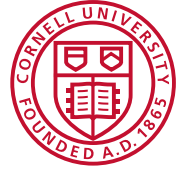


Cornell Cooperative Extension

Cornell Garden-Based Learning



Flowering Parts



20 minutes

Learning Objective(s): Participants will...

- Identify the different parts of a flower.
- Discuss the function of each flower part.

Supplies:

Handouts:

- Printed images of different flower types
- Anatomy of a Flower handout for participants

Materials:

- Three types of flowers for learners to observe and dissect.
- Cups with water to hold the flowers.
- Hand lenses



Instructions:

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 serve to attract pollinators and can be a variety of colors, shapes, and smells.

Activity Description:

- 1) Divide people into small groups, give each group a cup with three different types of flowers.
- 2) Ask the learners to draw the flowers on their worksheet and label all the flower parts. Each person in the small group can draw one type of flower or each person can draw each flower.

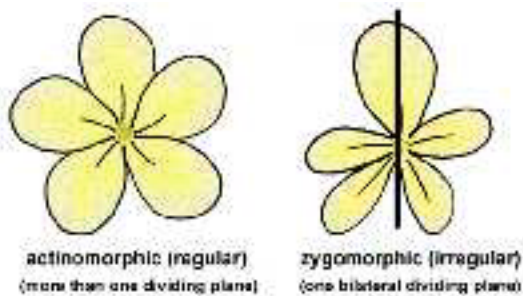
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Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

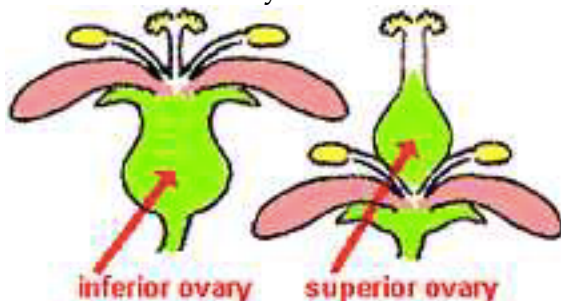
Then the group can identify the flower parts together according to the Anatomy of a Flower handout.

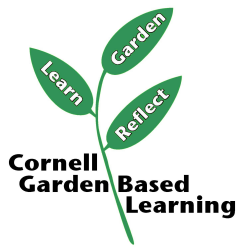
3) Explain that flowers are arranged differently on different species. Introduce the terms perfect vs. imperfect flowers; complete vs. incomplete flowers; regular vs. irregular flowers; superior ovary vs. inferior ovary.

- A flower with male and female parts is called a **perfect flower**. A flower that is missing male or female parts is an **imperfect flower**.
- **Complete flowers** are flowers that have all four main components: sepals, petals, pistils and stamens while **incomplete flowers** lack at least one of those elements. (self-pollination vs. cross-pollination)
- **Regular, or Actinomorphic, flower** is of radial symmetry; in whatever plane you cut through the flower in a longitudinal manner you will always obtain a half flower – the petals are all the same length. An **irregular, or Zygomorphic, flower** differs in that it has bilateral symmetry. You can only cut this type of flower down in one plane in order to obtain a half flower - the petals here are of different lengths.



- A flower has a **superior ovary** when the base of the ovary is located above where the sepals, petals, and stamens are attached. This point of attachment is referred to as the receptacle or hypanthium, the fused bases of the three floral parts. An **inferior** flower has an ovary below where the sepals, petals, and stamens are attached.





References: Activity adapted from the Southern Tier MGV Training Spring 2017; Flower Anatomy worksheet sourced from

https://www.superteacherworksheets.com/plants/flower-anatomy_ANZBH.pdf;

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Reviewer: Fiona Doherty