

Parts of a Flower Lab

Name: _____



Word List: petal sepal stamen anther stigma ovary
pistil

Part One: Procedure

1. Observe your flower specimen. Use a magnifying glass to see greater details of flower part structures. Write three detailed descriptive sentences of your particular flower.

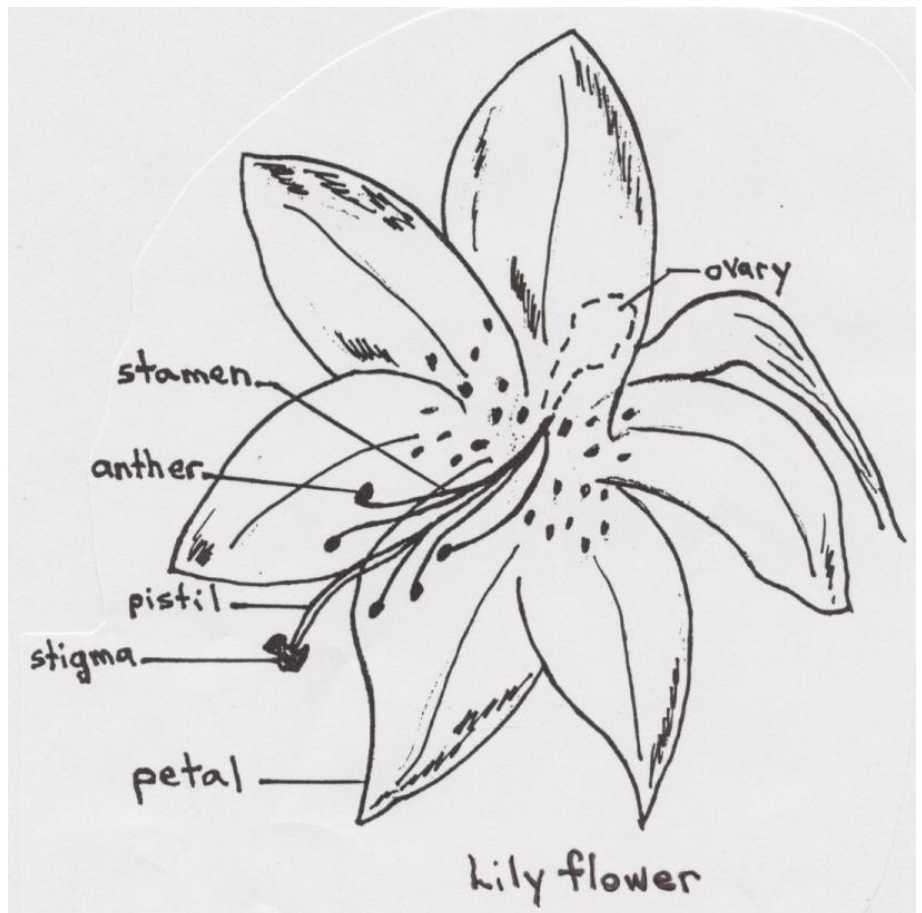
a) _____

b) _____

c) _____

2. The diagram shown to the right is a typical flower. Your flower may be slightly different, but will have the same types of flower parts.

- A) Using your forceps, carefully take the flower apart and set them on a sheet of paper towel.
- B) Use the diagram to identify each part.
- C) Draw your own diagram of each part in the spaces provided on your worksheet. Use your magnifying glass or dissecting microscope to see and draw greater detail.
- D) Label your drawings and answer the questions.



