# Flower Structure & Plant Reproduction

**Content Connections:**
Life Science - Plant life cycle

**Grades:** 4th-8th

**Time:** 45-60 minutes

**Objective:** Students will dissect and identify parts of the flowers. They will learn about plant anatomy and be able to demonstrate the mechanism of pollination by examining several types of flowers.

**Materials:**

- A variety of fresh flowers (the number of flowers depends on how you will divide up students to facilitate this activity)
- Small sharp scissors
- *Anatomy of a Flower* diagram (showing flower structure and function)
- *Taking a Closer Look at Flowers* record sheet, 1 for each type of flower
- Flower anatomy worksheet, 1/participant
- Felt markers
- Recycled materials and craft supplies including tape and glue

**Background:**
Pollination of a plant occurs when a pollen grain moves from the anther (male part) of a flower to the stigma (female part). This is the first step in a process that produces seeds, fruits, and the next generation of plants. This can happen through self-pollination, wind and water pollination, or through the work of pollinators that move pollen from bloom to bloom.

**Procedure:**

1. Give each participant a copy of a flower anatomy worksheet.

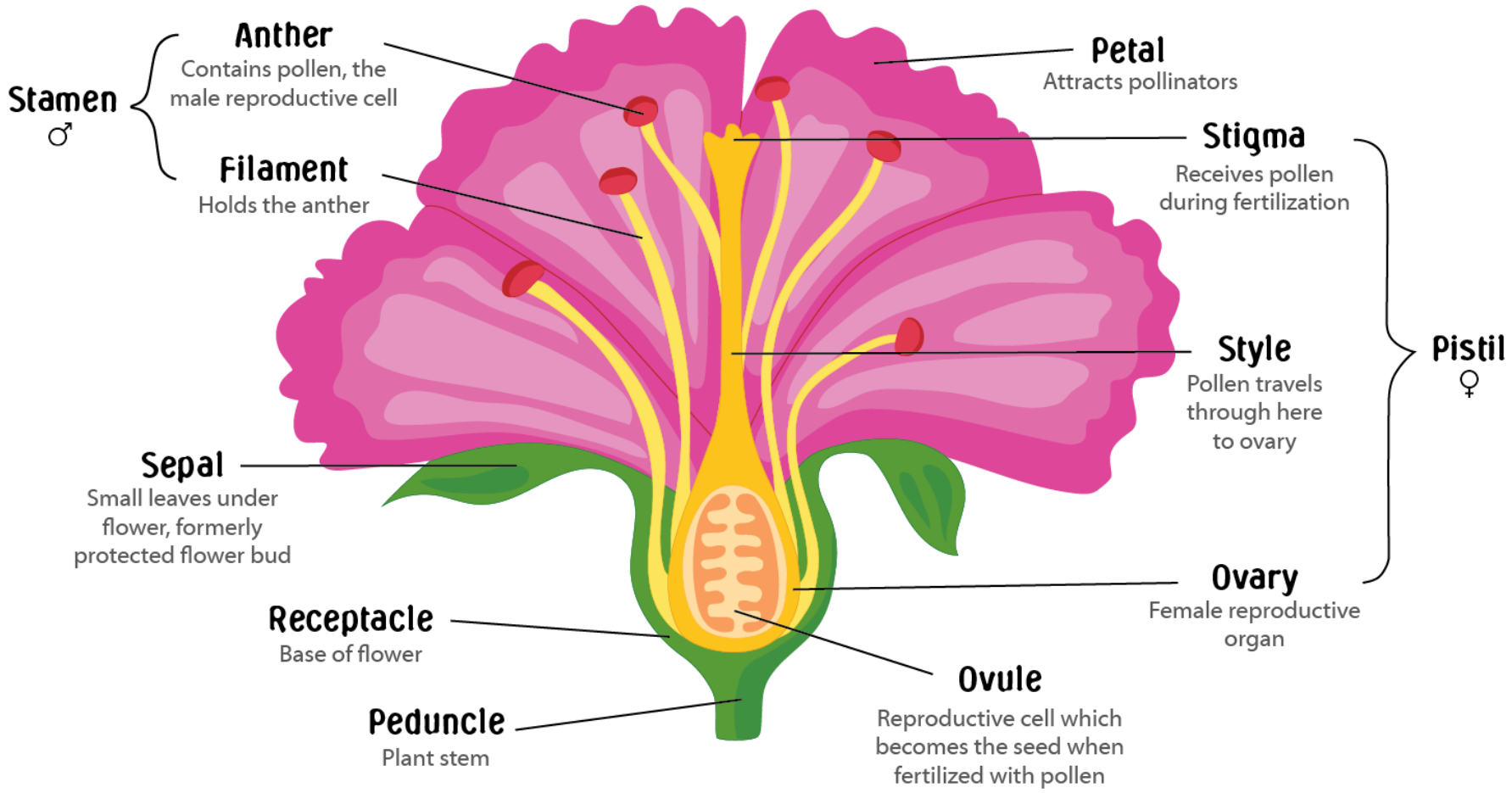
2. Spread fresh flowers out on a table, or place individual flowers in plastic cups. Place one *Taking a Closer Look at Flowers* sheet labeled with the name of the flower with each sample for recording observations.
