Parts of a Flower! Flower Dissection

Essential Question:
What are the parts of a flower and what are their functions?

At a Glance:
Learners observe and dissect a flower to discover its anatomy and the how each part contributes to its reproduction**.**

Getting Ready:
Collect three or more different types of flowers for learners to observe and dissect. Simple flowers with easily identifiable parts such as gladioli, carnations, lilies, pansies, daffodils, peas, tomatoes, and beans are good plants to use. Composites such as sunflowers and daises are more complex for young naturalists but help them understand the differences in flower structure. Both fresh flowers and those that are starting to lose their petals are excellent specimens for dissection.

Location: classroom with tables for children to work in small groups

Objectives: *Learners will*
1) identify the different parts of a flower and understand their function.
2) understand the importance of pollen for plant reproduction.

Skills: data collection, observation, asking questions, analysis, communication

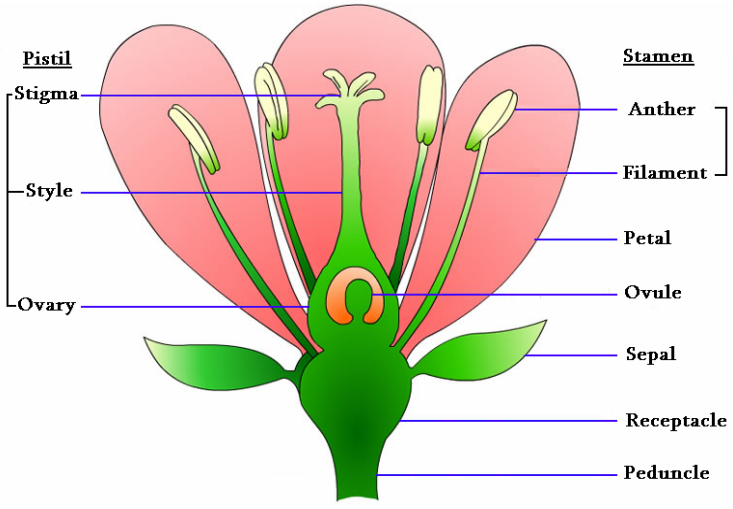
Supplies:
- 3 or more different types of flowers
- cups with water to hold the flowers
- hand lenses
- ruler
- toothpicks to use as probes
- worksheet: I Observe, I Wonder

Subjects: science

Time: 30 minutes

Background information:
Many plants (angiosperms) contain flowers where the sex cells are contained for the plant's reproduction. The stamen is the male organ for reproduction and is composed of the anther and filament (or stalk). At its tip is the anther, the organ that produces the pollen. Pollen is composed of fine grains that contain the male sex cells. The pistil is the female organ; its parts include the stigma, style, and ovary. During pollination, male pollen lands on the stigma, germinates and the sperm cells travel down the style, and fertilize the eggs in the ovary. The fertilized eggs develop into seeds. Sepals are the leaf-like parts under the petals. They are usually green and photosynthetic (able to produce food with the sun's energy). Petals can be all colors, shapes, and smells which serve to attract pollinators.

Procedure:
1. Divide the class into small groups. Each group has a plate or cup with three or more different flowers.
2. Learners begin by simply looking at the flowers and completing the *I Observe* section on their worksheet. See attached.
3. Introduce flower structure. Refer children to the flower diagram chart. Explain that each flower is unique with its own special beauty. While flowers are composed of the same



parts, the flowers are arranged differently on different species. (Actually, some plant species have separate male and female flowers and an individual flower can be missing some parts.) Tell children that although all of them have the same parts-- nose, eyes, arms, legs, hair etc.-- they, too, are all unique.

4. Have learners choose a flower and sketch it on the *Parts of a Flower!* worksheet.
5. Next, learners take apart (dissect) their flower and record additional observations. Have learners identify the parts of the flower and label them on their sketch.
6. Finally, have learners develop a series of 'I wonder' questions. These questions can be used as the basis for developing inquiry investigations and science fair projects.

Fowler Drive Elementary

Questions/Assessment:

Why are flowers important to the Pollination Department?
What is the name of the male part of a flower?
What is the female part called?
What is pollen?
What part of a flower such as a pecan swells to become the fruit and seeds?
How would the world change if there were no flowers?
How do you think your flower is pollinated?

Going Beyond:

Transferring pollen by hand or brush

Procedure: This task demonstrates moving pollen from one flower to another (pollination). Have children carefully touch the anthers (the pollen-bearing parts at the top of the stamens) of a flower and see if any of the dust-like yellow pollen grains are visible on their fingers. Have them gently rub the grains from their fingers onto the stigma (the top of the flower part with the ovary) of another flower of the same species. It may be easier to have children do this with a paint brush or a Q Tip.

Goldenrod Parachute Math

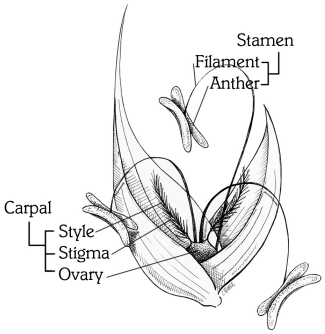
Supplies: several goldenrod plants with seed heads.

Procedure: Count the number of parachute-like seeds on one seed head. Count the number of seed heads on a spray, the number of sprays on a branch, and the number of fruiting branches on the plant. Multiply the number to find the estimate of the number of seeds produced by one plant. Repeat the process with several other plants to compute an average number per plant.

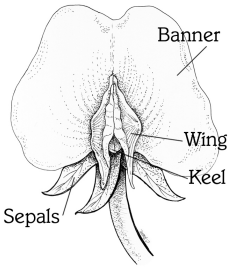
Parts of a Flower!

I Observe…..	I Wonder……
Tape or draw your flower here. **My Flower**	

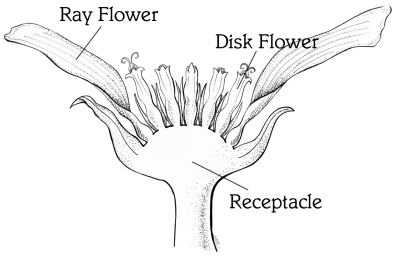
Structures of Plants



Grass



Legume



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