

Sock Walk

Skills: Science, Language Arts, Visual Arts

Objective: Students will learn how some seeds travel by taking a walk outdoors wearing socks over their shoes.

Background

Fruits and vegetables have one characteristic in common—seeds. Without seeds there would be no new plants after the old plants died. Eventually there would be no more tomatoes or watermelons or other plants of that kind.

Many plants produce seeds in the fall. Plants with flowers have seeds. Seeds grow in vegetables and fruits. One plant may have many seeds. In fact, most plants produce many more seeds than will finally grow to new plants.

Seeds come in many different shapes and sizes. Some, like avocado seeds, are large. Others, like blackberry seeds, are very small.

Birds, animals and people eat many of the fruits and vegetables that hold seeds. Sometimes we eat the seeds, too.

Seeds travel. Some seeds travel to far away places, and some stay close to the plant or tree where it grew. Some seeds, like dandelion and poppy seeds, are carried by the wind. Some, like lily pods, move through the water. Birds eat berries and carry the seeds far away. Some seeds stick to the fur of animals and are carried to new places. Some are scattered when the fruits carrying them pop open and shoot them out. People also move seeds. We collect seeds so we can plant them the following spring.

Viable seeds (those capable of growth) have been found embedded deep within layers of ice and inside pyramids thousands of years old. Similarly, when garden seeds are stored properly, they can be viable for five or six years.

Science

1. Read and discuss background.
 - Brainstorm all the ways seeds are scattered (animals' fur, clothes, water, wind, insects).
2. Show the fruits and vegetables to students.
 - Discuss what they are and what they have in common.
 - Cut open the fruits and vegetables for the students to examine.
 - Remove the seeds.

P.A.S.S.

GRADE 1

Science Process—1.1,2;
4.1,2,3

Physical Science—2.2

Reading—1.1,2; 5.1; 6.1ac

Visual Arts—3.2

Physical Education—1.1,4;
2.3; 3.1,2; 5.3,4; 6.1,2; 7.1

GRADE 2

Science Process—1.1,2;
4.1,2,3

Reading—4.1; 5.1ac

Visual Arts—3.2

Physical Education—1.1,3;
5.2,3; 6.1; 7.2

GRADE 3

Science Process—1.1,2;
4.1,2,3

Life Science—2.1,2

Reading—3.1; 4.3a

Visual Arts—3.2

Physical Education—5.3; 6.2

GRADE 4

Science Process—1.1,2; 2.1,2;
4.1,2,3,4

Life Science—3.2

Reading—3.3a

Visual Arts—3.1

Physical Education—3.3;
5.1,2; 6.3; 7.1

GRADE 5

Science Process—1.1,2; 2.1,2;
4.1,2,3,4

Visual Arts—3.1

Physical Education—4.1; 7.3

GRADE 6

Science Process—1.1,2,3;
2.1,2; 4.1,2

Visual Arts—3.1

Materials

unshelled peanuts

pea pods

green beans

apples

grapefruit

a watermelon

tomatoes

green peppers

knife

paper plates

chart paper

crayons

old socks—one for each student

plastic bags

- Place seeds on a paper plate.
 - Label the plates with the names of the fruits and vegetables.
 - Students will describe the sizes, shapes and colors of the seeds. How are the seeds alike? How are they different? Why are seeds important?
 - Students will count the number of seeds on each paper plate.
 - Students will make a bar graph to compare the number of seeds found in the different fruits and vegetables.
 - Cut the fruit into bite-size pieces for children to enjoy for a snack.
3. Hand out copies of Student Worksheet A for students to complete.
 4. Provide each student with one sock.
 - Students will turn the socks inside out and put them on over their shoes.
 - Take the class outdoors to a grassy area. A dry, weedy area would work best.
 - Students will drag their socked feet through the grass to collect seeds. A dry, weedy area would work best.
 - Before returning to the classroom students will take off the socks and turn them so the seeds are inside.
 - Return to the classroom.
 - Students will carefully turn the socks right side out and place socks in a place where they can dry.
 - Students will carefully remove the seeds from the socks and sort them.
 - Students will work in groups to chart every kind of seed they have collected.
 - Discuss how each kind of seed is scattered to a new place.
 - Students will leave a few seeds on their socks, moisten the socks slightly, and place them in plastic bags.
 - After a few days, students will check to see if anything has sprouted.
 5. Divide students into groups.
 - Provide each group with a cup of water, a square of soft cloth and an assortment of seeds (burrs, dandelion, lettuce, pecan, radish,)
 - Students will predict how each kind of seed would be dispersed in nature—by flying, floating or hitching rides.
 - Students will experiment with each kind of seed and decide as a group which category each belongs in.
 6. Students will bring seeds from home and make seed collections on index cards or poster board, or keep seed collections in egg cartons and write the names of the seeds on the lids.
 7. Students make seed booklets.
 - Provide magazines or seed catalogues with pictures of common vegetables.
 - Students will cut out pictures of their favorite vegetables and glue them to 8 1/2 X 11 sheets of construction paper turned sideways and folded in half.
 - Provide seeds to match the vegetables.
 - Students glue the corresponding seeds above the picture of the vegetable.

