



SEED DISPERSAL

Raccoon Creek Explorers Activity #25

Supplies:

- Paper cup
- Scissors
- Rubber Balloon
- Tape
- Oatmeal, Confetti, yarn puff balls, seeds, or any small, light objects



Vocabulary:

Disperse - scattering or spreading to different places

Fruit - the seed bearing part of a flowering plant, formed from the ovary after flowering

Germination - the process by which a plant grows from a seed

Seed - the tiny embryo of a plant, usually in a protective coating

Soil Seed Bank - the natural storage of seeds in soil and leaf litter on the ground

Background:

Many plants reproduce by growing fruits, and each fruit contains a seed or even many seeds! In the right conditions, these seeds will germinate and grow, creating more plants. In this way, plant populations can reproduce and spread. But how exactly do they spread to new areas? Plants can't walk or hitch a ride, so they send their seeds! There are many ways a plant's seeds might travel and some can travel much farther than others.

Some plants use gravity to move their seeds. This means the fruits or seeds simply fall to the ground. They may roll a bit, but they don't travel very far from their parent plant. Other plants use animals to move their seeds. They might produce a fruit that animals like to eat. Then when the animal defecates, the seeds from the digested fruit are left behind. Animals can help move seeds in other ways, like carrying them on their fur or by collecting them and storing them to eat later. For example, squirrels often bury or hide acorns for winter, but they don't always come back to every stash. These forgotten acorns can sprout and grow new trees!

Some seeds are carried by wind or water. The puffy white dandelion fluff people enjoy playing with in the summer is an example of a wind dispersed seed, and as an example of water dispersed seeds,, coconuts can be carried across oceans by the waves!

The final method of seed dispersal is called mechanical and involves a kind of controlled 'explosion' that launches the seeds. There are different ways a plant might do this, but one local example is Jewel Weed. If you've ever touched a ripe Jewel Weed seed pod you know it will suddenly burst open and fling seeds everywhere! This last method of dispersal is the kind we'll be testing today!





Let's Get Started:

- 1.) Carefully use the scissors to cut the bottom off of your paper cup. Tie a knot in the tail of your balloon, then use the scissors to cut the top of your balloon off.
- 2.) Stretch the balloon over the open bottom of the cup and tape it in place.
- 3.) Add a small amount of oatmeal, confetti, puffballs, seeds, or whatever light object you'd like to use to the balloon-cup.
- 4.) Pinch the bottom of the balloon and pull it back. Aim the opening of the cup, and release the balloon to fire your 'seeds'!



Reflect:

Which method of seed dispersal do you think travels the farthest?

Which method of seed dispersal do you think is most reliable?

Why is it important for seeds to disperse?

What kind of obstacles to plants face when it comes to spreading their seeds?





Apply:

Given what you've just learned about seed dispersal, how do you think we can help local, native plants reproduce and thrive? How could we stop or prevent the spread of invasive plants that aren't meant to live in our area? Did you learn anything you might be able to apply to your garden or potted plants at home? Think of all the different fruits you eat, or the kinds of plants in your neighborhood. What method of seed dispersal do they use?

Wrap-Up:

Below are some examples of fruits and seeds you may recognize, and the ways they are dispersed.

Gravity: Apples, pears, black walnut



Animals: Blackberries, acorns

these are eaten or carried off by animals

Burdock, and other burs

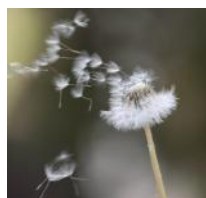
these stick in the fur of animals (and on your pants!)



Water: cattails, willow seeds, water lily



Wind: maple samaras (helicopters), dandelion fluff, milkweed seeds, tulip tree seeds



Mechanical: Jewel Weed, violets, Impatiens

