

Standards and Correlations

Head Start Domains

1A3, 1A4, 1A5, 1B1, 1B3, 3A4, 3A5, 3A6, 4A1, 4A2, 4A3, 5A2, 5C2, 5B1, 6E2, 8C3

NAEYC Accreditation

Criteria

2.A.07, 2.A.08, 2.A.09, 2.A.10, 2.A.11, 2.A.12, 2.B.03, 2.B.04, 2.B.05, 2.B.06, 2.B.07, 2.C.03, 2.C.04, 2.D.04, 2.D.06, 2.D.07, 2.E.03, 2.E.04, 2.E.06, 2.E.09, 2.F.02, 2.F.03, 2.F.04, 2.G.02, 2.G.03, 2.G.04, 2.G.05, 2.G.06, 2.G.07, 2.G.08, 2.J.05, 2.J.06, 2.J.07, 2.K.01, 2.K.02, 2.L.01, 2.L.02, 2.L.05, 2.L.08, 2.L.09

Resources

Non-Fiction

Berries, Nuts and Seeds by Diane L. Burns

From Seed to Plant by Allan Fowler

From Seed to Plant by Gail Gibbons

A Fruit is a Suitcase for Seeds by Jean Richards

How and Why Seeds Travel by Elaine Pascoe

Seeds by Ken Robbins

Fiction

I'm a Seed by Jean Marzollo

In a Nutshell by Joseph Anthony

A Seed is Sleepy by Dianna Hutts Aston

The Tiny Seed by Eric Carle

Show Me Wildlife

<http://www.arkive.org/grey-squirrel/sciurus-carolinensis/video-08a.html>

<http://www.arkive.org/sycamore/acer-pseudoplatanus/video-09b.html>

<http://www.arkive.org/emu/dromaius-novaehollandiae/video-08a.html#text=FACTS>



This activity is modified from "Seed Need" from the Project WILD K-12 Curriculum and Activity Guide.

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Seed Need

Children explore seeds as food for people and animals and learn how animals spread seeds.

Quick Facts

Plants grow in nearly every environment on earth and serve as food for people and many animals. Depending on the kind of plant (and animal), different parts may be eaten including the leaves, stems, roots, flowers, nectar, fruit and seeds. People plant seeds to grow the food they need in gardens or on farms. Animals in the wild must search for the seeds and plants they need to eat.

In the wild, animals help in the process of seed distribution (dispersal) in a variety of ways. Some seeds have little barbs or hooks that catch on an animal's body as it passes by. Later, grooming or brushing up against an object will knock the seed off in a new location. Many plants have developed brightly colored, flavorful fruit as a means of attracting animals. Fruit-eating animals, including many birds and mammals, pass hard to digest seeds out of their bodies in their "poop," called scat. Animals may also loosen seed heads or drop acorns and other seeds to the ground as they are feeding. The seeds can then float in the air or roll to a new location. Squirrels and many jays are famous for burying "nuts" to eat at a later time. When they lose track of their hidden treasures, seeds are dispersed. If dispersed seeds get enough water, nutrients and sunlight, new plants may grow in many new locations.



Wild Wonderful Words

seed plant fruit scat sprout

Materials and Prep

- A variety of seeds from common plants
- Part I: a large sock and piece of construction paper for each child, and a paper or reusable tote bag
- Part II: a whistle, a playing field, 6 baskets, and plastic eggs or similar objects in 6 different colors (see page 92 for preparation and instructions)

Prerequisite: Children should understand the function of seeds before they explore dispersal. Complete a unit on seed germination and plant development first.

Warm Up

Look at a variety of seeds, particularly some the children might recognize or eat, e.g. pumpkin, sunflower, beans, apple, orange, corn, almonds, berries, etc. Discuss where they came from and how they grow

into plants. What animals besides people eat seeds? Refer to any pets the children may have in the classroom or at home. Discuss wild animals that eat fruits and seeds. How do wild seeds get to so many places? Not only do animals eat seeds, they help to spread them into new places. Let's explore how they do that!

Ready, Set, Go!

Part I: Outdoor seed walk

(Fall may be the best time for this in many areas.)

Safety Tip: Remind children not to put objects from outside, some of which may look like edible seeds, in their mouths.

