



8 POLLINATOR HABITAT

BIG IDEA: Many delicious fruits and vegetables depend on pollinators to grow.

OBJECTIVE: Students will understand that pollinators have an important job in making sure fruits and vegetable grow in our garden.

This lesson is adapted from the FoodPrints lessons, Pollinators at Work (PreK) and Pollinators and Flowering Plants (2nd). To learn more about the FoodPrints program and access the full curriculum, including instructional videos, visit freshfarm.org/foodprints.

VOCABULARY

- **POLLINATION** the process involving the transfer of pollen from the anther of one flower to the stigma of another
- **POLLINATOR** an animal that carries pollen from one flower to another; common pollinators include: bees, wasps, beetles, flies, moths, butterflies, hummingbirds, and bats
- **FLOWER** the reproductive plant part; the plant part that makes seeds
- **FRUIT** the plant part that protects the seeds
- **SEED** the plant part that can make a new plant

MATERIALS (attached)

- Pollination Hand Motion Instructions
- Pollinator Color Preference Cards
- *Pollinators and Our Food* Resource

ENGAGE: The engage section is designed to activate students' prior knowledge and experiences, pique their interest, and build curiosity.

Ask students to quietly observe the pollinator habitat and then to share what they noticed.

Explain that the insects they see flying around are called pollinators and they have a special job in the garden. Pollinators move pollen from one flower to another and that helps the fruit of the plant grow. Fruits can't grow without the flower part of the plant, and if we didn't have pollinators, we wouldn't have many of the delicious fruits we love to eat, including cucumbers, apples and tomatoes.

You can use the attached *Pollinator Hand Motions* to demonstrate how pollinators work.

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EXPLORE: *These hands-on and minds-on investigations offer an opportunity for students to further explore the Big Idea of the lesson.*

INVESTIGATION 1:

POLLINATOR SEARCH. Students can search for pollinators in the garden using the color preference cards. As they prepare to enter the garden, remind students that they are entering into the home of the insects and other animals, and they need to be calm and respectful, just as they would want visitors to be respectful in their homes.

Explain that each insect has a favorite color and smell. Give each student a card with a pollinating insect and its favorite colors to use as a reference. Ask them to search for flowers that their pollinator would prefer to get nectar from, and thus pollinate.

To further elaborate for older students, explain that in addition to a favorite color, pollinators have a preferred scent, shape, and time of opening. Ask students to identify any pollinators they see and watch if they fly to any specific flowers.

INVESTIGATION 2:

OBSERVATIONAL DRAWING. Ask students to choose a flower in the garden to observe. Watch it carefully and then draw what they see, including any pollinators that come and what they do.

EVALUATE AND CLOSE: *Before moving on to the next station, please take a few moments to have students reflect on what they have learned.*

- Ask students to share the pollinators they saw.
- Review the hand movements that show pollination.

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POLLINATION HAND MOTIONS

This can be done as a demonstration using bee and flower puppets, and/or the whole class can perform using their hands.

Words	Hand Motions and Sounds
A bee flies to a flower	<p>One hand is the flower, with fingers splayed and curved up, palm up</p> <p>Other hand is the bee, with fingers all touching, flying around then "landing" on the flower head</p> <p>Make a buzzing sound</p>
And drinks nectar	Make a slurping sound
While there, the pollen from the stamen sticks to its legs	<p>Flower fingers touch bee fingers</p> <p>Say, "stick stick stick stick"</p>
The bee flies away	Bee hand flies away
And finds another flower	<p>Move flower hand to another space, for example on other side of body or higher up near head</p> <p>Fly bee hand over to flower hand</p> <p>Make a buzzing sound</p>
Where it drinks more nectar	Make a slurping sound
And some of the pollen from the first flower sticks to the new flower's pistil	<p>Flower fingers touch bee fingers</p> <p>Say, "stick stick stick stick"</p>
The bee flies away to its hive	<p>Bee hand flies away</p> <p>Make a buzzing sound</p> <p>Say, "bye bye bee"</p>
And the pollen from the first flower goes into the ovary of the second flower to make a seed	

