Name: _____ Period:_____

Flowering Plant Lab Activity 2025

Instructions: Students will dissect a flower and identify the parts of a flower and their function.
Materials Needed: A flower such as a lilies, tulips, daffodil or gladiolus plant. You will need access to the internet to get the powerpoint which has the pictures and information to complete the lab. Go to the teachers website: www.walkersclass.com and go to the AP Biology webpage for plants. You can get the powerpoint by clicking on the link listed under todays work.

Demonstration:
Teacher will demonstrate the various parts of the flower on the template (Sepals, petals, stamen, pistil, style, ovary)

Part 1: Anatomy of a Flower

1. What do pollinators carry with them from one flower to the next?

2. What happens when the pollen from a male part of a flower lands on a female part of a flower?

3. The female or seed-bearing part is called the _____, and is composed of the _____, _____, and _____.

4. The male parts of the flower are called the _____ and are made up of the _____ at the top and the stalk or _____ that supports the anther.

5. A flower may have only male parts, only female parts, or both. Even flowers that have both male and female parts need to cross-pollinate with other plants in order to flourish. Cross pollination is the transfer of _____ from the male reproductive organ (an anther) of one plant to the female reproductive organ of another plant. This can be done by insects, small animals (such as bats and birds), and wind.

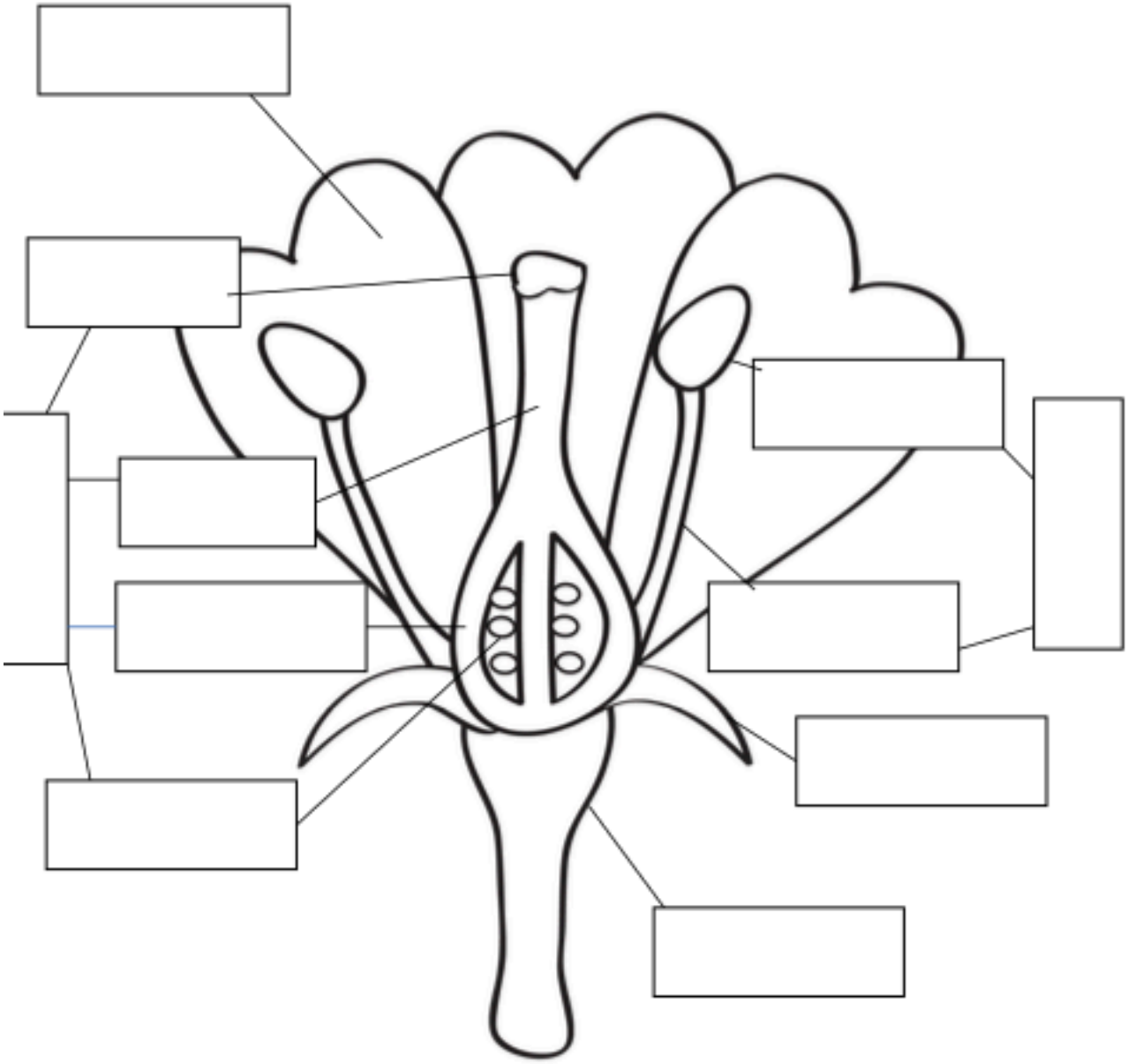
6. Notice if any of the flowers have lines or dots on them. The markings on the flowers are called _____ _____. They guide the pollinators to the nectar.

