



# Pollinators

From Flowers to Food to Our Future

# Educator Guide



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Did you know that pollination is one of the most important ecological processes on the planet? The basic transfer of pollen from the male parts of a plant to the female parts is vital for reproduction of about 90 per cent of the seed-producing plant species in the world.

Pollination is a fundamental function in ecosystems, and pollinators, which are often referred to as **keystone species** because many other species in their ecosystem depend on them, play a critical role. Indeed, without pollination, many plants could not reproduce. Food webs and, therefore, ecosystems would collapse. We would quickly run out of food, medicine, wood products — almost everything we and wildlife need to survive on this planet. Without pollination, the world as we know it would be a different place.

In this educational kit, students will learn about the science of pollination, explore the important roles pollinators play, and work together to support pollinators in their own backyards, schoolyard and community.

## Learning Outcomes

Students will:

1. Understand the pollination process.
2. Identify biotic and abiotic pollination agents.
3. Identify some ways that plants have adapted to attract pollinators.
4. Describe the importance and value of the pollination process to plants, wildlife and humans.
5. Identify possible threats to biotic pollinators.
6. Identify actions that people can take to contribute to healthy pollinator habitats.



## Vocabulary

Abiotic, angiosperms, anther, autogamy, bee, beetle, biodiversity, biotic, butterfly, diversity, ecosystem, filament, fly, food web, forest, gymnosperms, habitat, hummingbird, keystone species, moth, ovary, ovules, parasite, pistil, pollination, pollinator, pollen, sepal, spermatophytes, stamen, stigma, style, syngamy, water, wind.

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For additional resources visit:

[CanadianWildlifeFederation.ca/Education](http://CanadianWildlifeFederation.ca/Education)

## Learning Journey

1. Begin by exploring the concept of pollination with students using [The Process of Pollination](#) resource sheet.
2. Next, lead students through the activity [Pollination Puzzles](#) where they will learn about biotic and abiotic pollinators, then decipher clues to match flower cards with their pollinating agents.
3. You can then explore a variety of pollinator products and by-products with your students through the activity [Pollination By-Products](#), getting them to connect common foods to the pollinating agents that make them possible.
4. Explore some of the threats pollinators are facing, using the [Pollinator Problems](#) resource sheet to guide your discussion.
5. Finally, encourage your students to use their newfound knowledge to take action in support of pollinators in their own backyards, schoolyard or community! Use the activity [Plant a Butterfly Garden](#) to create a school yard habitat for butterflies and other pollinators or have students research and select their own pollinator-friendly project. Check out CWF's library of [Conservation Projects](#) for additional ideas!



The yucca moth depends on the yucca plant (soapweed) for food, and the yucca plant depends solely on this moth for pollination services.



Asters are a great late food source for pollinators that stay active throughout the summer and into the fall.

Encourage school administrators to convert all or part of the school's lawn to wildflower or perennial gardens that will provide valuable habitat for pollinating insects and birds.

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