



The Arboretum for Educators

Resources for Teachers, Students, and Families

April 2025

Tree Buds



Look at trees from a distance in early spring and you begin to see some hazy colors around trees that were previously dull brown or gray – pink, red, yellow or lime green. Those trees have buds that are beginning to emerge from their dormant state; this is called “bud break.”

This month, get outside to observe bud break on individual trees and monitor its progression. It is amazing to watch buds reveal flowers, leaves and shoots in real time.

Grades PreK-2: Forcing Blooms Indoors

Bring in cuttings of forsythia, cherry, crabapple or willow trees to [force their blooms indoors](#) . Often grocery stores will have these twigs for sale! Simply put them in water near a bright window and watch the buds swell and burst! But, before this, involve your students in close observation of the branches. Have them feel the bumps with eyes closed, and use magnify glasses to help make observational drawings of the twigs. Let them scratch the bark a bit to reveal the green new growth underneath. Mark a date on the calendar and involve students in predicting when the first flower will appear, what color it will be and what the flower might look like. Make sure students observe the buds daily to monitor the size, shape, color, and texture changes as the days go by. Perhaps they make daily drawings to document the process.

Grades 3-5: Close Observation

Adding the element of dissections and magnification will greatly enhance student's understanding of buds. Some buds are just flowers, some are just leaves, and some contain flowers, leaves and shoots. By cutting them open (carefully) students can look at the plant tissues to figure out if they are looking at flower or leaf buds. Their external shape is also a clue! [Time-lapse videos](#) are an amazing way to cement understanding.

[Check out these lesson plans](#) on phenology and tracking the changes in buds!

Middle School: Tracking Growth

Take students out for a “bud hike” and bring along this [labeled diagram vocabulary guide](#) to help students make sense of what they see on tree branches. Tie a string securely around the end of a tree branch where the terminal bud is located, making sure the string is behind the bud. As the

season progresses, check back to see how much growth has happened after bud burst. Leave the string in place throughout the summer and check back in the fall when classes resume – students will be amazed at what an almost years' worth of growth can look like. Be sure to keep track of this data with dates, measurements, and drawings.

High School: Phenological Mismatch

Observing the timing of plant change and how these are influenced by climate is called phenology. When students engage in observing bud burst, they are making phenological observations that can be tracked. A [community science project called Budburst](#) from the Chicago Botanic Garden can inspire high school students to collect and contribute valuable data for researchers. Phenological mismatch happens when the timing of ecological interactions is out of sync and can lead to negative consequences for many species. [This video](#) explains the concept and [this article](#) shares examples. Good discussions can be had around this topic!

Arboretum Happenings

2025 Summer Institute



The People Behind the Trees

August 11-14, 9am-3pm

The Arnold Arboretum

FREE

Cherry Blossom Celebration



April 19, 2-4:15pm

Rose Garden

FREE

Come celebrate Japanese culture

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.

amongst the Arboretum's beautiful cherry blossoms. Watch performances by taiko drummers and traditional Japanese dances, participate in calligraphy activities and learn more about our cherry collection.

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