Oh, Say, Can You Seed?

Skills: Language Arts, Math, Science, Social Studies, Physical Education

Objective: Students learn about seeds and participate in physical activities to reinforce knowledge.

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/Math

1. Students plant bean seeds in the potting medium
   —Students record observations in a journal as plants grow.
   —Students measure plant growth after a period of 7 days, 14 days, etc.
   —Students chart results on a class bar graph.
2. Students collect plant leaves.
   —Students label leaves.
   —Students display leaves in a classroom leaf collection.

Steps to a Healthy Oklahoma

P.A.S.S.

GRADE 3
Math Process—4.3; 5.2
Math Concept—4.2a; 5.1c
Science Process—1.1,2;
   3.1,2,3; 4.3
Life Science—2.1
Writing—2.3
Oral Language—1.1; 3.2
Visual Literacy—3
Social Studies—4.3; 5.1
PE—2.1; 3.3; 4.5; 5.3

GRADE 4
Math Process—4.3; 5.2
Math Concept—4.4b; 5.1b
Science Process—1.1,2;
   4.1; 5.2
Life Science—4.1
Writing—2.1
Oral Language—3.2
Visual Literacy—3
Social Studies—4.2
PE—1.5; 5.2

GRADE 5
Math Process—4.3; 5.2
Math Concept—4.4; 5.1d
Science Process—1.1,2;
   4.1; 5.2
Life Science—2.2
Writing—2.1
Oral Language—1.2; 3.2
Visual Literacy—3
Social Studies—7.2
PE—5.3,5
**Social Studies/Language Arts**

1. Tour a farmer’s market or the gardens or orchards of a local fruit and/or vegetable producer.
   — Students prepare questions ahead of time about the economics of producing fruits and vegetables.
   — Students use prepared questions to interview producers.
   — Students write short reports based on the interview.

2. Students prepare displays to illustrate products from seeds, i.e., paper, cotton, wood products, corn, flax, etc.
   — Students write a non-fiction story about plants and how they help us develop products for consumer’s use.

**Physical Education**

1. Discuss the importance of warming up muscles followed by stretching.
   **THE SEED STRETCH: A GROUP WARM-UP ACTIVITY**
   — Form a circle.
   — Demonstrate that being a seed (crouched and hunched as much as possible) is how the seed begins its new life.
   — Ask students to imagine slowly growing into a plant. Remind students to grow as slowly as possible to prevent thigh burn.
   — Show the students how to stand on their “tippy toes,” arms completely outstretched, face oriented to the sun, arms waving in the breeze, etc.
   — Relax.
   — Repeat by growing faster, and faster.
   — At the end of this simple activity, students will have a solid dose of sunlight, their muscles will be warmed up and they will be alert for awhile longer!

**ROOTS, STEMS AND FLOWERS**

1. This game is a variation of “Rock, Paper, Scissors.”
   — Gather class in a large space, preferably outside.
   — Review the three parts of a plant—root, stem, flower.
   — Explain that in this game the following rules apply:
     
     **ROOT WINS BY OUTLASTING FLOWER.**
     **STEM WINS BY OUTGROWING ROOT**
     **FLOWER WINS BY OUTBLOOMING STEM.**
     **SAME PART IS A DRAW.**
   — Students agree on poses to represent the different plant parts.
   — Practice by calling out the parts and having students strike the agreed-upon poses.
   — Form two teams.
     — Each team convenes secretly to decide on the plant part they will represent.
     — Place a rope on the ground to separate teams, and designate a “safe
zone” about 30-60 feet away.
— Teams line up facing each other, at least four feet apart, on opposite sides of the rope.
— Facilitator counts slowly to three as teams adopt their poses, revealing their identity.
— The winning team chases the losing team and tries to tag as many as possible.
— The losing team tries to reach the “safe” zone without being captured.
— Tagged participants join the winning team.
— Teams then reconvene and decide on their next plant part.
— The game is over when one team has incorporated all participants into its team.

Extra Reading