dicots

Procedure:

1) Draw and label a typical complete flower. What is the function of each part?

2) Examine a tulip.
   - How are the veins arranged in the leaves?
   - How are the floral parts arranged?
   - Based on the answers, how do you suppose the vascular bundles (xylem and phloem) are arranged in the stem?
   - Is this a monocot or a dicot? Give other examples of this group of angiosperm.
   - Using a dissecting microscope, carefully dissect the flower in half - make a labeled drawing of what you see.

3) Examine a rhododendron.
   - How are the veins arranged in the leaves?
   - How are the floral parts arranged?
   - Based on these two questions, how do you suppose the vascular bundles are arranged in the stem?
   - Is this a monocot or a dicot? Give other examples of this group of angiosperm.
   - Using a dissecting microscope, carefully dissect the flower in half - make a labeled drawing of what you see.

4) What similarities and differences do you notice between the two flowers?

5) Draw a labeled diagram of the life cycle of a typical flowering plant. (Just the highlights)
   - **Briefly** explain the life cycle.
   - What are angiosperms dependent upon for reproduction?
   - How are angiosperm seeds different from gymnosperm seeds?
   - If a plant had only female flowers, how would reproduction occur?
   - What is meant by double fertilization?

6) Compare how angiosperms and gymnosperms have adapted to land. (structure, reproduction)

Observations: Drawings and answers to questions.

Conclusion: Discuss purpose.