7. Did some of the plants have more male parts than female parts? Why would a plant need more male parts? What is their function?

Part 2: Parts of a flower identification
Identify the parts of a flower

Parts of a Flower

Name_____



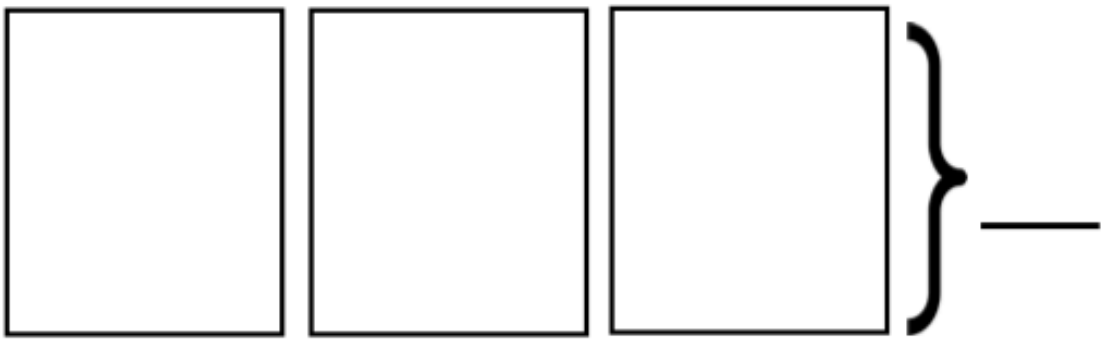
Part 3: Parts of a Flower Lab Sheet

Dissect the flower and put the parts of the flower on the lab sheet. Draw out what it looks like next to the part. 1. Carefully remove the sepals from the flower, and place them on your dissection sheet. Draw out of copy of what you find. 2. Now carefully remove a petal and place it on the dissection sheet. 3. Carefully remove the stamen and place it on the dissection sheet. Draw out of copy of what you find. 4. Carefully rub the anther with your finger. Once you collect the pollen, place it on the dissection sheet. Draw out of copy of what you find. 5. Remove the entire pistil from the flower and place it on your dissection sheet. Draw out of copy of what you find. 6. Locate the stigma. Try to draw it in the box below. 6. Try to open the pistil and locate the ovary. Draw out of copy of what you find.

