

# Flower Dissection Lab

## Introduction

Flowering plants are the most recently evolved members of the plant kingdom. Many of the plants that we are most familiar with belong to this group. Plants such as hardwood trees, corn, soybeans, grass, clover, roses, daisies, and daffodils produce flowers that are actually the reproductive organs of these plants. The purpose of this lab is to dissect a flower specimen to learn about the reproductive structures found in it and how they function.

## Materials

1 dissecting microscope  
1 compound microscope  
1 microscope slide  
1 cover slip  
1 forceps (tweezers)  
1 single edged razor blade or scalpel  
1 flower specimen  
your textbook

## Instructions

1. Using the index of your textbook as a reference, locate the section that contains a diagram of the parts of a flower with descriptions of their functions.
2. Again, using your textbook as a reference, list four characteristics of plants that are known as **monocots**.
  - a.
  - b.
  - c.
  - d.

3. List four characteristics of plants that are known as **dicots**.

a.

b.

c.

d.

4. Is your flower specimen from a monocot or a dicot plant?

How do you know?

5. Examine the diagram of the parts of a flower in your textbook. How many petals does your flower specimen have?

What color are they?

Many flowers depend upon pollinators and the pollinators in turn, depend upon the flowers. What function do these flower petals play in the flower-pollinator relationship?

6. What three structures make up the pistil or female part?

a.

b.

c.

7. What two structures make up the stamens or male part?
  - a.
  - b.

8. What color is the pistil in your specimen
9. What color are the anthers in your specimen?
10. How many anthers are there in your flower?
11. What do the anthers produce?

12. What special cells are made inside the ovary?

13. Carefully use the forceps to remove the pistil.

Using a single edged razor blade or scalpel, carefully slice the ovary open (lengthwise).

Examine the contents of the ovary under the dissecting microscope.

What do you see inside the ovary?

How many are there?

14. Using the forceps, carefully remove one of the stamens.

Scrape some of the pollen grains from the anther onto a microscope slide.

Place a coverslip on the pollen grains on the slide and examine under a compound microscope.

In the space below, draw the pollen grains the way they appear under high power magnification.

15. What do these pollen grains contain that are necessary to fertilize the egg cell?