

FLOWER FUNCTIONS

BEFORE 2: What is Phenology? Practicing phenology in the schoolyard

Before your visit to introduce phenology, monitoring, and citizen science.

Background Lesson Preparation:

For an overview of Phenology and monitoring, review community science activities <https://budburst.org/plant-animal-interactions> and activities designed for educators at <https://budburst.org/activities/for-educators/grades-3-5> Assess your students' cognitive levels and adjust data sheets or journal prompts as needed. Coordinate this activity with the seasons (look around the schoolyard to see what plants are budding, flower, fruiting, etc.)

VA Standards Addressed: Science 4.1

Instructional Strategy:

1. **Hook:** Watch this video <https://www.youtube.com/watch?v=SHHkmOh942A> with students. Watch it once. Then introduce the concepts of phenophases. Watch it again, pausing the video to note these events in the flower's phenology:
 - Flower Buds at 0:01
 - First Flower at 0:12
 - Full Flowering 0:32
 - Fruit Development at 0:41
 - Full Fruiting at 1:05
2. Solicit student responses to the question: Why do scientists study the phases or stages of plant life?
3. Introduce the concept of community or citizen science. From Wikipedia, "Citizen science is scientific research conducted, in whole or in part, by amateur scientists. Citizen science is sometimes described as "public participation in scientific research," participatory monitoring, and participatory action research whose outcomes are often advancements in scientific research, as well as an increase in the public's understanding of science." ALTERNATE: Provide the phrase "community science" and instruct students to break down the words to determine what it means. And then, build a classroom definition.
4. Take students outside with nature journals (you may want to include journal prompts for students as needed) to choose a plant to make careful observations of its structures and phenophases.
5. Allow students at least 15 minutes with their plant.
6. **Wrap-up:** Ask students what they observed. Generate a list of observation on a large white board or smartBoard.