1. Help each child put a sock on over one shoe and go walking through a grassy area or field that has many seed bearing plants.
2. After the walk, have children take off the socks and examine them carefully. What happened? What kinds of things are on the socks? Place the socks in a bag and return to the classroom.

3. Help children remove seeds and other particles from their socks. Encourage each child to sort out the items they found on a large piece of construction paper. What is alike? What is different? Introduce and encourage vocabulary using words such as round, flat, large, small, prickly, bumpy, and smooth.

4. Ask students how animals' fur might be similar to their socks. Has anyone ever brushed seeds or picked burrs out of a dog's or cat's fur? Seeds may stick to an animal's fur in one place and then later fall off onto the ground in another. Why might this process be important?

Part II: Seed dispersal simulation

(See page 92 for preparation and instructions.)

1. Gather children at the center of a large open area. Have them count off #1-6. Designate each number group as an animal: Black Bears, squirrels, mice, deer, goldfinches, and robins. Allow each "animal" to gather 5 "seeds" (plastic eggs or similar) of the same color to carry.
2. Blow a whistle and encourage the "animals" to move off in any direction. The bears must skip, the squirrels must hop on one leg, the mice must crawl, the deer must walk, and the goldfinches and robin can "fly"/run. After about 5 seconds, blow the whistle two times. All the "animals"



should freeze. Each must drop a "seed" wherever she/he stopped.

3. Repeat Step 2 five times, reminding students that they may move in a different direction each time.
4. After the final seeds drop, gather the students on the sidelines to observe the field. Judging by the colors spread on the field, which animal covered the most territory? Which covered the least?

Wrap Up

- Why are seeds important? Where do they come from? What do they become?
- Who eats the plants that grow from seeds?
- How can seeds travel to grow in different places?



Take Me Outside!

Plant Seeds and Watch Your Garden Grow

Let's plant a garden and watch plants grow into food we can eat. First we cover the bottom of a large clay pot (or pots) with small rocks. Then we add a thick layer of potting soil. Now we plant the seeds in the soil and cover them up. (Plant quick growing plants such as radishes, beans, or lettuce.) Let's put our pot on a saucer in full sun and water our seeds to help them grow. We'll need to check on our plants every day and water them when needed. (You may opt to carry the pot indoors at the end of each school day.) **Note:** Seeds may be started in clear containers so children can watch them sprout. Once they have a root and a shoot, plants may be transplanted into pots.

Healthy Me!



A Meal from Fruits and Seeds: Did you know most people eat lots of seeds every day? Wheat, corn, rice and oats are all seeds from different grass plants. We call these seeds "grain." Grain is used to make breads, cereals, crackers and other foods. Look in magazines for pictures of fruits and vegetables with seeds and foods made from grain. Cut or tear out the pictures and glue them on paper plates. Show your plate to your friends and tell them about your favorite "seedy" foods.



Helping Hands

Share a Seedy Meal: Set up bird feeders filled with seeds for wild birds. Watch the birds and squirrels spill seeds on the ground while they're eating. What do you notice about some of the seeds spilled on the ground (they may sprout and grow)? What might happen to some of the seeds the animals carry away from your feeders? What other ways can you help feed or provide water for the wildlife in your neighborhood? (Encourage children to pull birdseed seedlings after a few days to prevent them from "invading" your area. You might also bring your bird feeder in at night to prevent undesirable wildlife.)



Mighty Math

Seed Counting: Look at the groups of seeds we sorted from our socks after our outdoor seed walk. Which group looks as if it has the most? How can we know for sure? We can count! Count the number of items in each category, carefully touching them one by one. (Say, "this is the way we write the number ____," as you help the children write the numeral next to each category on the construction paper. Have older children compare numbers, determining which is more or less, or add totals in different groups.)

Home Connections

Seed Stake Out: Find a place in your yard or neighborhood with plants that have flowers, fruits or seeds. With an adult, sit quietly and observe the animals that visit the plants. What kinds of animals eat from the flowers, fruits or seeds?

Seed Scavenger Hunt: Go on a seed scavenger hunt with a grown up. Read ingredient labels on foods in your house. How many have seeds in them?

Note: Copy Seed Scavenger Hunt sheets (page 107) and send them home with children.

See page 103 for a take-home Home Connections card.



