

Flower Structure

Remember that the flower is the reproductive organ of angiosperms and has been largely responsible for the success of those plants. In this activity, you will learn how the structures of a flower serve the reproductive function.

Materials:

slide and coverslip	scalpel
compound microscope	one fresh flower
binocular microscope	

Procedure:

1. Examine the outside parts of the flower. Identify the sepals. Describe the petals.

What is the function of the sepals?

- How do the petals differ from the sepals?
- What function do petals have?

2. Carefully strip away the sepals and petals with the probe or scalpel blade to examine the reproductive structures. Identify the filaments and anthers. If your flower does not have anthers there are some on the front bench.

- How many stamens are present (or would have been) in your flower?
- If there are no stamens, why might they have been removed?
- Is the flower a monocot or dicot? How can you tell?
- How might pollen be carried from the anther to the female part of the flower?

3. Prepare a wet mount of some pollen and examine. Make a sketch.

4. Find the carpel and identify the stigma, style, and ovary.

g) How is the stigma of your flower adapted to capture and hold pollen? Describe at least two such adaptations?

5. Use a probe or scalpel to cut into the ovary lengthwise. Gently open the ovary. Locate the ovules using the binocular microscope if you need to.

- Approximately how many ovules do you see?
- How do the sperm reach the egg?
- Describe where pollination and fertilization occur. What is the primary difference between these two processes?
- What do the ovary and ovules become?
- Based on the anatomy you observed, what kind of pollinator would your flower likely have used and state the evidence on which you based your decision?