

# READ ABOUT SEEDS

Vocabulary: germinate, climate, sow

## Description

In this classroom-based lesson, students read real seed packets to learn what a seed needs to grow. They will use observation and language skills to decode the words and graphics on the packet and predict how a seed will grow. Options for the lesson include allowing students to plant their own seeds to observe over the next few weeks and moving seedlings into the school garden. February or March is a good time to complete this lesson, if you want to start seeds in the classroom that can be moved later to the school garden.



## Guiding Question

What do we need to know about seeds to help them grow?

## Big Idea

Seeds are essential for life cycles.

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## Learning Objectives

At the end of this lesson, students will be able to read seed packets, make predictions about the growth of the seeds, and (optional) use directions from seed packets to plant seeds.

## Materials

A new, unopened seed packet for each student or pair, depending on how many seed packets you can procure. If you plan to plant seeds and move seedlings to the school garden, be sure to get seeds of plants that are appropriate to plant at the time of year you do the lesson. (Note: Many seed companies donate seeds to schools, including High Mowing and Seeds of Change. Local nurseries, such as Portland Nursery also sometimes donate seeds.)

Read About Your Seeds Worksheet (enough copies for each student to have one) or garden journals or paper.

Pencils and colored pencils or other drawing/coloring tools.

Optional:

Flats for seedlings.

Masking tape and markers to label flats.

Potting soil.

Rulers

Garden tools for scooping soil into flats and later digging in the garden.

## Preparation

Choose the portions of the lesson your class will complete.

Obtain seeds, and plan whether there are enough for all students to have their own packets or for the lesson to be done in pairs or groups.

Gather remaining materials.

**Additional time:** Up to 3 hours, depending on the options you choose. The lesson can be divided into up to three parts:

About 60 minutes to learn to read seed packets

30-60 minutes to plant seeds

30-60 minutes to move seedlings to the garden

Lesson time: see additional time



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Familiarize yourself with the information, graphics, and tables provided on the seed packets you've obtained. You may wish to visit the web sites listed in the Resources to learn more about seed packets.

Preview, and if needed, modify the Read About Your Seeds worksheet to fit the information available on your seed packets.

### Introducing the Lesson

Activate prior knowledge. Review information from the Kindergarten Spring Lessons, *Plants Start from Seeds*, *Popcorn is a Seed*, and *Seeds Help Plants Travel*, and from 2nd Grade Fall Lesson, *Harvesting Seeds*. Ask questions such as the following to see what students have already learned about seeds and to clarify the following key facts: *What is a seed?* (A seed is a package for a tiny plant and the food it needs to start growing.)

What does it mean to *germinate*? (A seed germinates when it breaks out of its seed and grows into a sprout.)

What does a seed need to *germinate*? (water, warmth)

How do seeds *travel around*? (Birds, wind, water, and humans all help seeds travel.)

What seeds do we eat? [Grains, such as rice, wheat, or quinoa; seeds in fruits of plants such as berries, tomatoes, cucumbers; peas, corn and popcorn, and nuts are all popular seeds]

Can we eat all seeds? [No.]

*Engage student interest.* Preview the lesson. Show students the seed packets you have obtained. Tell students that each person in the class (or each pair or group of students) is going to get one of these packets of seeds, and that the class is going to use the seed packets to learn about the seeds and the plants that will grow from them.

### Procedure

1. *Distribute materials.* Hand each student (or pair or group of students) a seed packet and a copy of the Read About Your Seeds worksheet (or have them get out paper or their garden journals). Make sure all students have pencils and access to colored pencils or other drawing tools.

2. *Examine the front of the packet.* Guide students to understand the information provided by the front of the seed packet, such as the name of the plant, type of plant, a picture of the plant, and the company that sells the seeds. Have students write in answers on their Read About Your Seeds worksheets that they can glean from the front of the seed packet.

3. *Examine the back of the seed packet.* Guide students to understand the information provided by the back of the seed packet. Define terms students may not know, such as *sow*, and assist students in reading any tables or decoding any graphics on the packet, as needed. Have students write in answers on their Read About Your Seeds worksheets that they can glean from the back of the seed packet.

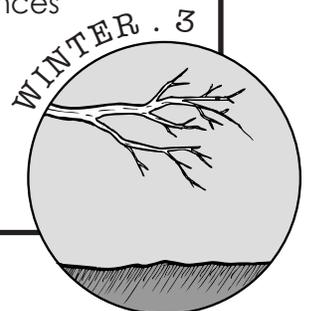
4. *Examine seeds.* Allow students to tear open their seed packets. Encourage them to carefully examine the seeds, then draw and write descriptive sentences about the seeds on their Read About Your Seeds worksheets.

