Lesson 5: Pollination Partners

Flower Pounding

Flower pounding is a crafty way to preserve different types of flowers. Place a paper towel. Cover it with a piece of muslin cloth. Place thin flowers or petals on the cloth. Cover with another paper towel. Finally, cover with a sound-absorbing material, like a phone book. Hammer the flowers into the muslin, and carefully peel off the paper towel. Experiment with different flowers. Some preserve perfectly, like pansies, marigolds, verbena, and geraniums. Others leave very different effects, like the watery impression of impatiens or the dark veins from some leaves.

Edible Flowers

A number of tasty edible flowers provide delightful nibbling snacks. Borage, begonias, rose petals, pansies, calendula, chive blossoms, dianthus, and bee balm are all edible. For a complete list of edible flowers, download the Garden Grazing Guide at http://www.ces.ncsu.edu/4hplantandsoils.

Edible Flower Ice Cubes

For a marvelous addition to your favorite drink, make flower ice cubes. Simply fill an empty ice cube tray with your favorite edible petals or flowers. Gently cover with water, and place it in the freezer. After a few hours, plunk the ice cubes into your glass and enjoy!

Assessment:

Flower-Pollinator Whatzit Cube Game

Adapted from Whatzit tic-tac-toe (Tishman, Andrade, 1997), this assessment encourages students to use analogies, evaluate important features of flowers, and think creatively about pollination. Cut out and assemble (or have students do this) dice, and make copies of the Whatzit work sheet at the end of this lesson.

Divide the class into partners or small groups, and have them work through the whatzit game. Students should fill out the work sheet as they are completing the game. Use the work sheets to find areas of strength and uncertainty in students.

Beyond the Garden Gate:
Activities to try at home

The Ophrys orchid resembles a female bee, wasp, or fly. The males of this insect species emerge in the spring before the females. The orchid’s blooming coincides with the emergence of the male insects. The male insects are tricked by the flower’s appearance and scent into mating with the orchid flowers. During the visit to the flower, the pollen rubs onto the insect’s body. When the insect visits another orchid, the pollen is deposited, thereby pollinating and fertilizing the flower. The female insects emerges slightly later, mates, and lays her fertilized eggs.

In a spirited tale of symbiotic relationships, the yucca moths are the only pollinator for the yucca flower. The female moth rolls a tight ball of pollen from one yucca flower, flies to another flower, and packs the sticky pollen into the stigma, fertilizing the flower. She then lays her eggs in the ovary wall. The moth larvae and seeds develop simultaneously with the larvae eating some of the seeds.

The hawkmoth is a moth that hovers above the flower, inserting its long mouthparts into the floral tube to reach the nectar at the bottom. Hawkmoth-pollinated flowers don’t have landing platforms, traps, or other specialized adaptations.

Hummingbird-pollinated flowers tend to produce a certain amount of nectar that is drained by the birds. After the bird leaves to hunt for more nectar the flowers will refill with more nectar, to attract more birds and ensure successful pollination.