



Dissecting Flowers

Supplies:

- Flowers (azaleas and lilies work well)
- Tweezers or Forceps
- Small Scissors (such as a manicure scissors)
- Hand Lens or Magnifying Glass
- Paper/Pencils

Age or Grade: All Ages

Time: 30 Minutes

Background:

Flowers bring beauty to the world around us. We enjoy their appearance and scent, but flowers are also crucial to the production of food and seeds to make new plants. There are many types of flowers. Some are brightly colored and highly scented, while others, like grasses and tree flowers may be barely noticeable. Flowers have male and female parts to make seeds. The male parts, called stamens, surround the female part, called the pistil, and produce a powdery material called pollen. The pollen must reach the pistil for seeds to develop. Pollinators, such as bees and other insects, carry pollen to flowers. Wind can also carry pollen to flowers.

Project Goal

- Understand the purpose and significance of flowers in our everyday lives.
- Identify flower structures
- Make observations and distinguish between self-pollinating flowers and cross-pollinating flowers.

What to Do:

1. Gather some simple flowers from around your yard. Simple flowers have one central pistil, surrounded by stamens and petals, such as an azalea or lily. Compound flowers will have multiple pistils in one flower head such as a daisy, dandelion or sunflower.
2. Sketch the flower, noting the placement of each of the following: stamen, pistil, sepals, petals.
3. Peel off the **petals** to get a better look at the **stamen**. The **filament** is the thin stalk part of the **stamen** and the **anther** are the pollen producing part. Does the pollen rub off on your fingers?
4. Do the stamens rise above the **pistil** or are they below the **pistil**? Remove the **stamens** so that you can get a better look at the thicker central part called the **pistil**.
5. The end of the pistil is called the **stigma**, it is usually sticky. Why would this help with pollination? When a spore of pollen lands on the stigma, it forms a tube to an ovule and fertilizes the ovule.
6. The **style** is the tube-like part of the **pistil**—it looks like the neck of a vase and bottom part of the pistol is the **ovary**.
7. Carefully spit open the **ovary**. Can you see the **ovules**? When these are fertilized with pollen, they eventually develop into seeds.

Reflect:

1. Imagine how a bee or other insect might carry the pollen from plant to plant. Can this flower pollinate itself?
2. Why are bees and other insects so important as pollinators?





Virginia 4-H STEM @ Home Activity

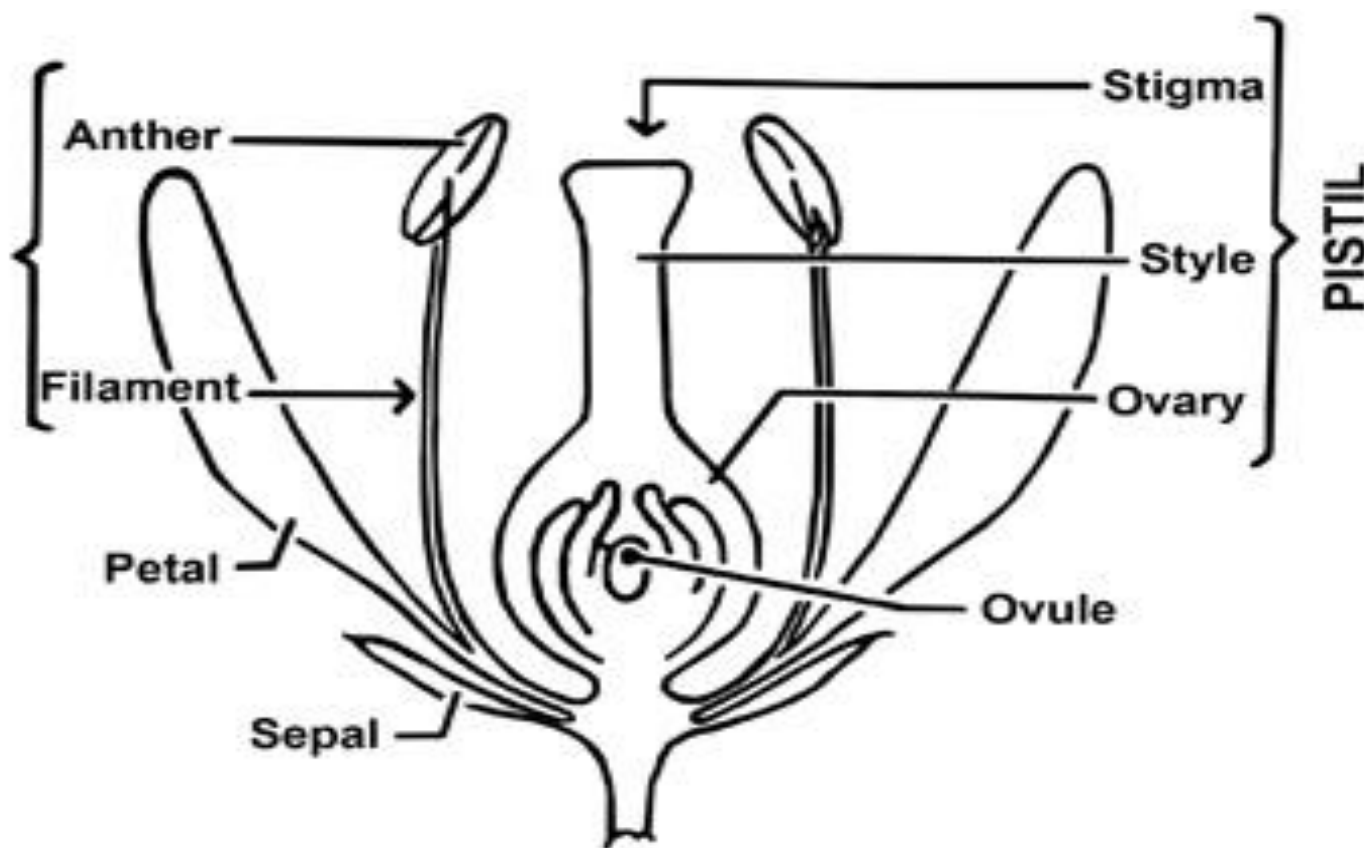
3. How could the loss of pollinators impact food production?
4. Why could cross pollination, either by wind or insects be beneficial?

Apply:

1. Observe and sketch other flowers around the yard. Are they simple, or compound?
2. Do they cross-pollinate or self-pollinate?
3. What characteristics of each flower help with pollination? Color? Structure? Scent?
4. Do you see any pollinators? (bees, flies, butterflies, moths, etc.).
5. Which usually produces more seeds... simple or compound flowers?

Notes for Parents or Helpers:

Use common flowers from around your own yard. Many parks have rules against picking flowers. Ask your children: Why do these rules exist? Why should we avoid picking wildflowers? Consider having your children “collect flowers” by photographing or sketching them.



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