3. As a group examine the flowers and discuss: What parts of the flower are visible? How are flowers different? How are they similar? Encourage participants to notice and compare flower characteristics such as shape, petals (color, patterns, texture, and number), scent, and whether the flower is composite (composed of many small flowers), like a sunflower, or simple, like a lily.
4. Divide students into groups of 2 or 3 to examine one flower and record their observations on *Taking a Closer Look at Flowers* sheet.
5. Have each group dissect their flower with the sharp scissors, carefully laying out the different parts and comparing the real flower to their flower anatomy worksheet. If necessary, identify the basic flower structures using the *Anatomy of a Flower* diagram.
6. Have each participant complete *Taking a Closer Look at Flowers* sheet to reinforce and/or review the basic structure of a flower.
7. As a whole group or in small groups, look at each dissected flower and the accompanying *Taking a Closer Look at Flowers* sheets. If students were given different flowers, ask them to compare and contrast the structures in their flower with those from a neighboring group.
8. Discuss as a group the features they have identified, i.e., floral color, form, scent, and structure in addition to any similarities and differences between different flowers.
9. Using the parts of the dissected flowers, discuss the basic process of pollination using the *Anatomy of a Flower* diagram. Depending on the age of your group, focus on the cross-section of the flower and the development of the pollen grain, pollinating agents, and types of pollination.