Lab Dissection Diagrams:

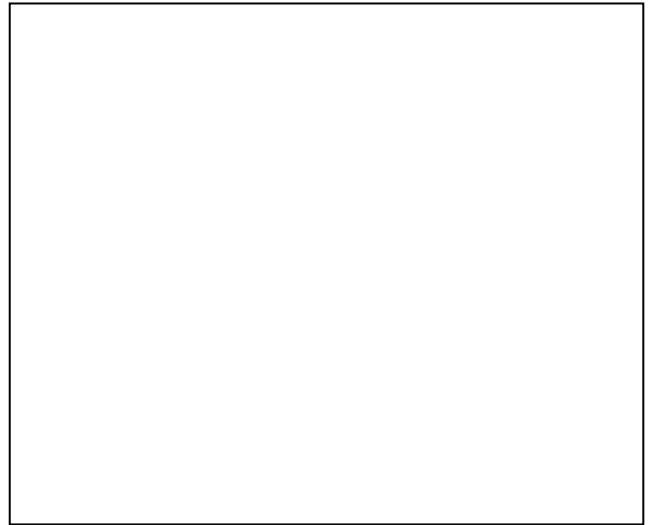
Petals and Sepals

a) How many colored petals are present? _____

b) What advantage to the flower are colored petals? _____

c) How many green leaves surround the bottom of the flower? _____

d) What is their function? _____



Petal diagram

Stamen and Anther

Remove enough petals from the flower so that you can observe the inner parts. Do you see a large stalk like part in the center of the flower? This part is called the pistil. Surrounding the pistil are several upright stalks.

Questions:

a) What are these called?

b) If you observe carefully, you can see structures attached to the tops of the stalks. What are these called? _____

c) What do they produce? _____

- 1) Examine the anther with a hand lens.
- 2) Add a drop of sugar solution to a microscope slide. (The sugar solution will imitate the sugary surface of the stigma.) The pollen tube uses the sugar to produce energy for growth.
- 3) Place a yellow anther in the drop of solution and stir it around with a stirring rod.
- 4) Remove the anther and add a cover slip over the drop of solution.
- 5) Examine the pollen under a microscope.
- 6) Draw a diagram of what you see.



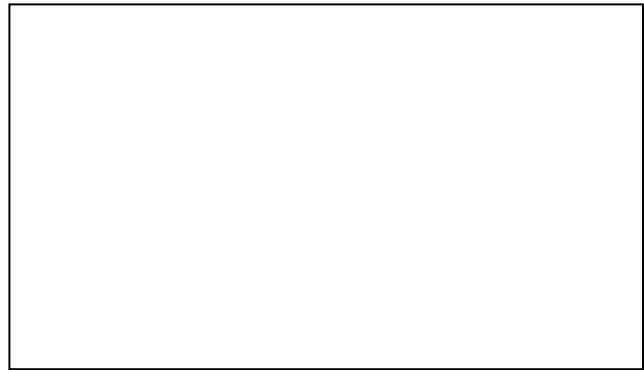
Stamen and anther diagram



Pollen grains diagram

Stigma, Pistil and Ovary

- 1) Draw and label a diagram of the stigma, pistil, and ovary.
- 2) Use the razor blade to cut open the ovary of the flower. Half the class will do a cross-sectional cut. The other half will do a longitudinal cut. Ask your teacher which group you are in.
- 3) Draw a diagram of what you see. If the ovary is mature, you may observe a number of chambers inside it. These chambers contain the seeds that are forming. Label your diagram to show the chambers and the seeds.



Stigma, pistil, and ovary diagram



Ovary section

Questions:

- a) Is the ovary divided into parts? If so, how many? _____
 - b) When the ovary matures, forming a fruit, how do you think it will look? _____
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The stigma, pistil, and ovary are the female reproductive parts of the flower.

The stamen and anther are the male reproductive parts of the flower.

Part Two: Read to Learn Activity

Read the handout "Sexual Reproduction" of plants to answer the following questions. Be prepared to discuss your answers in a classroom discussion.

1. Write a function for each of the following flower parts.

Stamen _____

Anther _____

Pistil _____

Stigma _____

Ovary _____

Petals _____

Pollen Tube _____

2. Write a definition for pollination.

3. How does pollen travel from one flower to the next for pollination? Write down 2-3 of your ideas.

- _____
- _____
- _____

4. In your own words, write a paragraph describing sexual reproduction in flowers.

4. Can you think of any other ways that plants reproduce themselves? Write your ideas here.
