Seed Dispersal
A Role Play

Students use scenario cards to enact a variety of ways that seeds may be dispersed away from a parent plant. Students are encouraged to move around the schoolyard, within teacher-set boundaries.

| GRADES 3-8 | SCIENCE, LANGUAGE ARTS | GAME | CARD PRINT-OUTS |

Introduction

Animals, birds, wind, water, gravity, and humans are all included as possible seed dispersal agents in this kinesthetic activity. The game can be used as an engaging introduction to the topic of seed dispersal, plant life cycles, plant adaptations, and/or ecosystem interconnections. Teachers can adapt the game for younger students by reading the card text aloud.

The scenarios included in this game are fairly general so that they can be easily applied in different regions with their unique ecosystems. Teachers can follow up with more specific examples from their local ecosystem.

Materials

- Printed and cut out copies of the cards provided below, ideally on sturdy paper such as white card stock.

Instructions

Step 1: Prepare Cards

- Print out a set of the 30 cards provided at the end of the directions. Cut out the cards.

- Note: Pages 1 and 2 of the card set include scenarios of seed dispersal in the wild, page 3 includes examples of challenges a seed can encounter, and page 4 is human-mediated dispersal. Shuffle the cards or select a focus you wish to explore.

Step 2: Set Outdoor Boundaries

- Head outdoors with your class and create a 'home base.' Set boundaries for how far students can go during the game. Allow for the furthest possible distance within safety and visual supervision parameters.

Step 3: Explain and Play the Game

- Place cards face down in a pile at home base. Students will return to this home base area during each round.

- Model one card by reading it aloud and asking everyone to follow its instructions at the same time. Suggested actions are written in CAPITAL letters.

- When students return from the first round, they can play the next rounds with a partner (sharing a card) or independently.

- Students draw a card from the top of the pile (or get one handed out), read their card, role-play its instructions while moving to different areas, and then come back to return the card to the bottom of the pile. They can then take another card from the top.
- Students can return for second, third, fourth cards, etc., depending on class time. Multiple rounds will allow them to experience different forms of seed dispersal.

Reflection

- Gather the group back together outdoors or indoors.
- Lead a post-activity discussion or writing/drawing activity using prompts such as: "How did you travel/get dispersed as a seed during this game? What happened to you? Why do you think plants have this adaptation for travel? Did any of the scenarios remind you of a seed you know about? What is your favorite fruit or seed?"

Extensions

1. Invite students to make more cards for the game based on their own research and ideas. Blank cards are provided for printing out with the game cards.
2. Observe real seeds and fruits to predict their dispersal method. Take students on a seed hunt in a natural area outside or bring a variety of seeds and fruits to the class.

BOOK RECOMMENDATIONS

- *The Dandelion Seed* by Joseph Anthony and Cris Arbo
- *Flip, Float, Fly: Seeds on the Move* by JoAnn Early Macken and Pam Paparone
- *From Bird Poop to Wind: How Seeds Get Around* by Ellen Lawrence
- *Planting the Wild Garden* by Kathryn O. Galbraith and Wendy Anderson Halperin
- *Seeds Move!* by Robin Page
- *Who Will Plant a Tree?* by Jerry Pallotta and Tom Leonard

NEXT GENERATION SCIENCE STANDARDS

Disciplinary Core Ideas

- From Molecules to Organisms: Structures and Processes
- Ecosystems: Interactions, Energy, and Dynamics
- Biological Evolution: Unity and Diversity

Crosscutting Concepts

- Structure and Function
- Patterns
- Systems and System Models

Science and Engineering Practices

- Obtaining, Evaluating, and Communicating Information
- Developing and Using Models

AUTHOR

Ayesha Ercelawn

National Schoolyard Forest System℠

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You are a seed... inside a juicy fruit that got eaten by a BIRD. FLY along with the bird for 15 FLAPS. When the bird stops near a tree, you get pooped out. If you landed in a good place to grow, start germinating.

Count to 15, sprout two leaves, then come back.

You are a seed... with prickly spines that got stuck to an animal's fur. Get a ride on the RUNNING animal until it SCRATCHES its back on a rough surface and you finally drop off and onto the ground. Do you think you found a good place to grow?

Count to 20, then come back.

You are a seed... that got stuck in the feathers of a migrating warbler. FLY with the bird to the furthest place you can go. When the bird stops to PREEN itself, you fall off. Did you land in a good place to grow?

Count to 10, then come back.

You are a seed... that is very lightweight, with special fluff that helps you get carried by the wind. FLOAT to the furthest place you can until you gently land. Did you land in a good place to grow?

Count to 10, then come back.

You are a seed... that starts twirling as you fall out of a tall tree. TWIRL and TWIRL until the wind catches you and carries you FLOATING as far away as possible from your starting point.

Count to 10, sprout two leaves, then come back.

You are a seed... that got buried in the soil by a jay storing seeds for the winter.

Lucky for you, the jay forgot to eat you.

HOP to a new spot with 10 hops.