## Extension:

To demonstrate understanding, ask students to build a model of a flower with provided materials. Give students a variety of recycled materials and craft supplies, including tape, glue, and scissors. Ask them to build a flower that models the key parts identified in the *Flower Anatomy* sheet.

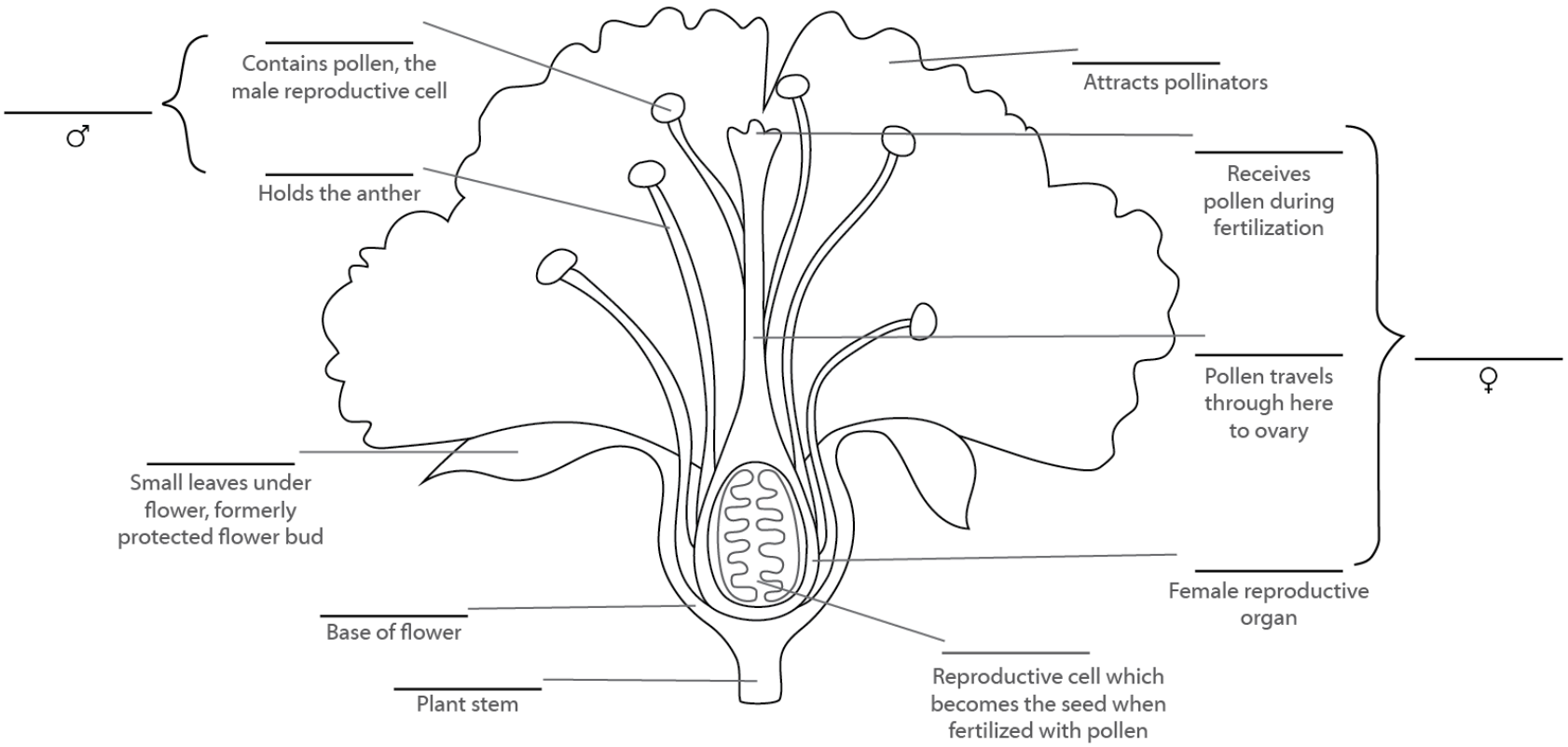
**References:** For more information and ideas, visit the NAPPC curriculum guide activity on Understanding Flower Structure & Plant Reproduction, Pg 51.

# Anatomy of a Flower



# Anatomy of a Flower

**Use the word bank to help you fill in the blanks and name the missing parts of the flower**




| | | | | | |
|---|---|---|---|---|---|
| **Stamen** | **Filament** | **Petal** | **Anther** | **Ovary** | **Style** |
| **Pistil** | **Ovule** | **Peduncle** | **Sepal** | **Stigma** | **Receptacle** |

# Taking a Closer Look at Flowers

Name of Flower: _____

Describe the parts of the flower. Include number of various parts, size (length or diameter). Colors, patterns, texture (smooth, rough, sticky), and shape. Draw them if you can.

Sepal:

_____
_____
_____

Petals:

_____
_____
_____

Stamens (Anther & Filament):

_____
_____
_____

Pistil (Stigma, Style, & Ovary):

_____
_____
_____

Scent:

_____
_____
_____

Draw your flower below:

What type of pollinator do you predict would pollinate this flower? Why?

_____
_____

If this flower has nectar guides please describe them.

_____