Fun with Flowers: Take a Flower Apart & Make Your Own

Grade K-3

Supplies

- Diagram of a Flower
- Fresh samples of 3-4 flowers (avoid sunflowers or other daisies), enough for students working in pairs
- Hand lenses
- Paper flower pattern
- One green pipe cleaner per student
- Yellow construction paper
- Red, pink, orange construction paper
- Scissors
- Single hole punch

Background information

Flowers are the reproductive structures of angiosperms (flowering plants). An enormous variety of flowers exist, each specifically adapted to that plant species' pollinating/reproductive needs. Flowers vary in color, shape, and size. Some flowers include all the basic parts (sepals, petals, stamens, and pistils) while others only have some of these parts. As with all plant parts, there are clear connections between form and function in flowers. The huge variety of flowers that we see today results from natural selection and evolution over long expanses of time.

Activity: Flower Form & Function

See the **labeled flower diagram** provided and ask older students to label the parts of a flower

Give each pair of students the first type of fresh flower to investigate. Ask them to pull the flower apart and see if they can find all of the basic parts. Pick off the sepals, these protect the important flower parts.

Pick off the petals. Why are these petals so bright and colorful? Are all flowers the same color? These are usually colorful and often fragrant parts of the flower that attract essential pollinators like bees. Hummingbirds, butterflies, bees, and other pollinators often prefer a particular color and shape over others. For example, red tube-like flowers are favorites to hummingbirds.

The stamens, often composed of long thin filaments topped by anthers, hold the pollen. Long stamens in tube flowers often deposit their pollen on a hummingbird's forehead, while shorter stamens may be pollinated by bees who like to crawl around inside the flower. Using a magnifying glass, can you see the pollen clinging to the anthers?

Toward the center from the stamens, students will find the pistil which is composed of the stigma (at the top), style (in between) and ovary (at the base). This stigma receives the pollen from other flowers which travels down the style and fertilizes the ovules inside the ovary. If you carefully cut open the pistil you may be able to see the ovules, which, once fertilized, will turn into seeds.

Repeat this process for the other flower types and compare what is similar and what is different. It may be helpful to line up the flower parts on the desk for easy comparison.

Hand out the materials for making your own flower. Depending on students' motor skills, you may need to cut the construction paper in advance or you can have students color in the activity page with crayons or colored pencils and then cut.

Assemble your flower parts in the correct order (sepals on the outside, then petals, then stamens). Push the green pipe cleaner through the center to hold them together. Have the long end stick down to form the stem and let about one inch stick up. Coil or knot this part to form the pistil. The knot will represent the ovary and the part that sticks up is the style with the stigma on top.

At the Santa Barbara Botanic Garden

Search for flowers and fruits in the Garden. How do these compare to the flowers you dissected in class? What pollinators might visit these flowers? Not all plants are pollinated by animals, some, like oaks, are wind pollinated. How do these flowers differ from those that are animal pollinated?

What other parts of a plant do you see that are similar or different, one plant to the next.

After your visit

Have students identify the plants at your school based on their leaves and other identifying characteristics. Assign the different species to your students for a research report. Have students create a drawing or model of their flower's different parts. The level should be adjusted to fit your students abilities.

See **Leafing Through** for information on leaf form and function.

See **Flower Power** for information on pollinators (4^{th} grade).