Count to 40, sprout two leaves, then come back.

You are a seed... waiting for your seedpod to pop open. Suddenly, on a hot day, it opens and you EXPLODE out and land in the dirt. JUMP as high as you can before sitting down on the ground.

Count to 30, grow two leaves, then come back.

You are a seed... that is bitter tasting, but inside a sweet fruit. An animal spits you out after eating the fruit. JOG around to a new place.

Count to 30, sprout two leaves, then come back.

You are a seed... that got stuck to a duck's webbed foot. PADDLE and SWIM with the duck to the far side of the lake until you fall off.

Count to 15, sprout two leaves, then come back.

You are a seed... with prickles that made you stick to a deer's fur in the mountains. As winter arrived, the deer migrated down the mountain looking for food. As it rubbed against a tree trunk, you fell off its fur. WALK 15 steps while RUBBING your stomach.

Come back.

You are a seed... that an ant carried off to its colony underground. WALK with the ant in 50 TINY STEPS. Did you get eaten by an ant or did you survive? You decide.

Count to 30, then come back.

You are a seed... that floats in water. You FLOAT across the ocean to an island. SWIM as far as you can.

Count to 5, grow two leaves, then come back.

You are a seed... inside a juicy fruit that fruit bats love to eat. FLAP along as you get carried by the bat to a HIGH place and drop to the ground under a tree while the bat eats.

Count to 10, sprout two leaves, then come back.

You are a seed... tiny but full of nutrients for an animal. The animal SCURRIED away and hid you in its winter storage area. Spring came before the animal ate you.

Count to 20, sprout two leaves, then come back.

You are a seed... that a mouse carried off to eat. But a large hawk swooped down and ate the mouse. You dropped out of the mouse's paws and survived. RUN to a new place.

Count to 20, grow two leaves, then come back.

You are a seed... large and round. Where might you ROLL and SPIN to because of gravity?

Count to 15, sprout two leaves, then come back.

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You are a seed... that starts twirling as you fall out of a tall tree. TWIRL until the wind catches you and carries you as far away as possible. Unfortunately, you landed on asphalt, not on soil. You are a dead seed.

Count to 5 while holding your head, then come back.

You are a seed... small and interesting. A child took you home to save in their collection. Bounce up and down in their pocket, then find a place and pose!

You didn't get to grow. Count to 10 then come back.

You are a seed... with prickly spines that got stuck to a squirrel's fur. RUN along with the squirrel until it scratches its back on a rough surface. Sadly, the area is surrounded by cement and you can't survive.

Count to 15, then come back.

You are a seed... full of nutrients. But the animal that would have helped you get to a new place has gone extinct. Fall to the ground and SLOWLY DIE in the shade of your parent tree.

Count to 100—a century of loss—then come back.

You are a seed... big and full of nutrients. You got buried by a scrub jay storing seeds for the winter. HOP 15 times to a new place. The jay ate you during the winter. You are a dead seed.

Come back.

You are a seed... that got stuck in the feathers of a migrating warbler. FLAP and FLY with the bird to the furthest place you can. Unfortunately, you fell off as the bird flew over a road and you can't survive. You are a dead seed.

Count sadly to 10, then come back.

You are a seed... light and with special fluff that helps you get carried by the wind. FLOAT to the furthest place in the yard until you drop out of the air. Oops, you landed in a parking lot. You are a dead seed.

Count to 10, then come back.

You are a seed... that got stuck in the feathers of a bird. FLAP and FLY with the bird to the furthest place you can. Oops. The bird crashed into a window at night. You landed on the sidewalk. You are a dead seed.

Count sadly to 5, then come back.

You are a seed... inside a person's favorite fruit. When they immigrated to this country, they brought you along to grow in their new home. BOUNCE around in the suitcase as you go to a new place.

Count to 20, grow two leaves, then come bac**k.**

You are a seed... found near a tree by a child who skipped home with you. SKIP 20 times. This child planted and watered you.

Count to 10, grow two leaves, then come back.

You are a seed... that has such fluffy and soft parts attached to you that people want to grow more. Travel on a ship to a new country. BOB UP AND DOWN as you walk to the furthest place you can.

Count to 10, grow two leaves, then come back.

You are a seed... inside a fruit that is so delicious that people want to grow more of you. Travel on a truck to a new farm. BOUNCE along for 20 steps.

Count to 10, grow two leaves, then come back.

You are a seed... that a child loves to eat. Lucky for you, you got dropped on the soil by this messy eater. WALK in a ZIG ZAG for 20 steps.

Count to 10, grow two leaves, then come back.

You are a seed... that is prickly and got stuck to a person's socks. They finally noticed you, said, "OW!" and threw you far away. WALK, SKIP, and HOP 15 times.

Count to 10, grow two leaves, then come back.

You are a seed... that humans eat for food. Lucky for you, they didn't eat you and saved you to plant next year. DANCE to a new place. How many edible seeds can you think of?

Count to 10, grow one leaf, then come back.

You are a seed...

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