Flower Power

Purpose: Students observe the physical characteristics of flowers. This knowledge creates the foundation for understanding pollination

Time: 45 minutes

Grade: 2

Materials:

- Cut flowers. Contact a local florist and ask if they have some old flowers they will be discarding. A variety of colors, sizes and types of flowers is suggested. Examples include: lilies, tulips, roses.
- Flower Power Worksheet
- Clear tape
- Cardstock or cardboard pieces.

Minnesota K-12 Standards and Benchmarks

2.4.1.1.1 Describe and sort plants into groups in many ways, according to their physical characteristics and behaviors.

2.4.3.1.1 Describe the characteristics of plants at different stages of their life cycles.

Background

When you walk through a garden there are many types of flowers – different sizes, shapes, colors and textures. The flower on a plant is not just beautiful to look at, smell and enjoy, it is vital to the plant's survival. Flowers have the same basic parts that allow them to produce seeds so the plant can reproduce. See the Flower Power worksheet.

Not only does a flower contain the parts necessary for reproduction, it also is very flashy about advertising its rich supply of nectar and pollen. Flowers trade sweet nectar and protein-rich pollen in return for the service that insects and other creatures perform: pollination. Pollination is simply the transfer of pollen grans from an anther to a stigma. Virtually all grains, fruits, vegetables and wildflowers and tress must be pollinated and fertilized to produce seed or fruit and pollination is vital for the production of critically important agricultural crops including corn, wheat, rice, apples, oranges, tomatoes and squash.

Procedure

1. Give each group member a copy of the Flower Power Worksheet. Use the glossary of terms to label the flower parts.
2. Look at the previously dissected flower. Work in pairs or individually to dissect your own flower. Please use a "light touch", rough handling of the flower will destroy the parts that need to be labeled.
3. Carefully dissect your flower and tape the parts onto the cardstock paper. Label the flower parts.
4. Discuss the following questions as a group:
    a. Are some flowers easier to dissect than others?
    b. Were some parts easier to identify than others?
    c. Did every flower contain pollen? Why or why not?
    d. How do you think your flower is pollinated?
    e. Can you predict the size and shape of the seeds that may be produced by the flower based on how the flower looks?

Additional Activities

- Explore the flower sturctures of food crops like squash, pumpkins, peas, beans, apples, etc. Dissect these flowers and discuss the connection between pollen and fruit growth.
- Visit the National Honey Board's website and explore The Honey Files Teacher guide. The video segment is an excellent resource that your students will enjoy viewing. http://www.honey.com/tools-tips-and-resources/the-honey-files-teachers-guide

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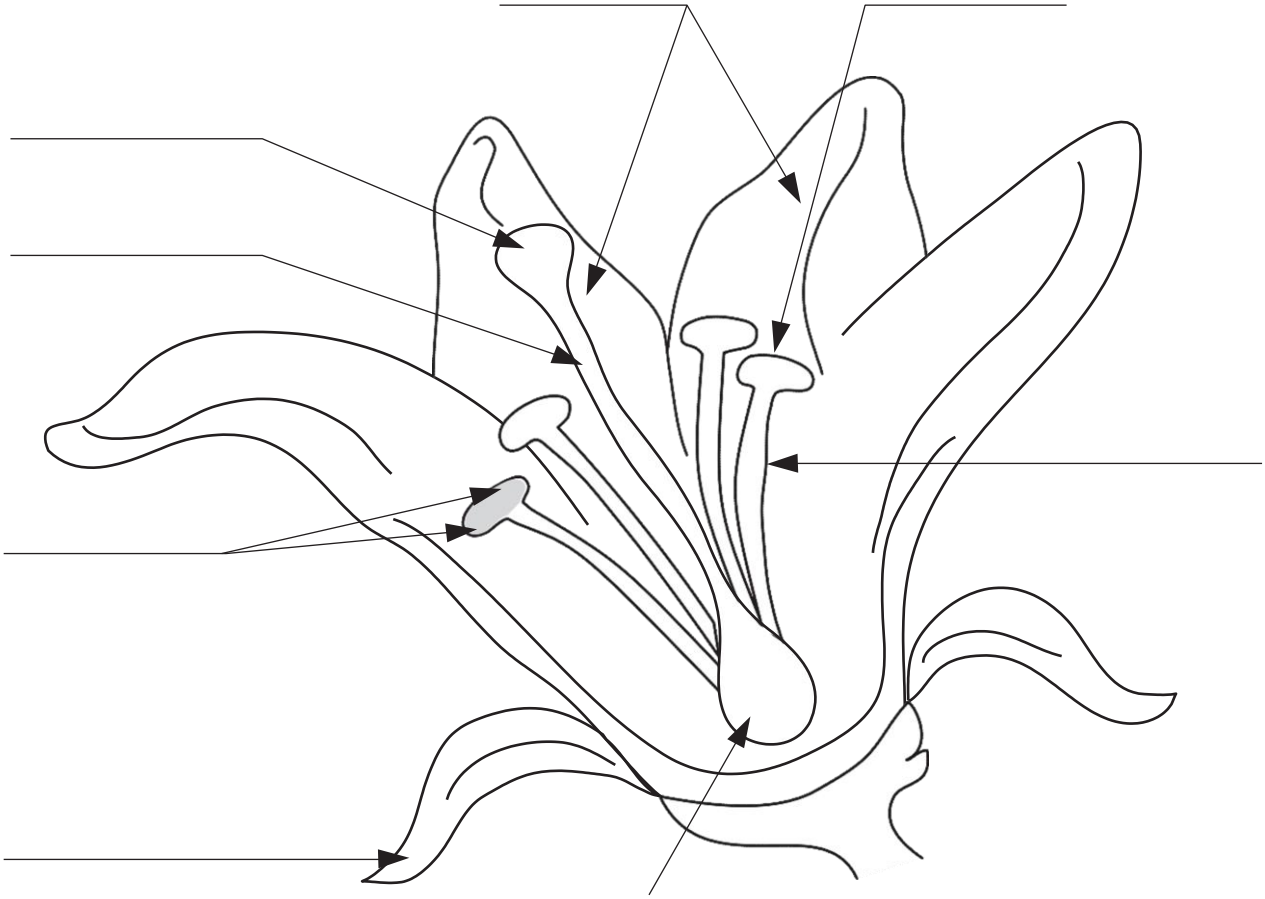

Glossary of Flower Parts:

Petals -- the colorful, thin structures that surround the pollination parts of the flower.

Sepal -- commonly green, leaf-like structures that protect the bud prior to opening.

Anther -- the bright sac that produces and contains the pollen grains.

Filament -- the stalk that supports the anther.
Pollen grains -- the powdery particles that contain the male portions of the flower; also a nutritious, protein-rich food for bees.

Stigma -- sticky surface where the pollen lands and eventually travels down toward the ovary.

Style -- the narrow region of the pistil between the stigma and the ovary.

Ovary -- the base of the female portion of the flower containing the seeds.

The Stamen or male part of the flower includes the anther and filament.

The Pistil or female part of the flower includes the stigma, style, and ovary.

Adapted from Utah Agriculture in the Classroom