5. *Make predictions.* Refer students to the class calendar and have them use information on the seed packets to make the predictions called for on their Read About Your Seeds worksheets.



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Lesson time: see additional time



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6. *Optional: Plant seeds.* Help students plant their seeds in pots or seed trays, following the directions on their packets about planting depth and seed spacing, as much as possible. Remind students to label their seeds, with the plant name from their seed packet, using the tape and markers.

7. *Optional: Observe and transplant growing plants.* Have students care for their seeds as directed by their seed packets, and observe them daily, noting in their garden journals (or on paper) any changes they see. When the students see the first sprouts of their seeds, help them check the predictions they made to see if the seeds are growing as the students predicted. When plants are large enough and conditions in the garden are appropriate, according to your seed packets, help students replant the seedlings in appropriate areas of the school garden.

8. *Wrap-Up.* Collect students' Read About Your Seeds worksheets after they have completed them, and use the worksheets to assess student understanding of concepts. If you did not plant seeds, have students return seeds to the packets and staple or tape them shut. Save seeds for later planting or give to other classes who may be planting. If students did plant seeds, clean up soil and planting materials, and staple the empty seed packets to students' Read About Your Seeds worksheets or garden journals. Retain completed worksheets and seed packets for later reference as students observe and transplant the seeds.

### Assessing Student Knowledge

Conduct informal assessments of your students' knowledge by noting their questions and responses during discussion and lessons about the seed packets, and by reviewing the answers on their Read About Your Seeds worksheets. If you choose to plant seeds, assess students' understanding by observing their ability to follow the directions from their seed packets as they plant and care for their seeds.

### Extensions

*Create a planting guide to use as a school resource.* Have students or groups of students write in their own words directions about how to plant and care for their seeds, as well as any notes they may want to share with future student gardeners. Then, have them staple their empty seed packet to the corner of their sheet of paper. Bind the sheets together to create a book.

*Share what you've learned.* Perhaps your students already have a younger "buddy" class. Partner older students with younger students, and have the older children teach the younger how to best sow the seeds they've studied.

### Books & Resources

Books (for students):

*From Seed to Plant*, by Gail Gibbons (1993, Holiday House)

*One Bean* by Anne Rockwell (1999, Walker Children's)

*Plant Packages* by Susan Blackaby (2006 Picture Window Books)

*Planting the Seed: A Guide to Gardening* by Suzanne Winckler (2002, Lerner Publishing Group)

*Seeds*, by Ken Robbins (2005, Atheneum Books for Young Readers)



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Web Sites (for teacher background):

*Garden Primer: How to Read a Seed Packet* at the Frugal Upstate web site

<http://www.frugalupstate.com/garden/garden-primer-how-to-read-a-seed-packet>

*How to Read a Seed Packet* at the School Garden Weekly web site

<http://schoolgardenweekly.com/instructional-activities/how-to-read-a-seed-packet>

*How to Read a Seed Packet* at the Veggie Gardener web site <http://www.veggiegardener.com/how-to-read-seed-packet> offers numbered diagrams of the front and back of sample seed packets.



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### OR. Dept. of Ed. Key Standards

Oregon Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects:

- 3.RI.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
- 3.RI.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Oregon Science K-HS Content Standards:

- 3.2L.1 Compare and contrast the life cycles of plants and animals.



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What is the name of your seeds? \_\_\_\_\_

What kind of plant will your seeds grow into? \_\_\_\_\_

What part of the plant do people eat? \_\_\_\_\_

What climate is best for this plant? \_\_\_\_\_

What sort of soil does it like to grow in? \_\_\_\_\_

What time of year should you plant your seeds? \_\_\_\_\_

How long will your seed take to germinate? (How many days?) \_\_\_\_\_

How many days after the seeds are planted will the food be ready to harvest? \_\_\_\_\_

How far apart should your seeds be planted? \_\_\_\_\_

How deep should the soil over seeds be? \_\_\_\_\_

Open the packet. Look at the seeds.

Draw the seed shape and size.



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## READ ABOUT SEEDS

Write three complete sentences that describe your seeds.

- 1.
- 2.
- 3.

Make Predictions:

If you plant your seeds today, on what day will you see tiny plants above the soil? \_\_\_\_\_

Draw a picture of how you think your plant will look 1 month (about 30 days) after you plant the seeds:



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