

Name _____
Date _____

Class _____
Flower Dissection
(40 minutes)

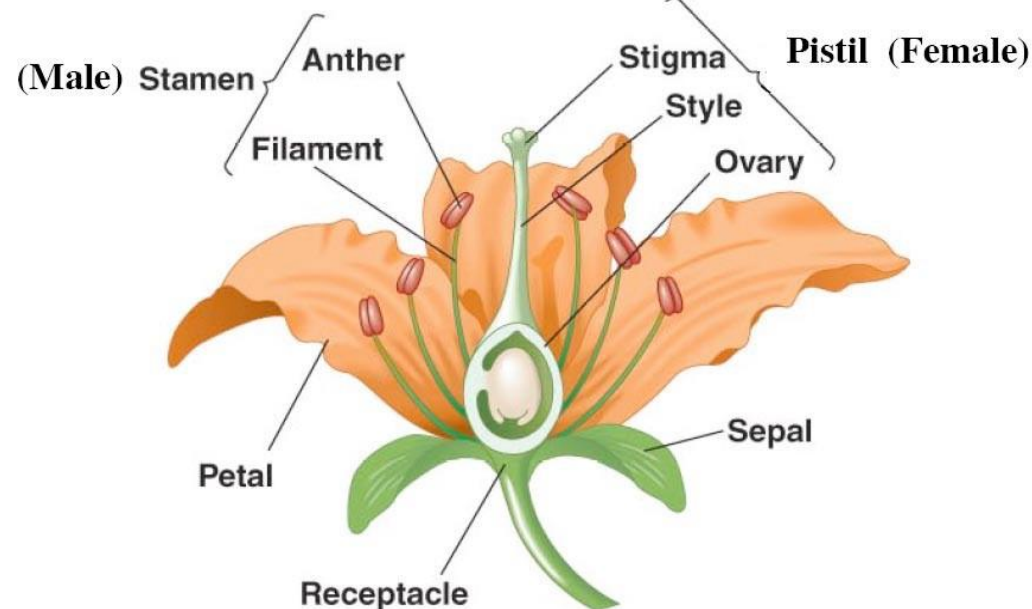
Background Information:

Every flower consists of a set of adaptations that help to ensure successful reproduction. For example, flowers often have bright colors, attractive shapes, and pleasing aromas. These traits help them attract insects and other animals that will carry pollen grains from flower to flower. Pollination also occurs by means other than animals carrying the pollen. For some flowering plants, the wind plays an important role in transferring pollen from plant to plant.

The seed-bearing plants that produce flowers are **angiosperms**. The flower produces the seeds, each of which contains a new plant embryo. The parts of the flower are usually found in whorls, or rings.

Petals are one of the sets of whorls. They attract pollinators. **Sepals** lie outside the petals. They protect the bud.

The reproductive organs, the stamens and pistils, lie inside the petals. A **stamen** is a male reproductive part. It consists of an anther that is held up by a **filament**. The **anther** produces pollen grains. A **pistil** is a female reproductive part. Its top is called the **stigma** which is sticky. The middle supporting structure is the **style**, and the large base is the **ovary**, where the eggs are produced.



Materials:

Flower, Forceps, Magnifying Glass, Glue/Tape, Scalpel/Razor (optional)

Procedure:

1. Locate the outermost layer of flower parts. These are the sepals. Carefully remove the sepals.
 - a. Record the number of sepals, attach one, and describe the function in your data table.
2. Identify the petals. These form the next layer of flower parts. Carefully remove each petal.
 - a. Fill in the data table on the last page.
 - b. What advantage to the flower are colorful petals?
- c. Why do you suppose sepals and petals are referred to as “accessory parts” (of the plant)?

3. Now locate the stamen.

- a. Record the number of stamen, attach one, and describe the function in your data table.
- b. What do anthers produce? _____
- c. Name the flower part that elevates the anther. _____
- d. Why is it important to elevate the anthers? _____
- e. Pollen grains contain sperm cells. What percentage of chromosomes would the pollen grain have compared to the plant body cells? _____
- f. How many chromosomes would a pollen grain have compared to an ovule? _____
- g. Is the stamen a male or female reproductive organ? _____
- h. Describe two different ways that a pollen grain can get to the stigma of a pistil.
 - 1) _____
 - 2) _____
- i. Flowers usually contain more stamen than pistils. Why do you think this is?

4. The female flower parts.

- a. Record the number of pistils, attach one, and describe the function in your data table.
- b. Name the flower part that elevates the stigma. _____
- c. Why is it important to elevate the stigma? _____
- d. How does the structure of the stigma aid in pollination? _____

- e. Which parts of the flower develop into the seeds? _____
- f. When fertilized, what will the ovary grow into? _____

Data Table

Flower Part	Number	Attach one of each part below.	Description of function
Sepal			
Petal			
Stamen		(Label the anther and filament)	
Pistil/ Carpal		(label the stigma, style, ovary)	