



HITCHHIKING WITH A GREEN THUMB*2021

Grade: 1st/2nd

Setting: Any Natural Area

Theme (Bottom Line): Seed dispersal is key to plant survival

Description: Students will have a chance to play with different toys that represent different types of seed dispersal.

Recommended Time: 30 minutes

Recommended Group Size: 10-12 students

State Standards:

- **Life Science 1.2.1:** All organisms have external parts that they use to perform daily functions.
- **Life Science 2.2.1:** plants depend on water and light to grow and on animals for pollination or to move their seeds around.

Outcomes: Enjoyment, Learning, Environmental Attitudes

MATERIALS LIST:

- **Toys:** Velcro ball (2)/mitts (6), helicopters or parachutes (8), bubble soap and wands (8), critters in water (plastic critters) and tray, ball popper launchers (6 poppers/20 balls), wooden screws (3), and rubber “spiky” ball(1).
- **Pictures** of different seeds: maple seed, wild licorice, dandelion, leafy spurge, cottonwood, Russian thistle/tumbleweed, mountain mahogany.
- **Bottle of water** to fill the water tray for critters in water
- 6 numbered **flags** to mark the toy stations – labeled with the plants they represent and 6 instruction cards to accompany each station (Cottonwood, tumbleweed, dandelion, leafy spurge, wild licorice, maple)
- **Bell** to signal station change

GETTING READY:

1. Gather materials and make sure you know how they all work and what form of seed dispersal they represent.
2. Set out the toys and flags in a large circle (preferably in low-cut grass)
3. Visit your site to make sure you find spot with enough room for kids to play
4. Pick out a plant for your introduction—you will want to find two examples of the same plant.

*This lesson was written by Zoe Shark, Susan Schafer, and Dolores Daniels of the City of Fort Collins Master Naturalist Department.



ENGAGE

Get the students focused with these leading questions:

1. Ask students if they think plants are exciting. (Chances are they will think they are pretty boring—but ask them why—they will probably say that plants are boring because they don't *do* anything. Or *do* they?)
2. Introduce them to a particular plant. (*Show the kids the plant example you have chosen.*) Ask the group to make a circle around the chosen plant. After explaining why you like this plant (color, form, use whatever), ask the students to turn around in the circle so they are facing out all the way around. Challenge them to find more samples of your plant. Ask students who see another plant like yours to point to it.

Today you will learn:

1. Plants all have special ways to spread their seeds around.
2. Plants are fun!

EXPLORE

1. Remind the group of how many examples of your plant they found. Remind them that the plants were not all together, but all over the place.
 - **ASK:** “How do you think those plants got moved around?” *Maybe plants do move!*
 - **ASK:** “What is the purpose of a seed?”
 - **EXPLAIN:** Each plant has a special tool for spreading its seeds around.
2. Explain the importance of seed dispersal
 - **EXPLAIN:** Plants need to reproduce in order to keep that species of plant alive!
3. “Because it is so important for plants to spread around, they all have unique ways of dispersing their seeds across the land.”
4. Explain the activity.
 - Have students get into small groups and explain that there are 7 stations; each marked with a blue flag and a toy. Explain the **Goal**. The **Goal** is to play with each station to discover how each plant disperses its seed.
 - Establish clear expectations of safety, respectful behavior, treating the toys gently, setting the station back the way they found it, taking turns, etc.

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- When they have their groups send each group to a different station.
- Each time you give your signal (demonstrate- bell ringing) they will need to put the toys down carefully like they found them and WALK to the next station.
- **ASK:** While the kids are exploring the toys ask some questions such as “How do you think this plant moves it’s seeds around?” “Do you think the seed travels far?”

Station	Plant Represented	Dispersal Technique
Helicopters	Maple seeds	Twirl and fly in the wind
Velcro ball/mitt	Wild licorice	Stick to animals like Velcro
Bubbles	Dandelions	Float through the air
Critters in water	Cottonwood	Seeds need water to germinate (like river banks)
Ball launchers	Leafy spurge	Seeds are forcibly ejected up to 15 ft.
Spikey rubber ball	Tumbleweed	Emits a chemical at the base of the stem that weakens the stem and allows the wind to blow the seed head away and around.
Screw and Bolt	Mountain Mahogany	Spiral shaped seed blows from the wind and screws into the ground.

Nat Note: *Let them play at each station for a few minutes. They might not fully understand what they are demonstrating but you’ll explain later.*

EXPLAIN → During the activity

1. As time allows, walk around to each station and have the students who played there talk about how their toy demonstrated seed dispersal.
2. Let the students try their hand at the explanation first and then correct them where needed.

ELABORATE/CONCLUSION

1. Have students think about plants at their home. What type of seeds do they see around their homes (students might not think of dandelions in their yard, bird seed or even the food they eat).
2. Talk about how they could help spread good seeds (plant native wildflowers)

EVALUATE

ASK students if they still feel like plants are boring. Have them name one thing that they think is cool about plants.

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