

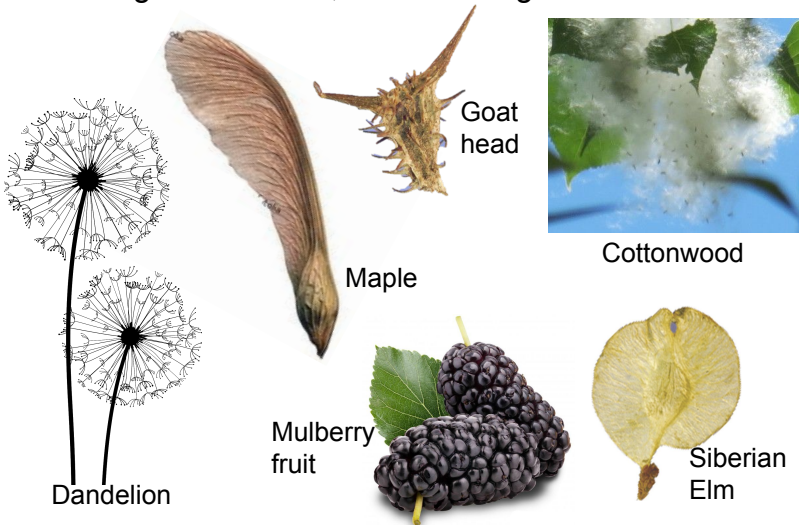
Seed Adaptations (for all ages!)



Many plants reproduce using seeds, which spread away from the parent plant to grow! How do seeds spread, or disperse, in their ecosystems? In this activity, you will learn how seeds are adapted to disperse away from the adult plant and how seed drop can help decision makers understand patterns in ecosystems.

Take a look at these seeds.

How do you think they **disperse** (distribute or spread over a wide area)? Is it by wind, being eaten, water, sticking to fur or hair, or something else?

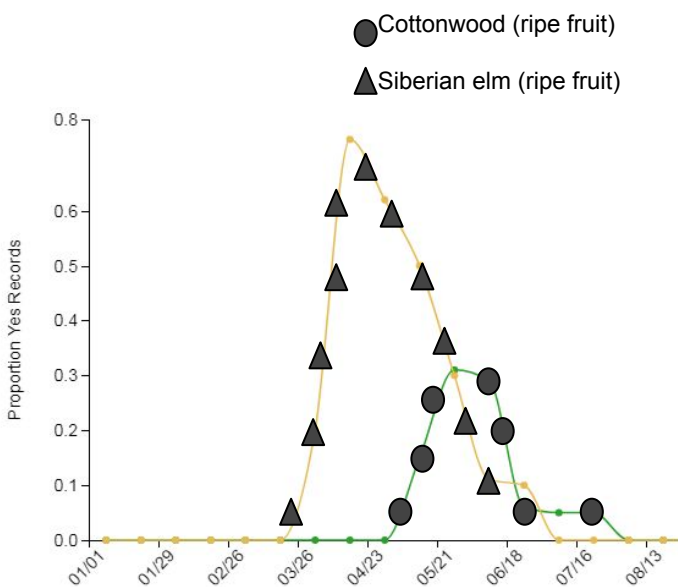


Create your own seed dispersal adaptation!

- 1) Find a dried lima bean, pinto bean, or other small seed-like material.
- 1) Add items that will distribute your seed far! This can be adding cotton balls, tape, toothpicks, etc.
- 1) Test it! Does it float or stick to something that could carry it away? You can even put it in front of a fan and see what happens.
- 1) How can you change your seed if it didn't disperse? What can you add or take away? Can you make it more specialized for water, air, being eaten, or sticking to something?

Take it to the next level!

Valle de Oro NWR uses BEMP-collected data on seasonal changes of plants and animals to help the refuge make decisions, like when to water plants. **Check out** this graph of when ripe fruit (with seeds dispersed by wind) were seen in 2019 on native cottonwood trees and exotic Siberian elms and **answer** the following questions:



1) What is the x-axis representing? _____ (Note: On the y-axis, lower values mean fewer trees have ripe fruit while higher values mean more trees have ripe fruit.)

2) What shape represents the cottonwoods? What shape represents the elms?

3) Does the left side or the right side of the graph represent earlier in the calendar year?

4) Do the cottonwoods or elms have ripe fruit first?

5) Seeds need water to grow, and Valle de Oro NWR can control when they water plants at the refuge. If Valle de Oro wants to grow cottonwoods and limit elms, when is it better to water the refuge? **Circle which months are best for cottonwoods and put an "x" through months that are best for elms:**

March April May June July