Art Projects

Seed Collage

After thoroughly handling, sorting, and counting the materials collected on their socks during the outdoor seed walk, help the children make seed collages. Place the seeds in bowls with spoons. Depending on how many seeds were collected, you may want to add additional seeds to the bowls. Give children stubby brushes, construction paper and white glue. Encourage them to use their imaginations and draw pictures or create design patterns with the glue. Allow children to sprinkle or place seeds on the wet glue to complete the collage.



Edible Art

Give each child a soft flour tortilla, flattened pita bread, or small pizza round to place on a plate. Have them use plastic knives or craft sticks to spread the bread with tahini, hummus, honey, fruit preserves or nut butter(s) (see Safety Tip below). Encourage them to design mosaics or make faces on the spread using nuts, sunflower seeds, pumpkin seeds, berries, and dried fruit. Photograph the mosaics before eating them. Use the photos to make a bulletin board or display for your classroom.

Safety Tip: Avoid peanut butter due to the high likelihood of allergies. Check school records or ask teachers and/or children's parents for information regarding any allergies children may have to other food products.



Music & Movement

Five Little Squirrels

(To the tune of "Twinkle, Twinkle, Little Star")

Five little squirrels sitting in a tree (hold up 5 fingers)
The first one said, "These nuts are for me."
(point to thumb)
The second one said, "I like to eat."
(point to pointer)
The third one said, "Nuts are a treat." (point to tall man)
The fourth one said, "Do you want some?"
(point to ring man)
The fifth one said, "You may have one."
(point to pinkie)

Then five little heads went nod, nod, nod. (nod heads)
Five little bodies went bob, bob, bob.
(jump up and down)
Ten little feet went patter, patter, patter.
(stamp feet)
Five little mouths went chatter, chatter, chatter.
(clap hands)
Five little squirrels scolded you and me,
(shake finger)
As they sat and ate nuts in the big, tall tree.
(stretch arms up)

Seed Sounds

Place dried beans, rice or other dry seeds in containers to make musical shakers. Discover the variety of sounds you can make by using different seeds in different containers. Containers can include plastic food containers, paper plates stapled together, frozen juice cans, soup cans, aluminum pie tins taped together, etc. Once seeds are securely contained, decorate the shakers. Use the shakers to keep the beat while singing "Dropping Seeds."

Note: When you are done making music, you may want to open shakers and cook up a seed feast. If seeds are left in containers for extended periods, naturally occurring insect eggs may begin to hatch inside the shakers.

Dropping Seeds

(To the tune of "Frere Jacques")

Dropping seeds, dropping seeds
On the ground, on the ground,
We carry them where'r we go,
When they get water, then they grow,
All around, all around

Centers & Extensions

Plant "Wild" Seeds

Plant some of the seeds you found on the children's socks. Observe their growth. What kind of plants do you think they are?

Watch Grass Grow

At a center near a window, place grass seed on a wet sponge. Pour water over the top of the sponge to keep it moist while the grass grows. What animals eat grass?

Soil Experiments

Put soil in a large tub or sand table and let the children dig in it. Add water. How does the soil change? What happens when the soil dries out? What would happen to a seed if it were in the soil when it dried out?

Dramatic Play: Human Seed Dispersal & Harvesting

Provide a prop box with: child-sized rakes, hoes, trowels, shovels, garden gloves, aprons and overalls; knee pads; empty seed packets; flower pots; watering cans; baskets; plastic flowers and fruits and vegetables. Allow time for children to role play human seed dispersal (a.k.a. gardening) and harvesting.

Seed Dispersal Experiments

Allow children to collect acorns and other seeds from the schoolyard (or provide some). Make sure they collect with respect (see page 7). Encourage them to experiment with seed dispersal. Drop acorns one at a time in different locations. Under what circumstances do they roll the farthest? Blow on dandelion or thistle seed heads. How far do these seeds travel on the breeze? How do other local seeds disperse?



Snack
Fruit and Seed Buffet: Serve the children a variety of seeds, fruits and "vegetables" that contain seeds such as sugar snap peas. Offer several dips as accompaniments, e.g. Ranch dressing, nut butter(s) mixed with mayonnaise, low-fat yogurt or hummus. Make sure to check for allergies when determining what to serve.

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