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POLLINATORS AND OUR FOOD

Foods that are dependent on pollinators:

- Almond
- Apple
- Apricot
- Avocado
- Blackberry
- Blueberry
- Cantaloupe
- Carrot
- Cashew
- Cherry
- Cucumber
- Mango
- Peach
- Pear
- Plum
- Pumpkin
- Raspberry
- Turnip
- Squash
- Watermelon
- Zucchini



Food plants that can self-pollinate, but produce more fruits and seeds when helped by pollinators:

- Beet
- Bean
- Broccoli
- Cabbage
- Cauliflower
- Eggplant
- Lemon
- Okra
- Onion
- Pepper
- Potato
- Strawberry
- Tomato



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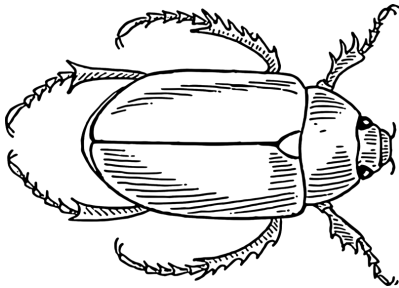
POLLINATOR COLOR PREFERENCE CHARTS

Butterfly



orange	red	pink
sweet smell		

Beetle



light green	white
light or no smell	

Fly



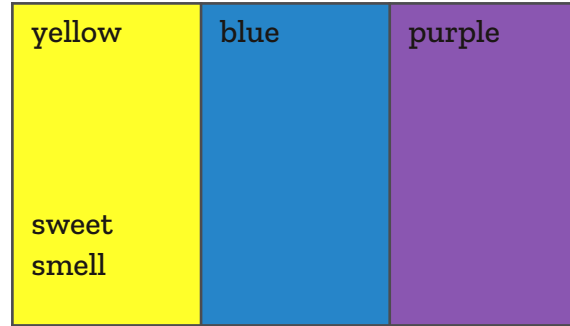
dark red
stinky smell

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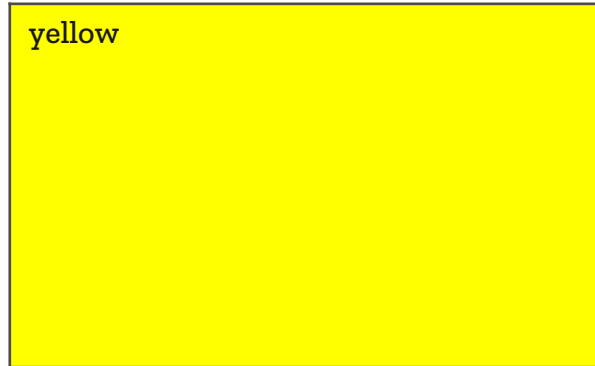


POLLINATOR COLOR PREFERENCE CHARTS, continued

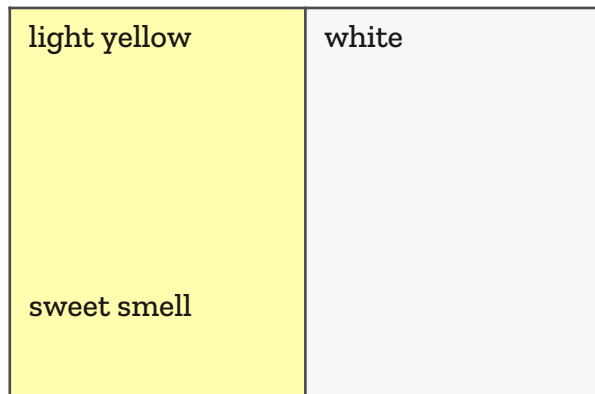
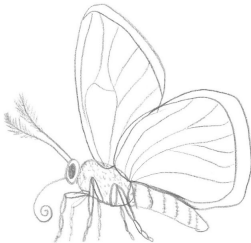
Bee



Wasp



Moth



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