

# CORN: A FULL LESSON ON ONE FOOD

students in group research

Vocabulary: kernel, cob, ear; additional terms discovered by students

Lesson time: see additional time

## Description

Students work in teams to research key facts about corn: Parts of a corn plant, how corn grows, the history of corn, the historical importance of corn to Native American nations, the current importance of corn in the United States today; and ways to eat corn. After teams share the results of their research with each other, the class harvests corn from the school garden, (optional) tastes the fresh corn, and (optional) dries and save kernels for spring planting (See 5th Grade Spring Lesson 3, *Planting Corn*).

## Guiding Question

Which of our foods grow here in Oregon?

## Big Idea

People and their environments affect each other.

## Learning Objectives

At the end of this lesson, students will be able to find and summarize information about corn as a plant and as a food, both now and in American history. They will be able to harvest and taste fresh corn, and dry fresh corn to save seeds for later planting.

## Materials

Chart or board for K-W-L chart.  
Books and reference materials about corn, Internet access for research.  
Optional: Volunteers to assist with research and/or corn picking and tasting.  
Containers to carry corn picked from the garden.  
Access to kitchen and kitchen equipment to cook and taste corn.

## Preparation

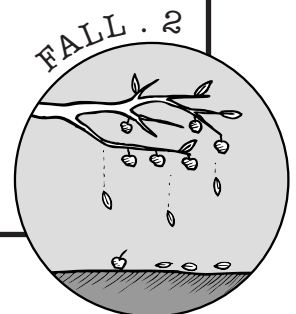
Work with the school garden coordinator to determine when corn in the school garden will be ready to harvest.  
Work with cafeteria staff to determine whether corn from the garden can be used in school meals and find a time when students and volunteers and cook and taste freshly picked corn.  
Choose times for different phases of the lesson. It is best if you are able to cook and taste corn very shortly after picking it.  
Gather research materials and/or arrange Internet access for research.  
Recruit and train volunteers to help students with research and/or corn harvest and tasting.

**Additional time:** This lesson has several parts. Choose the parts that fit your students, school garden, and learning goals, or do them all, spending a total of approximately hours:

- 30 minute introduction
- About 2 hours for team research (can be divided over several days)
- 60-90 minutes for team presentations
- 30-60 minutes in the garden to harvest
- 30-60 minutes in classroom or kitchen to prepare and taste fresh corn
- 30 minutes to prepare corn to dry, plus a few minutes a week for several weeks to check drying progress
- 30-60 minutes to remove dried corn from ears



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## Introducing the Lesson

1. *Engage student interest.* Prior to class, do an Internet search for “corn jokes.” Tell students a few of the best age-appropriate jokes that you find to engage their interest. Then, launch a discussion about corn.

2. *Activate prior knowledge.* Once you've got students talking about corn, create a K-W-L chart, listing things that students already Know (or believe they know) about corn, and what they Want to learn about corn.

## Procedure

In the classroom:

1. *Assign research teams.* Using your K-W-L chart, group the things that students want to learn into categories. Possible categories might include: parts of a corn plant, how corn grows, the history of corn, the historical importance of corn to Native American nations, the current importance of corn in the United States today; and ways to eat corn. Divide the class into teams, and assign one research category to each team. Allow students sufficient time to find information, using books and Internet resources such as those listed in the Resources section of this lesson.

2. *Share information.* After all groups have had a chance to complete their assigned research, gather as a class. Have each group share with the class its findings. As research teams present their findings, add key facts to the K-W-L chart that show what you have Learned about corn.

In the garden:

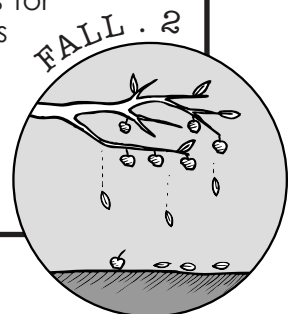
1. *Pick corn.* If a research team presented information on how to tell which ears of corn are ready to harvest, review it with students. If not, show them two ways to judge: 1) Check the color of the corn silks. They should be dark-colored all the way from their tips to the top of the ear. 2) Look inside. Peel back a tiny bit of the husk to reveal the kernels. See if they are full and plump. Press one with a fingernail. It should squirt out milky liquid. Then, demonstrate how to snap the ear from the stalk without damaging the plant. Allow students to harvest either just enough ears for your class tasting or, if you have made arrangements with the cafeteria staff, all ripe ears. If you harvest all the ripe corn, deliver corn that you do not need for class tasting to the cafeteria, to be shared with the school community. If your garden is growing more than one type of corn, pick some of each, to make comparisons. Divide corn to use for several of the remaining activities, or choose to eat it all fresh.

In the classroom or kitchen:

1. *Prepare some of your corn to dry.* Have students peel back, but do not remove, the husks and remove the silks from ears of corn. Hang the corn by the husks in an area of the classroom where it can remain undisturbed to dry for several weeks. Observe changes in the appearance of the corn as it dries. If corn is dry enough, you can use the ears of dried corn as part of your seasonal decorations for Thanksgiving or harvest celebrations. After corn is fully dried, show students how to chip dried kernels from the corn cobs. Store kernels in labeled envelopes or airtight containers to plant as seeds in the spring.



