

# Flower Dissection

Partner Names: \_\_\_\_\_ Block: \_\_\_\_ Date: \_\_\_\_\_

**Sample Your Flower:** Dissect your flower into the parts below. Then tape your flower parts to the page in the correct squares.

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Anther	Filament	Pollen Grains
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These 3 structures make up the \_\_\_\_\_

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Stigma	Style	Ovary
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These 3 structures make up the \_\_\_\_\_

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Petal

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Sepal

### Background Information

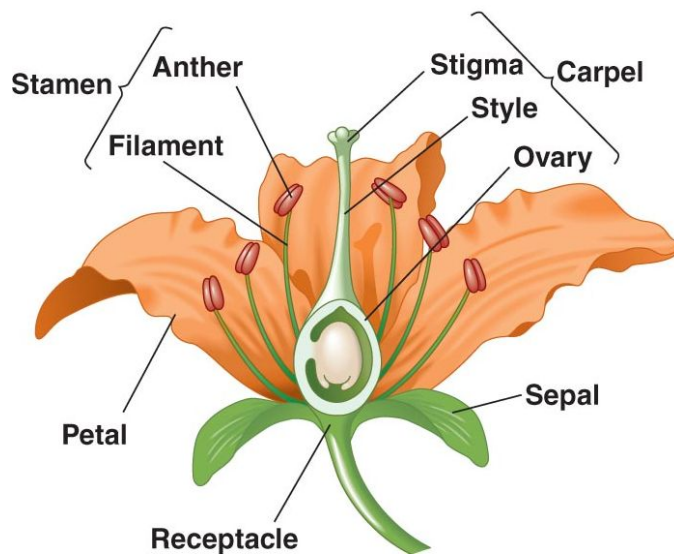
Flowers are more than ornamental parts of a plant. They are the reproductive structures of the angiosperm, the flowering plants.

**Stamen:** Male part of the flower. Stamens surround the carpel, which is in the center.

1. **Anther:** part of the flower that produces pollen
2. **Filament:** part of the flower that holds up the anther

**Carpel:** Female part of the flower.

1. **Stigma:** sticky and wet, it is where the pollen lands.
2. **Style:** the part of the flower through which sperm cells travel to reach the plant's egg cells.
3. **Ovary:** part of the flower where plant cells are found.



### PART 1: Pre-Dissection Questions:

1. Using your notes or textbook **page 474-475** as a reference, list four characteristics of plants that are known as **monocots**.
  - a.
  - b.
  - c.
  - d.
2. List four characteristics of plants that are known as **dicots**.
  - a.
  - b.
  - c.
  - d.
3. Is your flower specimen from a monocot or a dicot plant? How do you know?

4. Using textbook **page 535** as a reference, examine your flower specimen.
  - a. How many petals does your flower specimen have? \_\_\_\_\_
  - b. What color are they? \_\_\_\_\_
  - c. Many flowers depend upon pollinators and the pollinators in turn, depend upon the flowers. What function do these flower petals play in the flower-pollinator relationship?  
\_\_\_\_\_
  
5. What three structures make up the **carpel (pistil)** or **female** part?
  - a.
  - b.
  - c.
  
6. What two structures make up the **stamens** or **male** part?
  - a.
  - b.
  
7. What color is the **carpel (pistil)** in your specimen? \_\_\_\_\_
  
8. What color are the anthers in your specimen? \_\_\_\_\_
  
9. How many anthers are there in your flower? \_\_\_\_\_
  
10. What do the anthers produce? \_\_\_\_\_
  
11. What is made inside the ovary? \_\_\_\_\_

**PART 2: Dissection Procedure:**

1. 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. **Tape** one of each to the sample page.

- a. Find and count the petals of your flower. Why are petals usually brightly colored?

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2. Using the forceps (tweezers), carefully remove all the **stamens**. Scrape some of the pollen grains from the anther onto the sample box and tape it down along with one stamen.

- a. Find both parts of the stamen on your plant (the male part—**anther** and **filament**). Why is it important for the anthers to be towards the top of the flower?

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- b. What do these pollen grains contain that are necessary to fertilize the egg cell?

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3. Carefully use the forceps (tweezers) to remove the **carpel (pistil)**.

4. Carefully remove the **stigma & style** using the forceps (tweezers) and cutting with the razor blade. **CAUTION:** The razor blade is very sharp, so use care. **ALWAYS cut away from you.** Tape each part to samples boxes.

5. Put the remainder of the flower down on the table. Using a razor blade, carefully slice the **ovary** open (lengthwise). Tape in sample box.

**PART 3: Discussion Questions**

1. What color is the pollen on the anther? \_\_\_\_\_
2. How many stamens are on one flower? \_\_\_\_\_
3. Is the stigma sticky? \_\_\_\_\_ if so, why do you think it would be sticky?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Were you able to locate an egg cell in the ovary? How many eggs were found?  
\_\_\_\_\_
5. Some flower petals have lines or dots on them. Did you observe any on your flowers? What do you think these might be for?
6. Some flowers have more male parts than others... Why do you think this might be important?
7. What is the difference between pollination and fertilization.
8. Why is it advantageous for a plant to be cross-pollinated (pollinated by another plant), rather than self-pollinated?