

Flower Dissection Kit

Objective: Understand structure and parts of a flower. Students will breakdown a flower into its constituent parts while making detailed quantitative and qualitative observations. A secondary experiment will demonstrate how flowers draw water (with food coloring) through the stalk and into the petals.

Meets TN State Standards:

GLE 0707.4.1 Compare and contrast the fundamental features of sexual and asexual reproduction.

GLE 0707.4.2 Demonstrate an understanding of sexual reproduction in flowering plants.

Pre-lesson: Teachers should walk students through Parts of a Flower Powerpoint before the Scientist arrives in the classroom.

Introduction:

Discuss/Review the following (write underlined vocabulary words on the board):

- Types of reproduction:
 - Sexual – Offspring results from two parent cells.
 - Asexual – Offspring results from only one parent cell.
- Angiosperms = Flowering plants
- Gymnosperm = Cone-bearing plants
- Pollination = Joining of egg and sperm
- Plants rely on wind and pollinators to bring pollen (sperm) to the stigma (female)
 - Class Question: What are some examples of pollinators???
- Additional vocabulary words on the top of student observation handout.

Materials:

- Lilies (1 flower per student group)
- Student Observation handout
- Food Coloring
- Magnifying Lenses
- Plastic plates
- Plastic knives
- Forceps

Note: The flowers can often be procured at zero cost. Speak with floral dept. at Kroger, Publix, and Wal-Mart and inform them that it is for MNPS teaching purposes.

Procedure:

1. Students can be paired or grouped together depending upon numbers. Ideally no more than 3 students should be grouped with one flower.
2. Each student group will receive one flower.
3. The students will peel away the layers of the flower, making detailed notes and drawings as they proceed to the center.
4. Please collect and return knives, forceps, etc.
5. Discard plates and flower remains.

Extension: Teachers can have students exam pollen particles under microscope if class is equipped with the instrument.

Name: _____

Period: _____

Flower Dissection Lab: Observation Handout

Directions: You and your group will be dissecting a Lily today. Your goal is to peel away the layers of the flower to expose the parts underneath. You will be destroying the flower through this process but that is okay.

Procedures:

1. Analyze your flower to determine where the specific parts are located.
2. Look for and identify the following parts:

Pistil	stigma	style
Ovary	eggs	stamen
Anther	filament	pollen
Petals	sepals	
3. You will be counting, describing, pulling apart, and diagramming an example of each part of your flower.

Describe	Illustrate/Color
Sepal	
Petals	
Stamen – label anther and filament	

Describe

Illustrate/Color

Pistil – label the stigma, style, and ovary

Eggs – Use a hand lens to view the eggs

Pollen – Use a hand lens to view the pollen grains

Reflections: What two things did you learn today about flowers or the parts of flowers by doing this hands-on activity?

1.

2.

Extension: Leave Behind Demonstration

- 1) Fill 3-4 plastic cups with water.
- 2) Add 4-5 drops of food coloring to each cup, respectively (one color per cup).
- 3) Place one flower in each cup.
- 4) Students should observe and note any differences in the flowers over the coming days.