- Help students write the names of the vegetables.
- Laminate the pages, punch holes and lace yarn through the holes to make a book.
- Use one sheet of construction paper as a cover for the book.

Language Arts

1. Students read and complete Student Worksheet B.

Visual Arts

1. Let students use extra seeds from the lesson to make art pictures, or cut cardboard to make frames and glue the seeds to the frames.
2. Cut a piece of clear contact paper to fit as a bracelet for each student.
 - Students stick their seeds to their bracelets.

Extra Reading

Demi, *The Empty Pot*, Trumpet, 1990.

Ehlert, Lois, *Eating the Alphabet: Fruits and Vegetables From A to Z*, Harcourt, Brace, Jovanovich 1990.

Fleischman, Paul, and Kevin Hawkes, *Weslandia*, Candlewick, 1999.

Macken, JoAnn Early, Flip, Float, Fly: Seeds on the Move, Holiday House.

Answers

Student Worksheet A:

Seeds people eat—corn, bean, sunflower, peanut, wheat.

Seeds people do not eat—elm, watermelon, cucumber, grapefruit, apple, peach.

Student Worksheet B: Under “Find the Facts,” all the answers are true except 2 and 5. Under “Find the Main Idea,” the correct answer is number 2.

Vocabulary

flower—a shoot of a higher plant that is specialized for reproduction and bears modified leaves (as petals)
fruit—the ripened ovary of a seed plant (as an apple or raspberry) when sweet and pulpy

plant—any of a kingdom of mostly photosynthetic living things usually lacking the ability to move from place to place under their own power, having no obvious nervous or sensory organs, possessing cellulose cell walls, and often having a body that is able to keep growing without taking on a fixed size and shape

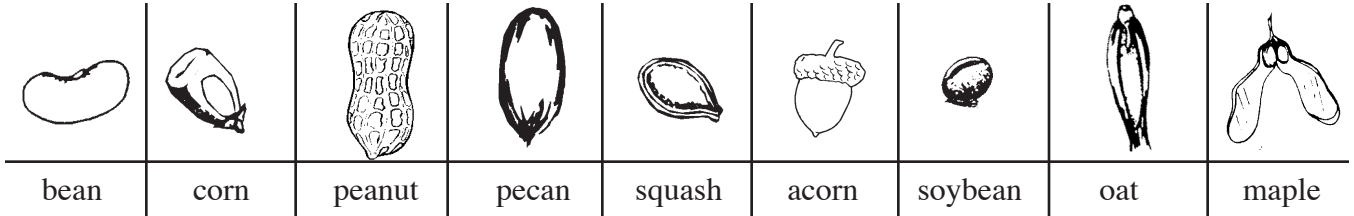
seed—the grains of plants used for sowing

vegetable—a leafy plant (as the cabbage, bean, or potato) usually without woody tissue grown for an edible part that is usually eaten as part of a meal

Name _____

Sock Walk

A



Seeds usually grow as part of a flower or inside a protective shell.

Birds and small animals eat many kinds of seeds. People eat sunflower seeds and sesame seeds. You have probably eaten seeds in vegetables, like green beans, or in fruits, like bananas. Pecans and other nuts are seeds, too.

Write the names of these seeds in the correct list below.

- | | | |
|------|------------|--------|
| corn | watermelon | peanut |
| bean | cucumber | apple |
| oats | grapefruit | peach |
| elm | sunflower | wheat |

Seeds people eat	Seeds people do not eat

Name _____

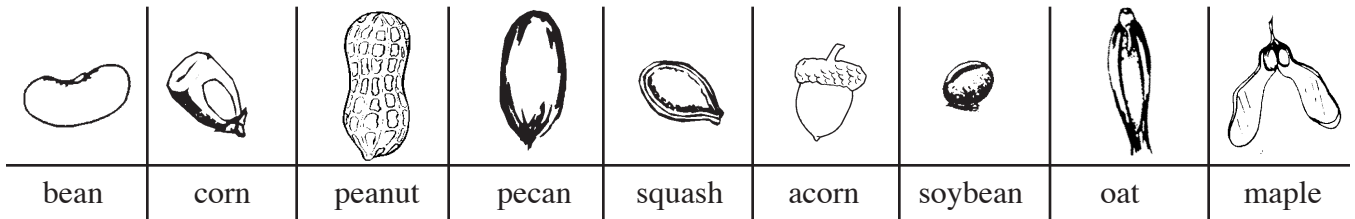
Sock Walk

B

Many plants produce seeds in the fall. Plants with flowers have seeds. Seeds grow in vegetables and fruits. One plant may have many seeds.

Seeds come in many different shapes and sizes. Some, like avocado seeds, are large. Others, like blackberry seeds, are small.

Birds, animals and people eat many fruits and vegetables that hold seeds. Sometimes we eat the seeds, too.



Find the facts.

Read these sentences. Draw lines under the sentences that are true.

1. Many plants produce seeds in the fall.
2. Some seeds grow in rocks.
3. Birds eat some seeds.
4. Seeds grow in fruit, vegetables and some flowers.
5. All seeds are brown.

Find the main idea.

Draw a line under the sentence that tells the main idea.

1. Fall is one time to find seeds.
2. Many different kinds of plants have seeds.
3. People eat some seeds.