The Arnold Arboretum of Harvard University

The Arboretum for Educators

Resources for Teachers, Students, and Families

June 2025

Flowers and Pollinators

The purpose of flowers is to make the seeds that become the next generation of plants. While both gymnosperms (mainly conifers) and angiosperms set

seeds, only angiosperms (flowering plants) have structures referred to as “flowers.” These structures have male (stamen with pollen) and female (pistil) parts – sometimes on the same flower, and sometimes as separate structures on separate trees. What is unique to flowers is the presence of an ovary which encases the seeds and goes on to become the fruit.

Many flowers depend on pollinators to spread pollen around. These two organisms co-evolved and have long histories of interdependence. Check out activities and resources from **Pollinator Partnership** to celebrate Pollinator Week which is June 16-22, 2025

PreK-2: Form and Function

When children begin to learn about flower parts, it is important to minimize the vocabulary in favor of purpose – children can use terms like “pollen makers” or “seed makers” to emphasize the function of these parts as well as notice the differences in their shapes, colors, and sizes. Easy to use flowers for dissecting include buttercups, azaleas, rhododendrons, daffodils, and a grocery store staple – alstroemeria, also known as lily of the Incas or Peruvian lily. Use this **organizer** to help students with their work. Children can use a black chenille stem to brush against the stamen to collect pollen. Try collecting pollen from different flowers and compare.

Grades 3-5: Flower-Pollinator Relationships

The book **Flower Talk: How Plants Use Color to Communicate by Sara Levine** explains the complex relationship between flowers and their co-evolved pollinators, focusing on the specific colors of flowers and what those colors mean to animals. Afterwards, students can get outside and look for different colored flowers and gather data on what pollinators visit them.

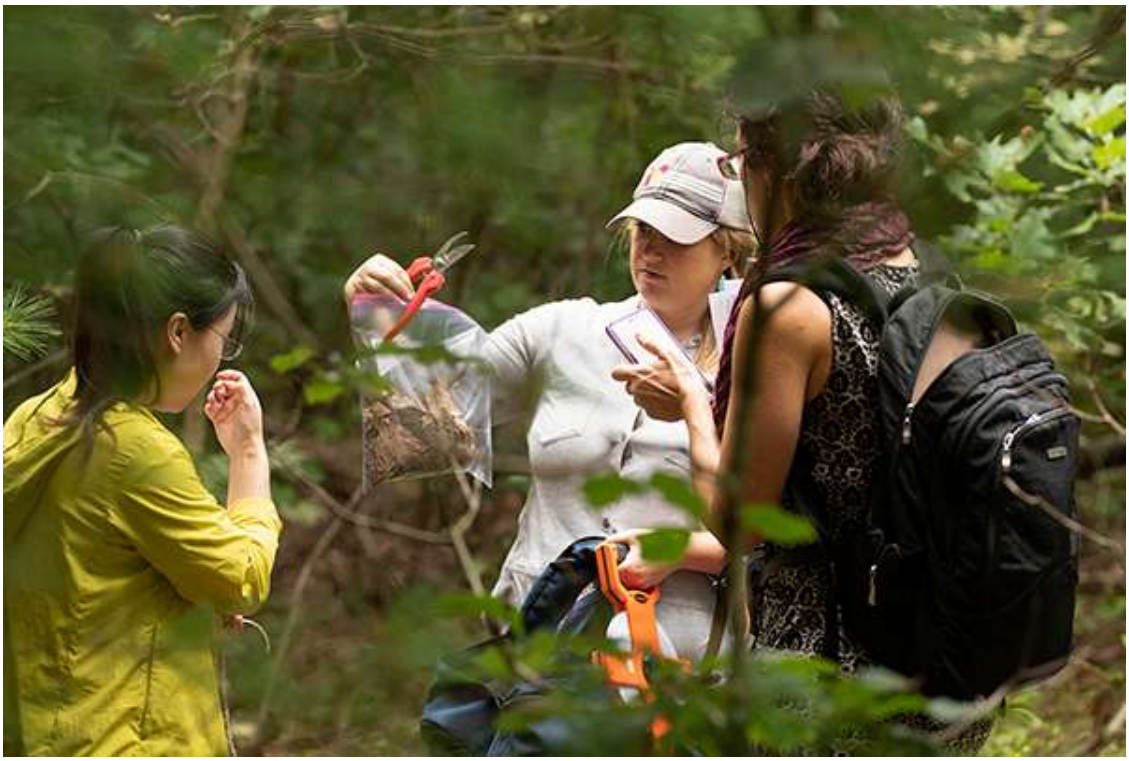
Middle School: Garden Design

Involve your students in **planning a pollinator garden**. It can be as simple as container plantings with wildflower seed packages, or it can inspire students to analyze their schoolyard, research plants and create a master plan to be shared with school leaders.

High School: Virtual Dissection

Students who already know the parts of a flower and have done basic dissections using a few levels of magnification may enjoy exploring a more advanced **on-line virtual dissection.** While the vocabulary may be too advanced, the images and variations of flowers will give students a more comprehensive understanding of the role of each flower part and their functions. Two Ted Talks, **The Hidden Beauty of Pollination** and **The Beautiful Tricks of Flowers**, may inspire future botanists! (Note, the second talk is all about plant sex!)

Attend the 2025 Summer Institute



The People Behind the Trees
August 11-14, 9am-3pm
The Arnold Arboretum
FREE

Daily outdoor science-based lessons and experiences will connect student work to the real-world work that happens when maintaining a significant world-class plant collection. Hear from experts in their fields today and become

familiar with historical expert naturalists and scientists through children's biographies.

Learn More and Apply