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2. *Cook and taste some of your fresh corn.* Using safe food-handling procedures, have students remove husks and silks from ears of corn, reserving husks and silks for composting (or to dry to use for Native American-style crafts). Have adult volunteers cook the corn and prepare it for students to taste. Encourage students to describe how the corn looks, smells, feels, and tastes; compare cooked corn to the raw corn they picked from the garden; and compare this corn to other preparations of corn they have eaten.

### Assessing Student Knowledge

Construct a rubric to assess student's research and presentation skills in relationship to relevant academic standards. Informally assess their ability to pick corn by observing them as they do so. Conduct additional informal assessment during corn tasting by asking questions such as the following: *Why do you think corn is a part of so many different foods? How does the taste of our corn compare to other corn you've tried? What are some other ways we could prepare this corn for eating? How do you think we could interest the other classes in trying corn if we served it in the cafeteria?*

### Extensions

Experience historical chores by grinding dried corn. Use kernels the class has dried or bring dried corn kernels to class. Have students grind them as early Native Americans and European immigrants did, with a mortar and pestle. Purchase pre-ground cornmeal to allow to taste historical dishes that featured dried corn, such as corn or "hasty" pudding. Compare the flavors to the fresh corn you tasted.

In the spring, plant saved corn seeds, following Spring Lesson 4, *Planting Corn*.

### Books & Resources

#### Books:

*The Biography of Corn*, by L. Michelle Nielsen (1007, Crabtree Publishing Company) – Part of the "How Did That Get Here" series.

*Corn*, by Gail Gibbons (2009, Holiday House)

*Corn is Maize*, by Alike (1986, Collins)

*Four Seasons of Corn: A Winnebago Tradition*, by Sally M. Hunter, Illustrated by Carly Bordeau, Photos by Joe Allen (1996, Lerner Publishing Group)

*From Kernel to Corncob*, by Ellen Weiss (2007, Children's Press) – Part of the Scholastic Press "How Things Grow" series

*The Life and Times of Corn*, by Charles Micucci (2009, Houghton Mifflin Books for Children)

*People of Corn*, by Mary-Joan Gerson, Illustrated by Carla Golembe (1995, Little, Brown & Co.) – A Native American creation myth

*Tomatoes, Potatoes, Corn, and Beans: How Foods of the Americas Changed*

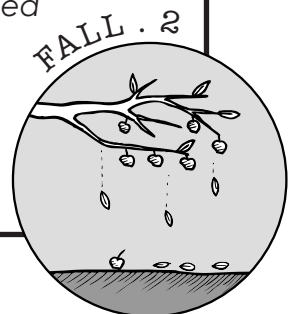
*Eating Around the World*, by Syliva A. Johnson (1997, Atheneum)

*Watch Corn Grow*, by Kristen Rajczak (2011, Gareth Stevens Publishing)



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Lesson time: see additional time



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## Web Sites:

Corn, from the Australian Fresh for Kids web site, [http://www.freshforkids.com.au/veg\\_pages/corn/corn.html](http://www.freshforkids.com.au/veg_pages/corn/corn.html)

Corn, at Indians.org <http://www.indians.org/articles/corn.html>

Harvest of the Month: Corn <http://www.pps.k12.or.us/departments/nutrition/5563.htm>

History of Corn, at History for Kids, <http://www.historyforkids.org/learn/food/corn.htm>

National Corn Growers Association Education page, <http://www.ncga.com/k-12-resources/>

Native American History of Corn, <http://www.nativetech.org/cornhusk/cornhusk.html>

Native American Food <http://www.native-languages.org/food.htm> - Part of a section called "Native American Facts for Kids," this page discusses the variations in food growing, gathering, and cooking among different tribes of the Americas.

Native American Plant Mythology <http://www.native-languages.org/legends-plants.htm> - links you to several stories from different Native American tribes about or involving the three sisters and many other plants.

## OR. Dept. of Ed. Key Standards

Oregon Science K-12 Content Standards:

- 5.2L.1 Explain the interdependence of plants, animals, and environment, and how adaptation influences survival.
- 5.2E.1 Explain how the energy from the sun affects Earth's weather and climate.

Oregon Social Sciences Academic Content Standards:

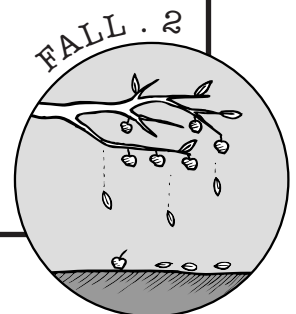
- 5.1 Identify and compare historical Native American groups and settlements that existed in North America prior to contact with European exploration in the late fifteenth and sixteenth centuries.

Oregon Common Core State Standards for English Language Arts:

- 5.W.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
- 5.SL.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.



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