# Fast Facts for Educators and Students

**What do pollinators mean to educators and students?**

Some people think only of allergies when they hear the word pollen. But pollination, the transfer of pollen grains to fertilize the seed-producing ovaries of flowers, is an essential part of a healthy ecosystem. Pollinators play a significant role in the production of more than 150 food crops in the United States, such as apples, alfalfa, almonds, blueberries, cranberries, kiwis, melons, pears, plums, and squash.

Bees, both managed honey bees and native bees, are the primary pollinators. However, about 200,000 invertebrate species, including bees, moths, butterflies, beetles, and flies serve as pollinators, as well as about 1,000 species of vertebrates, including birds, mammals and reptiles. In the United States, the annual benefit of managed honey bees to consumers is estimated at nearly $20 billion. The services provided by native pollinators contribute to the productivity of crops as well as to the survival and reproduction of many native plants.

**What Can You Do for Pollinators?**

You can educate others about their place and purpose in the ecosystem and the services that they provide for the environment. You can integrate pollinators into your curriculum. You can integrate pollinators when you teach about biodiversity, conservation and a sustainable environment.

- **Teach** *Nature's Partners*, an inquiry learning-based curriculum for young people in 4th through 6th grades. It is comprised of seven modules. Each module offers three or four activities designed to engage young people in active, investigative science following a three part learning cycle: (1) exploration; (2) concept introduction and development; and (3) concept application.
- **Use** activities for both formal and informal educational settings.
- **Involve** young people in service learning opportunities so that they can contribute to their communities.
- **Adapt** the *Nature's Partners* curriculum in any way that works best for teachers and youth leaders.
- **Reference** the curriculum link at http://www.nappc.org/curriculum/.

**What is pollination and who does it?**

Pollination is a vital stage in the life cycle of all flowering plants. When pollen is moved within a flower or carried from one flower to another of the same species, it leads to fertilization. This transfer of pollen is necessary for healthy and productive native and agricultural ecosystems. Adequate pollination ensures that a plant will produce full-bodied fruit and a full set of fertile seeds. With no pollination at all, most flowering plants could not

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produce fruit nor set seed, and many of the foods we eat would no longer be available. The plants that many wild creatures rely on for food or shelter would also disappear.

- More than 80% of all flowering plant species need the help of animals to move their heavy pollen grains from plant to plant for fertilization.
- About 1,000 of all pollinators are vertebrates such as birds, bats and small mammals.
- Most pollinators (up to 200,000 species) are beneficial insects such as flies, beetles, wasps, ants, butterflies, moths, and bees.

**What everyone can do for pollinators:**

- **Watch for pollinators**.  Get connected with nature.  Take a walk, experience the landscape and look for pollinators midday in sunny, planted areas.
- **Reduce your impact**.  Reduce or eliminate your pesticide use, increase green spaces, and minimize urbanization.  Pollution and climate change affect pollinators, too!
- **Plant for pollinators**.  Create pollinator-friendly habitat with native flowering plants that supply pollinators with nectar, pollen, and homes.  Find your ecoregional guide at www.pollinator.org.

**Join the Pollinator Partnership (P2)**
To find out more about pollinators, sign up for the Pollinator Listserv, or download a free ecoregional guide on how to plant for pollinators, go to the Pollinator Partnership website at www.pollinator.org to "Getting Involved."