

Capturing Kids' Attention in the ICNA Pollinator Garden

Engage them in activities, wow them with cool facts, ask thought-provoking questions.

What is a pollinator? *A pollinator is an animal that transports pollen between flowers and flower parts. Pollinators are crucial to the reproduction of certain plants and, therefore, much of the food we eat and the nature we appreciate. Here are some of the pollinators you might find in the ICNA garden and some cool facts about them to share. To learn more about these pollinators, visit the [Gardens](#) page on the Ivy Creek website.*

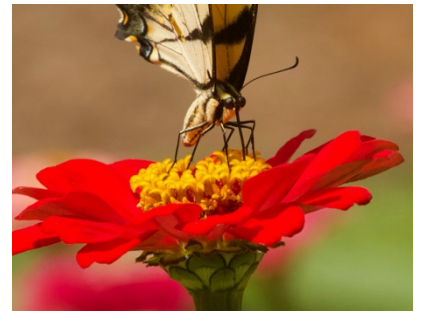
Bees:

- Some bees can fly 7 miles per hour and can beat their wings 190 times per second.
- The fuzzy bumble bee is one of the first bees to come out of hibernation in spring, its fuzzy coat keeps it warm.
- Some bees have a long "tongue" called a proboscis. The proboscis helps larger bees reach the nectar at the bottom of long narrow flowers.
- Blueberries and tomatoes are pollinated by bees using buzz pollination. Buzz pollinators land on a flower and vibrate their flight muscles rapidly causing the entire flower to shake. The rapid shaking of the flower forces the stamen to release pollen grains.



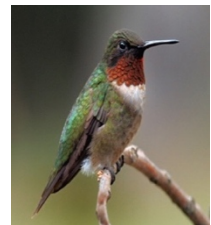
Butterflies and Moths:

- Butterflies are picky about which plants they use to raise their young. To determine if a leaf is good for laying eggs and rearing caterpillars, the butterfly "tastes" the leaf with their feet. Watch for butterflies prancing on leaves; if the leaf tastes good, the butterfly might deposit an egg.
- The beautiful Luna moth, lacks a mouth and never eats anything as an adult. They live only a few days, long enough to mate and lay eggs.
- Butterflies and moths use a proboscis to eat. When flying or resting, the insect coils up the proboscis. When eating, the proboscis uncoils into the plant and sucks up the nectar. Imagine how difficult it would be to fly with an uncoiled proboscis.
- A group of butterflies huddling around a puddle are males absorbing salts and minerals needed for reproduction. This process is called puddling



Hummingbirds

- When active, a hummingbird's heart can beat 1200 times per minute.
- To survive, hummingbirds must eat several times their weight in nectar a day.
- Hummingbirds can flap their wings 70 times per minute.



Hoverflies:

- Hoverflies can fly backwards and can reach speeds up to 24 miles per hour.
- The hoverfly larval stage, which looks like a legless maggot, lasts only a week and consumes hundreds of aphids.
- The number of eggs a hoverfly lays depends upon the number of aphids infesting a plant. Aphids hurt plants by drinking their sap. Plants with a high aphid infestation release an odor that triggers hoverflies to produce more eggs.



Beetles

- Beetles were the first pollinators to evolve.
- Beetles are clumsy fliers and prefer flowers with a wide opening.



Activities in the garden

(While the pollinators in the garden are generally non-aggressive, there are insects that will defend themselves when felt threatened. Please be aware and help your child to interact safely with the animals in the garden.)

Choose a favorite flower in the garden. Plants compete for pollinators and attract different pollinators by using a variety of colors, shapes and fragrances. Have kids choose a favorite flower and explain why they like the flower. Ask what pollinators may be attracted to their flower and why.



Which plant has the most pollinators? Ask kids to be a scientist and predict which flower trait, such as color or shape, attracts the most pollinators. Have kids search for the plant with the most pollinators. Ask them to count all the pollinators on a plant and notice if the pollinators are the same species or a variety of species.

