

FLOWER LAB

Name(s) _____

Date _____ Period _____

Introduction: The angiosperms are seed-bearing plants that produce flowers. The seeds, which contain the plant embryos, are produced in the flower. All the parts of a flower are actually modified leaves that are specialized for their roles in the reproductive process. Flower structures can be divided into two groups: the essential organs and the accessory organs. The essential organs are the reproductive structures, the stamens and the pistils. The accessory organs are the sepals and petals. They surround and protect the essential organs. As you study a typical flower, note how the flower parts are adapted for the production and protection of seeds.

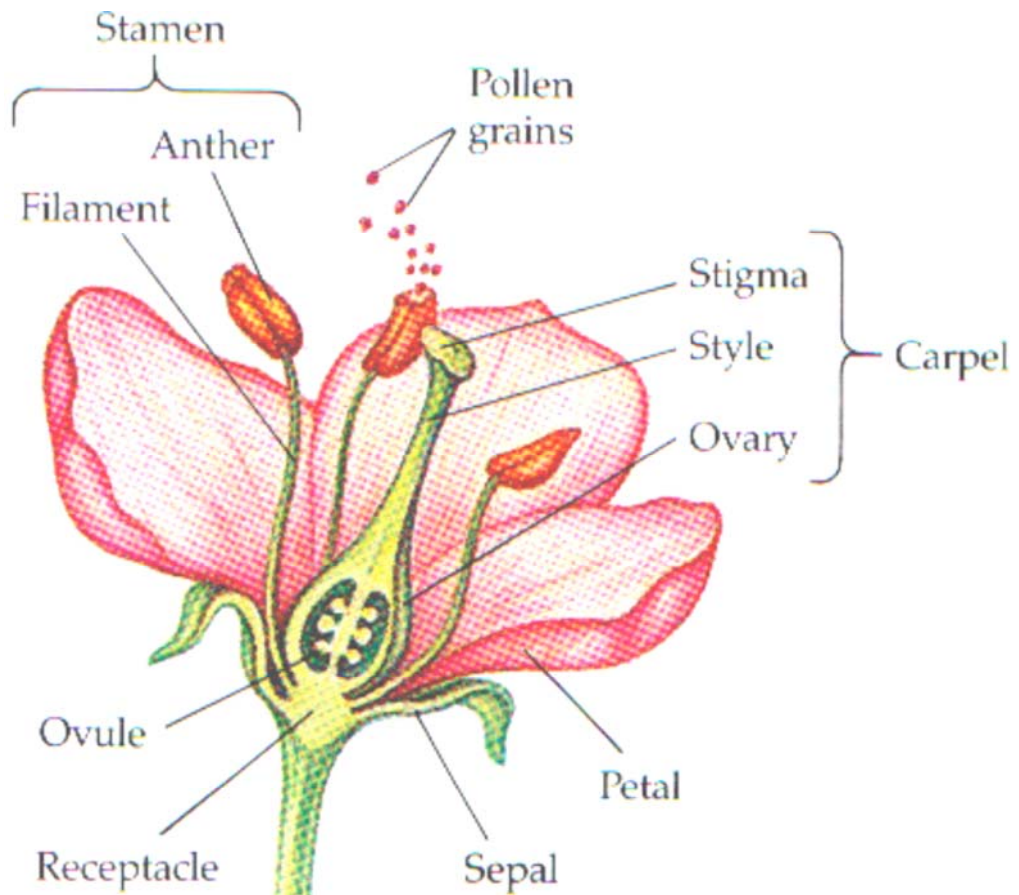
Materials: Live flowers dissecting needle hand lens scalpels transparent tape

SPECIAL NOTE FOR LAB RECOVERY: Obtain a LILY from the supermarket – PriceChopper has good ones. They should look like this.



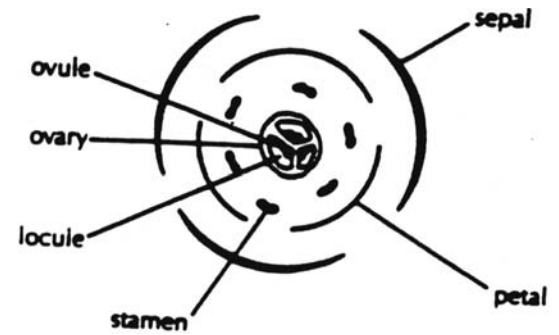
FOLLOW the directions below.

Go to www.mschien.com to receive any special directions to help you complete this lab successfully. Click on LE Biology lab recovery.



- Obtain a flower from your instructor. You will be removing the parts of the flower in the order specified and taping and labeling those parts to the next page. You can arrange the parts in rows, or you can arrange them as they were attached to the flower.
- Remove the sepals. Attach them to the paper and label one sepal. Under the row of sepals write a title : Calyx .
- Remove the petals. Attach them to the paper and label one petal. Under the row of petals write a title : Corolla.

- d. Remove the stamens. Attach them to the paper and label them as stamens. On one stamen, label the anther and filament.
- e. Before you attach the pistil to the paper, cut open the ovary with a scalpel and try to see the locules. Tape the pistil to the paper, and title it : Pistil. Label the ovary, stigma, and style.



Analysis:

1. What function do the sepals serve?
2. How do the petals compare with the sepals in size and appearance?
3. Describe the appearance of the stigma. How does the structure of the stigma surface aid in pollination?
4. How does the odor and appearance of the petals aid in pollination?
5. Name the male reproductive organs of the flower and list its parts.
6. Name the female reproductive parts of the flower and list its parts.
7. Where are the pollen grains produced? _____.
8. Where are the egg cells produced? _____.
9. Which parts of the flower become the seeds? Which parts become the fruit?
10. In a flower, how does the sperm nucleus from a pollen grain get to the egg nucleus in an ovule?

Multiple Choice Answers

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____

- The part of the apple you eat develops from which part of the flower?
a) Ovule b) Ovary c) Endosperm d) Kidney
- If a cell from the plant stem has 22 chromosomes, how many chromosomes would a sperm nucleus in a pollen grain have?
a) 22 b) 11 c) 44 d) 21
- Contain the n amount of chromosomes.
a) G b) I c) C d) A
- Fertilization happens here.
a) B b) F c) D d) B
- Part of the flower's female reproductive system.
a) B b) E c) C d) G
- Part of the flower's male reproductive system.
a) C b) D c) E d) G
- Will develop into the seeds.
a) A b) B c) F d) J
- Useful in attracting pollinators.
a) G b) H c) I d) J
- The style.
a) D b) E c) F d) I
- Meiosis does not occur here.
a) G b) J c) B

