



CLASSROOM CONNECTIONS



Early Childhood and Lower Elementary:
From Corn to Tortillas
Connections to Standards:
Science K.3S.1, 2; K.4D.1; 1.2L.1; 1.4D.3; 2.2L.1
English Language Arts K.W.3, 8; K.SL.5; 1.W.3, 8; 1.SL.4, 5, 6; 2.W.3, 8

Materials:

- "Corn" lesson plan materials from Cultivating Joy & Wonder: Educating for Sustainability in Early Childhood Through Nature, Food, and Community.

Engage students in a discussion about corn. What do we know about this plant and foods made from it? How do we like to eat it? When and where does it grow? Share facts from the Oregon Harvest for School poster and Family Newsletter on Oregon grown corn. Have corn available for students to explore in a variety of ways (dried cobs, dried kernels/seeds, photos of plants and products). Explore the idea that people often process food from its natural state into a different food product. How do we get corn from the stalk growing in a farm field to food in our hands or on our fork? If you have the supplies, demonstrate how corn kernels are turned into corn meal using a rock, a piece of leather, and a wooden stump or bowl. This can also be done with a mortar and pestle or a hand grain mill. Is this how corn meal we buy in the store is processed today? Adapt the lesson plans below and make tortillas with your students using masa, water, a tortilla press, and a griddle. Facilitate students' creation of a piece of work (text and illustrations) that demonstrates their understanding of the sequence from corn to tortilla.

Lessons: Corn and Johnny Cakes
Cultivating Joy & Wonder: Educating for Sustainability in Early Childhood Through Nature, Food, and Community, pages 189-192
www.shelburnefarms.org/sites/default/files/7_howareweconnected.pdf

Resources:
Network for a Healthy California's Harvest of the Month
www.harvestofthemonth.cdph.ca.gov/download/Summer/021712/ED_Corn_%20Newsletter_Final.pdf

The Three Sisters: Exploring an Iroquois Garden
Cornell Garden-Based Learning
blogs.cornell.edu/garden/get-activities/signature-projects/the-three-sisters-exploring-an-iroquois-garden/

Literacy Connection
Seed Soil Sun: Earth's Recipe for Food by Cris Peterson

Upper Elementary: Corn Explore
Connections to Standards:
Science 3.2L.1; 3.3S.1; 5.2L.1
Social Sciences HK.5.1; HK.6.1

Adapt one or more of the below lessons to explore aspects of corn cultivation.

Monocots and Dicots: Sprout corn, bean, and squash seeds. How do they look different as they swell and take up water? Grasses—including corn—are monocots, and beans and squash are dicots.
The Three Sisters: Exploring an Iroquois Garden
Cornell Garden-Based Learning
blogs.cornell.edu/garden/get-activities/signature-projects/the-three-sisters-exploring-an-iroquois-garden/activities/

Container vs. Ground: Experiment with growing corn from seed in containers and in the ground.
Network for a Healthy California's Harvest of the Month
www.harvestofthemonth.cdph.ca.gov/download/Summer/021712/ED_Corn_%20Newsletter_Final.pdf

Continued on reverse



Water Weight: Weigh two tablespoons of corn seeds and place them in a clear jar. Cover the seeds with a measured amount of water and let them stand overnight. Drain the water and measure the amount left. How did the seeds change in size? In weight? How much water did they absorb?

The Three Sisters: Exploring an Iroquois Garden
Cornell Garden-Based Learning
blogs.cornell.edu/garden/get-activities/signature-projects/the-three-sisters-exploring-an-iroquois-garden/activities/

Planting a Three Sisters Garden: Learn how to prepare a garden in the Iroquois tradition using corn, beans, and squash. How do these plants work together culturally and nutritionally?

Three Sisters: An Ancient Garden Trio
Center for Ecoliteracy
www.ecoliteracy.org/essays/three-sisters-ancient-garden-trio

The Three Sisters: Exploring an Iroquois Garden
Cornell Garden-Based Learning
blogs.cornell.edu/garden/get-activities/signature-projects/the-three-sisters-exploring-an-iroquois-garden/how-to-plant-the-three-sisters/

Middle School: Corn Field Math

Connections to Standards:

Math 6.EE.1, 2; 7.RP.3; 7.NS.2; 7.EE.3

In 2011, Oregon grew over 160 square miles of corn—that is a larger area than all of Portland. In fact, Oregon ranks in the top five of all states for sweet corn production. Use this lesson from Oklahoma Agriculture in the Classroom to explore the math involved in corn cultivation. Use the facts from Oregon Farm Bureau to guide students in creating their own math problems related to corn production or other Oregon-grown agricultural commodities. This might include word problems that explore current issues in Oregon agriculture. Students will need to conduct some research or read through teacher-provided news articles for the timeliest issues.

Lesson: Corn Field Math
Oklahoma Agriculture in the Classroom
www.clover.okstate.edu/fourh/aitc/lessons/upper/cornmath.pdf

Resources:

More facts about Oregon Agriculture, Oregon Farm Bureau

www.oregonfb.org/about/oregon-agriculture/

High School: Control: Far Afield

Connections to Standards:

Social Sciences HS.4, 9, 20, 57, 58, 59, 63

English Language Arts 9-10.RI.6, 8; 9-10.W.1, 2, 9; 9-10.SL.1, 4; 11-12.RI.1; 11-12.W.1, 2, 9; 11-12.SL.1, 4

Science H.2L.4; H.2E.4

In this lesson from PBS and the film *The Botany of Desire*, based on Michael Pollan's book, students explore various aspects of genetic engineering. The detailed lesson plan contains links to film clips, readings, discussion questions and writing prompts, and information to guide students as they develop a cultivar of their choice.

www.pbs.org/thebotanyofdesire/lesson-plan-control.php

Resources:

Breeding the Nutrition Out of Our Food by Jo Robinson

New York Times opinion article

www.nytimes.com/2013/05/26/opinion/sunday/breeding-the-nutrition-out-of-our-food.html?page-wanted=all&r=0

Graphic: Nutritional Weaklings in the Supermarket

www.nytimes.com/interactive/2013/05/26/sunday-review/26corn-ch.html?ref=sunday