Take pictures of pollinators. Challenge kids to sneak up on a pollinator and take its picture. To avoid spooking the pollinator, they will need to move slowly, quietly and avoid casting shadows. Bees, butterflies, flower flies, ants, beetles, and hummingbirds are all examples of pollinators. The kids may also find pollinator predators, like a spider or a praying mantis hiding near a flower.

Look for signs of caterpillars. Caterpillars are not pollinators themselves but are the larval (young) stage of a butterfly or moth. Caterpillars are eating machines that can double their weight in a few days. Leaves with holes or chewed edges may be evidence of a hungry caterpillar (or a hungry deer). Tiny black spots that look like black pepper sprinkled on a leaf may be caterpillar poop. If you see lots of caterpillar poop, a hungry caterpillar is probably nearby.

Notice the ways bees transport pollen. Bees come in a variety of sizes and shapes. Some bees carry pollen in tiny sacs found on their legs. Other bees are very fuzzy and carry pollen on their fur. Look to see if a bee uses a pollen sac or collects pollen on its fur. Do you notice different colors of pollen being carried by bees?

Is it a bee or flower fly? Challenge kids to find a flower fly. Flower flies, also called hoverflies, look like miniature honeybees. By masquerading like a bee, flower flies avoid being eaten by predators. The easiest way to identify a flower fly is to look for large, fly-like eyes, short antennae and to watch their flying behavior. Flower flies dart rapidly from plant to plant and hover above a flower like a miniature helicopter.



Where do pollinators go in the winter? Some pollinators like monarchs and hummingbirds migrate, but most pollinators spend the winter here. Ask kids, if they were a pollinator, where in this garden would they go during the winter? Pollinators spend the winter in a variety of places including inside stems, buried underground or curled up in the leaf litter.

Thought-provoking questions

Why should you thank a pollinator for a blueberry or a piece of chocolate?

- The first step in plant reproduction is pollination, which is the process of transferring pollen from the male part of the flower to the female part. About seventy-five percent of the world's food crops depend upon animal pollinators for this process.

Some days you won't see many pollinators in our garden. Why?

- Pollinators prefer warmer temperatures to fly and are more common later in the day.
- Pollinators are timid and may hide when a loud group of people approach the garden. If you are quiet and still, you may soon notice tiny pollinators buzzing around.
- Pollinator populations are declining worldwide for a variety of reasons including: the use of pesticides, decline in native plant populations, climate change and habitat destruction.



How can we help pollinators?

- Avoid using pesticides. Most pesticides can kill both good bugs and bad bugs.
- Remove invasive species which limit the diversity of food for pollinators.
- Add native plants to your yard to help native pollinators. Many plants around our homes, such as azaleas and lawn grass, evolved elsewhere and native pollinators are not adapted to utilize them.

Showy flowering plants have a bizarre way of reproducing. How is this different from how animals reproduce?

- Plants can't move like animals do. Some plants can self-pollinate or use wind but others need the help of a pollinator to carry pollen between the male and female parts of the plant. Many of these plants have evolved showy flowers to help attract pollinators to them.



Why do some plants like oak trees and grasses have a small, inconspicuous flowers?

- Grasses and oaks are pollinated by wind. Wind pollinated plants do not waste energy on producing showy flowers to attract animal pollinators. Plants that use animal pollinators have a greater chance of successful pollination than wind pollinated plants so wind pollinated plants produce millions of pollen grains to increase their chances. In the spring, the pollen grains coating the surfaces of cars and ponds were likely produced by wind pollinated plants.

Why do the bees in the pollinator garden rarely sting?

- Most bees around flowers are not aggressive and are so busy finding food they ignore people. Bees will sting if they feel threatened and, in particular, to defend their homes. This is also true of other insects such as yellow jackets. A yellow jacket is not a bee; it is a wasp. Because yellow jackets nest in the ground, people are more likely to accidentally disturb their nest and can get stung as a result. But yellow jackets are also useful insects in the garden as they eat many insects that damage food crops.

