

INDOORS ✿ GRADES 4-6 ✿ SPRING ✿ ACTIVITY



Flower Power, Part Two

DESCRIPTION

Students role-play flowers and pollinators, and find their perfect match.

OBJECTIVE

To learn about pollinators and their relationship to flowers.

TEACHER BACKGROUND

Flowering plants have evolved various methods of pollination. Some flowers are wind pollinated and have very light pollen grains that are blown from plant to plant. Flowers attract many pollinators in different ways. Insect-pollinated plants often produce nectar or pollen that insects collect for food. As an insect enters the flower to get food, it is dusted with pollen. When the insect enters the next flower, some of the pollen brushes off onto the stigma. Other flowers use specific odors or colors to attract pollinators. By impersonating flowers and pollinators, students learn that there are a great variety of pollinators and that each has a special relationship to a certain kind of flower.



MATERIALS

✿ Pollinator Cards from appendix, pages 390-391

CLASS DISCUSSION

Unlike animals, plants can't move from place to place to find their mates. How then does the pollen from one flower get to the pistil of another flower? That's where pollinators come in. A pollinator is anything that helps spread pollen. There are all kinds of pollinators: birds, bats, bees, bugs, and more! Even the wind is an important pollinator. Pollinators may drink nectar from the flowers, and some, such as honeybees, collect and eat the pollen, too. In the process, they spread pollen from flower to flower without even trying. Once the pollen fertilizes the egg in the flower ovary, the plant will go on to produce fruit and seeds. So we have pollinators to thank for most of our fruits and nuts and many of our vegetables, too. Scientists estimate that one out of three things we eat is thanks to pollination by bees.



ACTION

1. Write the following list on the board:

<i>Pollinator</i>	<i>Type of Flower Preferred</i>
Beetle	Small white or light green flowers that hang down near the ground and have very little scent
Honeybee	Flowers with sweet smells and showy, bright petals, often blue or yellow
Fly	Reddish flowers that smell like rotten meat
Butterfly	Bright-colored, sweet-smelling flowers
Bat	Large sweet-smelling, white flowers that bloom at night
Hummingbird	Bright red or yellow flowers with long tubelike shape and very little scent
Moth	White or yellow flowers with sweet smell
Wind and water	Small, odorless flowers with pollen that can get picked up in the wind or float on water

Grasses, corn, and so on tend to be wind pollinated. Since they rely on the wind, they don't have to produce showy or scented flowers to attract pollinators.

2. Divide the class into two groups. One group will be Pollinators, the other Flowers.
3. Hand each student or pair of students one card.
4. Then have the two groups mingle, with pollinators looking for flowers they would like to pollinate and flowers looking for pollinators to carry their pollen to other flowers. Remind the class that there can be more than one pollinator to a flower because different pollinators may like the same type.



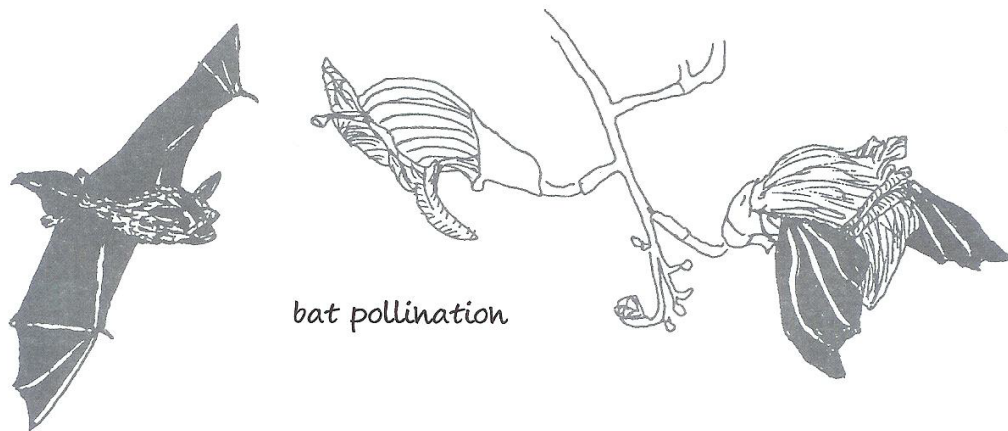
5. Once everyone has found a match, go outdoors and have the teams work together to find a real flower their pollinator might like! Can they find any bees, hummingbirds, beetles, or wind?

WRAP UP

When you look at insects near flowers now, what will you try to observe? Most scientists believe that flowers and their pollinators coevolved. That means that they changed over time to suit one another; they adapted to one another. How does this coevolution benefit the flower? How does it benefit the pollinator? During this activity you learned that often several pollinators like the same flower. For example, bees and butterflies often visit the same type of flower. How would more than one pollinator be an advantage for the flower?

