

Flower Dissection

Introduction

Flowers are more than ornamental parts of a plant. They are the reproductive structures of the angiosperm, the flowering plants. Flowers are efficient structures for sexual reproduction, which has greatly aided the angiosperms in becoming so widespread.

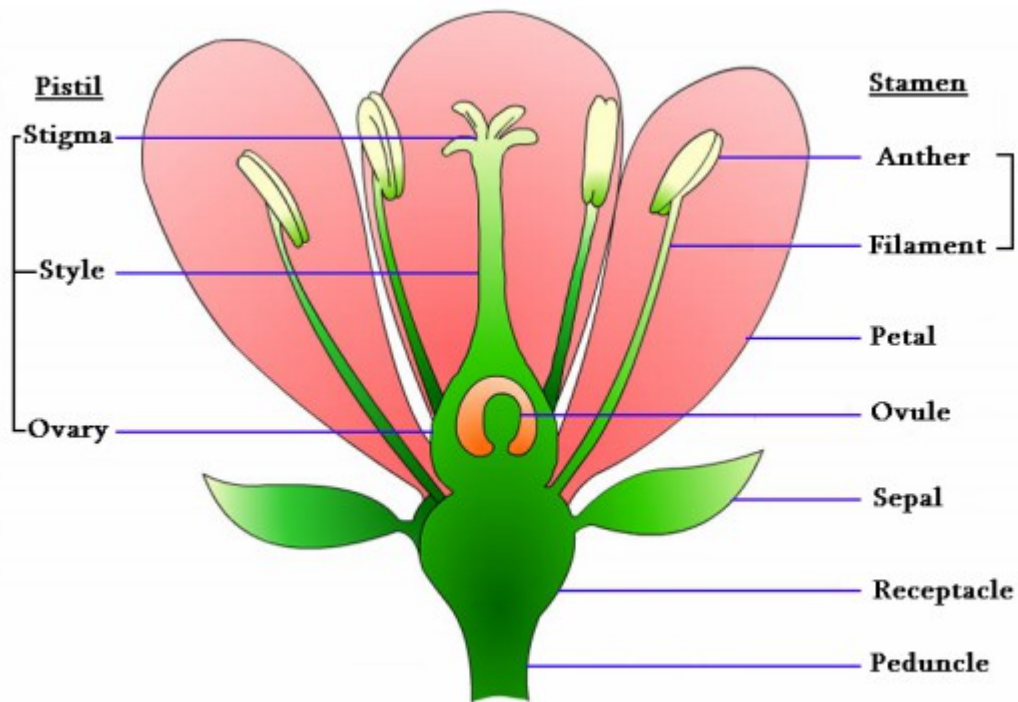
Objectives

In this lab you will be expected to:

1. Dissect a flower and label and explain all the parts.
2. Observe pollen grains.
3. Observe a pistil, which has been dissected, and make a labeled drawing of the ovary.

Procedure

1. Review the parts of the flower using the diagram. Find the parts on the flower given to you by your teacher.



2. Dissect your flower carefully. Remove the parts and set aside. You will tape and label all the parts as your last step.
 - i. Observe the **sepals** and **petals**. Sepals are usually green, leaf like parts at the base of the flower. Sepals provide protection to the bud. Petals are usually the brightly colored parts of a flower. Petals protect the delicate structures inside the flower and may also attract insects. The sepal and petals are not directly involved in reproduction and many flowers lack them.
 - ii. Carefully remove a sepal (if you have one, not all flowers do) and all the petals from the flower by holding the flower stem and gently pulling the sepal and petals away and off.
 - iii. Take a look at the **stamen**. This is the stalk-like structure with caps found on the inside of the petals, or still attached to the stem. All parts that make up the stamen are associated

with a flower's male reproductive system. The stalk portion of a stamen is the **filament**. It supports the **anther**. The anther produces pollen grains that contain plant sperm. Carefully remove a stamen.

- iv. Now focus on the **pistil**. The pistil is a slender stalk like structure with a round base connected to the stem. All parts that make up the pistil are associated with a flower's female reproductive system. A detailed study of the pistil reveals that it is composed of three parts. The **stigma** is the top portion of the pistil. It is usually sticky. The stigma is the collecting place for pollen grains. The stalk of the pistil is the **style**. The base of the pistil is the **ovary**, which may be partly hidden from view by the sepals. The ovary contains **ovules**. The ovules are the eggs of plants. Very, very carefully cut the pistil in half long ways with the razor blade. Cut on the Paper towel, NOT the table top. Do you notice any ovules?
 - v. Look at a wet-mount slide of pollen grains (high power) and a thin sliced section of the ovary (low power).
3. Tape the parts of the flower onto a piece of paper. Be sure to include the **sepal, petal, receptacle, peduncle, ovary, ovule (if possible), stamen, and pistil**. Label all the parts including the **filament, anther, stigma, style, and ovary**.
 4. Create a diagram for 2 different flower for a 20% bonus
Clean up: Throw away your extra parts.