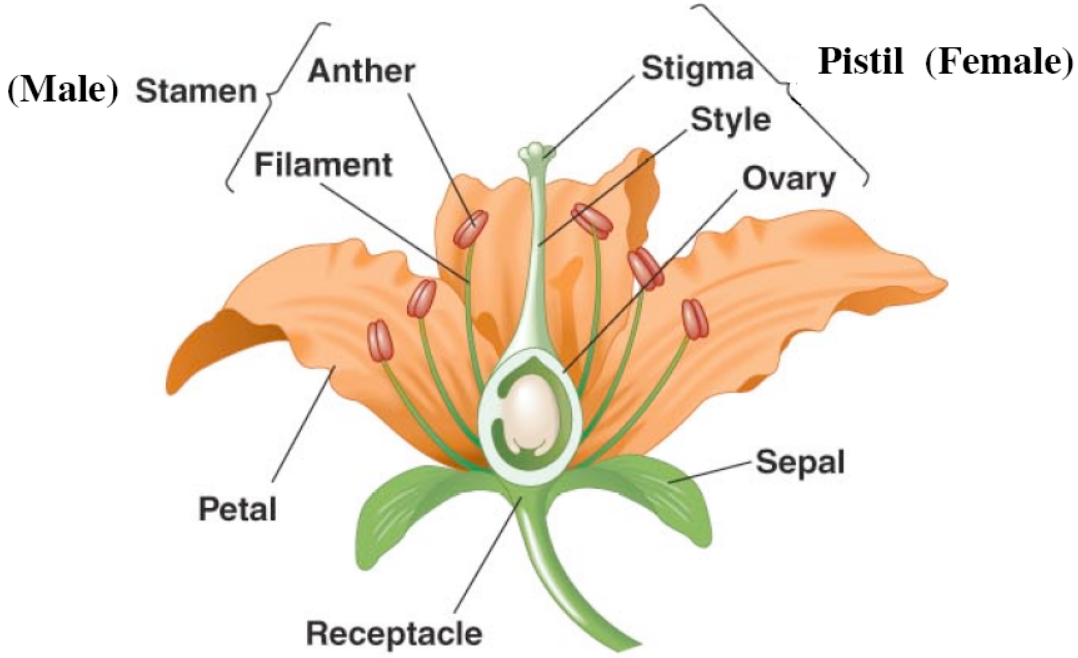
Name: _____ Period: _____

Flower Dissection Lab

Background Information:
Every flower consists of a set of adaptations that help to ensure successful reproduction. For example, flowers often have bright colors, attractive shapes, and pleasing aromas. These traits help them attract insects and other animals that will carry pollen grains from flower to flower. Pollination also occurs by means other than animals carrying the pollen. For some flowering plants, the wind plays an important role in transferring pollen from plant to plant.

The seed-bearing plants that produce flowers are **angiosperms**. The flower produces the seeds, each of which contains a new plant embryo. The parts of the flower are usually found in rings. **Petals** are one of the sets of rings. They attract pollinators. **Sepals** lie outside the petals. They protect the bud.

The reproductive organs, the stamens and pistils, lie inside the petals. A **stamen** is a male reproductive part. It consists of an anther that is held up by a **filament.** The **anther** produces pollen grains. A **pistil** is a female reproductive part. Its top is called the **stigma.** It is sticky to ensure that when pollen grains land on it, they stick to it. The middle supporting structure is the **style,** and the large base is the **ovary,** where the eggs are produced.



Using the information above, identify and examine each part of your flower. Make a sketch of your flower in the box provided. Include labels to identify the structures indicated in bold. *(Note: Your flower may or may not have all of the structures listed.)*

After examining each part of your flower, record how many of each part you find in your flower in the table below:

Label	Part	Total count	Description
A	**Sepals**		Thick outer green parts that protect the flower bud
B	**Petals**		Colored part that attracts pollinators
C	**Stamen**		Entire male reproductive structure (consists of **anther** and **filament**)
D	**Anther**		Cap at the end of the stamen that produces pollen.
E	**Filament**		Long fibrous structure that holds anther.
F	**Pistil**		Entire female reproductive structure (consists of **stigma**, **style** and **ovary**)
G	**Stigma**		Puckered top of the pistil.
H	**Style**		Long structure in the pistil going down to the ovary
I	**Ovary**		Swollen base at the bottom of the pistil where egg is housed.

A closer look at the reproductive structures:

1. Use a magnifying lens to observe the pollen grains more carefully. Describe/sketch what you notice.

2. Remove the entire pistil from your flower. Make a cross-section of the ovary. How many ovaries does your flower contain? Try to locate the eggs inside the flower's ovaries. Describe what you see.

Ovaries: _____

Description: _____

_____

Conclusion Questions:

1. The common name of the flower we dissected today is the Peruvian Lily. What is this flower's scientific name (look it up)?

_____

2. Compare the 2 methods of pollination.

3. Contrast the 2 methods of pollination.

4. How did studying flowers help Mendel make decisions about Genetics?

5. What are two most important products that plants give us?

_____ _____

6. Why do you think some flowers have so many ovule and pollen grains?

7. Can any flower reproduce with another type of flower? (For example, a rose can reproduce with a tulip) **Explain.**

_____ because _____

_____

8. There are a few different ways that pollen can be brought to the pistil: insects, wind, birds, animals and water. Which do you think pollinates your flower and why?

_____ because _____

_____

9. Name an insect that you have seen pollinating flowers. _____

10. Why do you think flowers are brightly colored?

11. The male sex cells in the pollen are called sperm. When the sperm and eggs combine, sexual reproduction occurs and the egg is fertilized. The fertilized egg becomes a seed. Where would you predict you would find seeds in a fertilized flower?

12. How many seeds could your flower produce? _____

13. If there are more flowers in the summer time, why do more people suffer from pollen allergies in the winter time? (hint, think about how flowers are pollinated)

14. Why do you think that most night blooming flowers are white in color?

Arrange the parts of your flower in concentric circles. Glue/tape them down in the appropriate circle.

- **Outermost circle: sepal**
- **2nd circle: petals**
- **3rd circle: stamen**
- **4th circle: pistil**