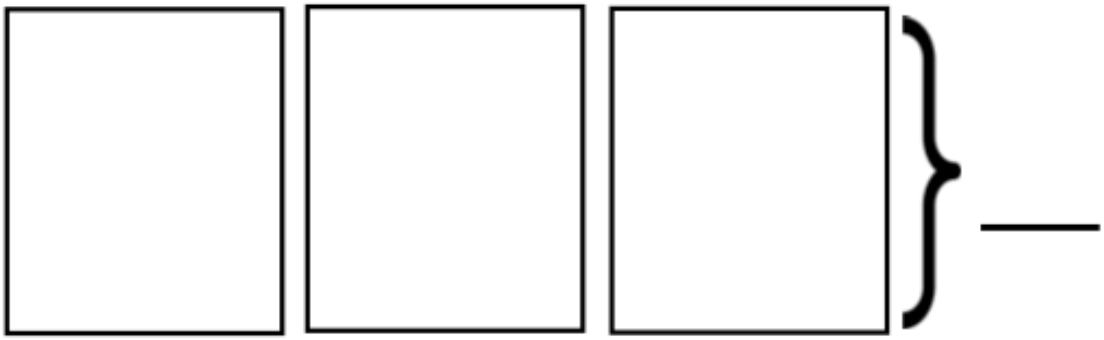
Parts of a Flower Lab Sheet

Name_____

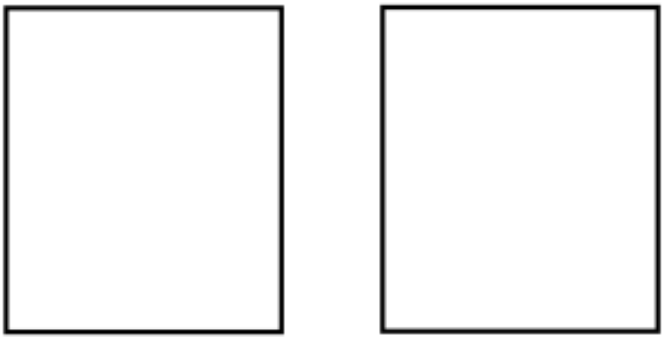
Type of Flower_____



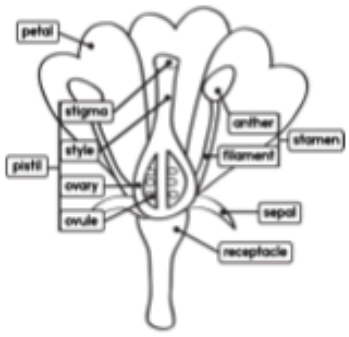
Stigma **Style** **Ovary** _____



Anther **Filament** **Pollen Grains** _____



Petal **Sepal**



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Once you have drawn out the different parts, you can discard the flower parts to the trash.

8. Where on the flower were the anthers located: Top of the flower or bottom of the flower (circle one)

9. Why do you think that the stigma is located on the top and not the bottom?

10. Describe how a bumble bee can help to pollinate a flower?

11. What is the purpose of the petals on a flower?

12. What is the job of the sepals?

13. Once the flower is pollinated and fertilization takes place, what will the ovary become?

14. Millions of pollen grains may be released by a single flower while only a few ovules containing eggs are produced by the same flower. Why does a flower produce more pollen than ovules?

15. Flowering plants that depend on wind for pollination often have smaller petals. What is the advantage to this?

16. What method of pollination might be seen in a plant that has a brightly colored flower?

Part 4: Matching

Match the flower part (Column A) with the definition (Column B). Draw a line to connect the correct flower part with its correct definition.

Pistil
Stigma
Style
Ovary
Stamen
Anther
Filament

A specially adapted portion of the pistil modified for the reception of pollen
The pollen producing part of a flower
The thread-like stalk that supports an anther of the plant
A stalked structure atop the ovary that elevates the stigma
It sits atop the filament of the male structure known as the stamen
The female reproductive part of a flower
Enlarged basial portion of the pistil, the female

organ of a flower