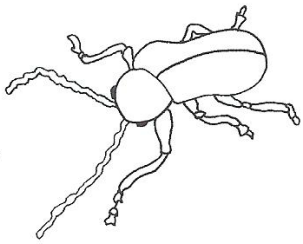

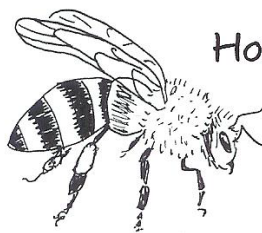
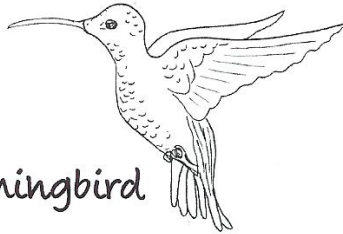
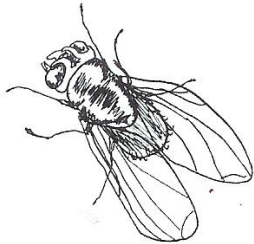
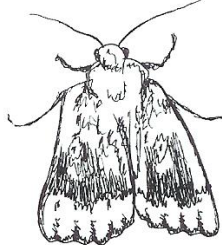
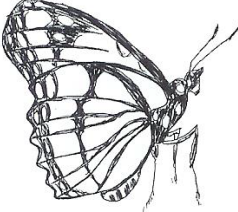

DIGGING DEEPER

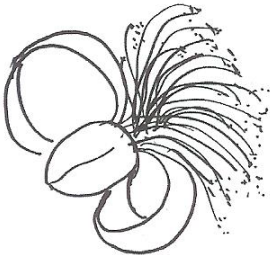
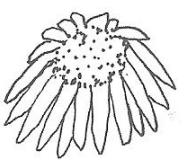
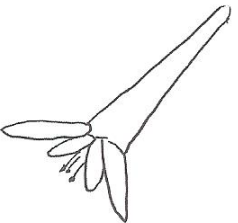
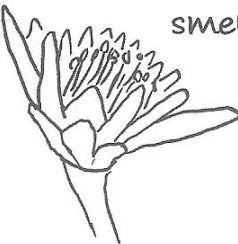
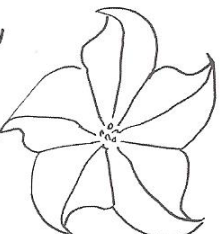
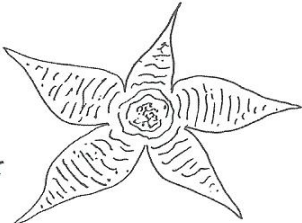
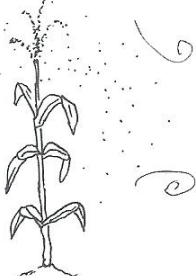
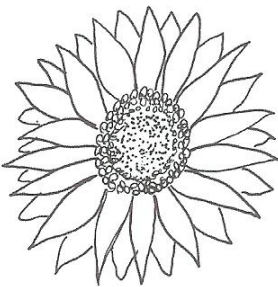
Go outdoors with students and sit quietly near some flowers. Watch carefully. What pollinators do you observe? How long does a pollinator stay on each flower?



✿ Pollinator Cards

(From: Flower Power, Part Two, page 230)

<p>Beetle</p>  <p>Pollinates light flowers that hang near the ground</p>	<p>Bat</p>  <p>Pollinates sweet-smelling, night-blooming flowers</p>
<p>Honeybee</p>  <p>Pollinates bright flowers, often blue or yellow</p>	<p>Hummingbird</p>  <p>Pollinates tube-shaped flowers</p>
<p>Fly</p>  <p>Pollinates flowers that smell like rotten meat</p>	<p>Moth</p>  <p>Pollinates white or yellow flowers that smell sweet</p>
<p>Butterfly</p>  <p>Pollinates brightly colored, sweet-smelling flowers</p>	<p>Wind and Water</p>  <p>Pollinate small, odorless flowers from grass, corn, and the like</p>

 <p>Large, sweet-smelling, white flowers that bloom at night</p>	<p>Small white or light green flowers that hang down near the ground and have very little scent</p> 
<p>Bright red or yellow flowers with long tube-like shape and very little scent</p> 	<p>Flowers with sweet smells and showy, bright petals, often blue or yellow</p> 
<p>White or yellow flowers with sweet smell</p> 	<p>Reddish flowers that smell like rotten meat</p> 
 <p>Small, odorless flowers with pollen that can get picked up in the wind or float on water</p>	 <p>Bright-colored, sweet-smelling flowers</p>