

Materials Needed

Materials to make colored flowers such as:

- Colored paper, construction paper and/or blank white paper
- Markers, colored pencils, pens, etc.
- Cardboard, cardboard tubes, cereal boxes
- Chopsticks, bamboo skewers, craft sticks if available
- Pipe cleaners/chenille stems, if available

Grade Range

6-8

Topics/Skills

Science: Life Sciences;
Botany; Structures and Processes
Engineering: Design and Build

Learning Standards

NGSS: [Life Sciences](#)

Duration

20-45 minutes

Prep Time

10 - 15 minutes

A Flower for Every Pollinator

Design the Most Attractive Pollinating Plant



Plants have developed unique features to attract pollinators, such as bats, bees and hummingbirds. Hummingbirds like tubular shaped flowers, butterflies prefer flat topped flowers and bats are attracted to plants that bloom at night. Scent and colors can both play a role in attracting pollinators as well.

Activity Challenge

Design a flower or group of flowers that can attract a wide variety of pollinators.

Preparation

1. Review the Materials Needed list and gather whatever supplies that are available in the household.

To Do

1. Start by carefully examining any flowers around the household or in the neighborhood if available. Sketch a few different flowers.
2. Review the list of pollinators on the next page.
3. Think about what a plant would need to attract each of the pollinators on the list.
4. Sketch a few designs. Think about shape, size and color.
5. Using the materials available, try making a flower for one or each type of pollinator. It may take some trial and error. Keep at it.
6. Next, create a stem for the flower and then a base for the stem.
7. Give the flower a scientific sounding name.
8. "Plant" the flower somewhere for all to see.

Observations

Think about where the flower points or the location of the plant. Depending on the pollinator, would it matter if the flower was facing downward or nearer to the ground? Which of the flowers do you find most attractive and why?

Pollinators and their Flower Preferences

Bees

Bees like flowers that are open or have a flat tubular shape. They also like to have a surface they can land on. Bright colors can attract bees as well although they cannot see the color red. Symmetry, where one half of the flower is a mirror image of the other may help bees find the center of the flower where the pollen is located.

Hummingbirds

The shape of the flower can attract hummingbirds. They like long narrow tubes shaped like a funnel. Bright colors such as red, pink, orange or yellow are attractive as well. Since hummingbirds do not often land on the flower, flowers that point downward and can be reached without the petals getting in the way of their wings are attractive.

Bats

Bats visit plants with flowers that are open at night. Larger flowers, 1 to 3 ½ inches wide that are a pale or white color are attractive to bats. Most bats are colorblind but can still detect bright white surfaces. The flowers need to stand out from the surrounding plants at night since that's when bats feed. Bell or dish shaped flowers may play a role in attracting bats through echolocation. A dish shape may reflect sound in a way that bats recognize.

Extensions

Research Challenge:

Research how bees collect and spread pollen and then develop a homemade pollinator that can perform the same functions (See "Bee the Pollinator" Learning Activity sheet).

If you were planting a flower garden, which of the pollinators would you want to attract?

Creativity Challenge:

Make one of the pollinators (bee, bat or hummingbird) out of paper, cardboard or other available materials and try to attach it to the plant/flower you created.

Language Challenge:

Describe this new species of plant as if you were the first to discover it. Create a story around how it was discovered. Then describe its ideal habitat.

See the following RAFT Learning Activities for more activities on this topic:

Bee the Pollinator

Pollinators play a critical role in food production. You can do your part in protecting pollinators. See these resources to learn more:

[Help Save The Honeybee - NRDC.org](http://www.nrdc.org/learn/children/raft/raft-activities/raft-activities-bee-the-pollinator)