

Corn in the Classroom – The Basics

Course:	Corn in the Classroom
Unit:	Did You know?
Competency:	Identifying field corn – our nation’s top crop.
Lesson Title:	Getting to Know the Basics of Corn
Estimated Time:	60 minutes

Terminal Performance Objective:
 Identify field corn as the nation’s top crop while distinguishing it from other corn varieties and identifying where it is grown.

- Enabling Objectives:**
- Distinguish between various types of corn (sweet, popcorn, field)
 - Identify nation’s number one crop
 - Identify top corn states (Corn Belt)
 - Recognize who grows corn
 - Identify how much corn is grown

- Materials, Supplies, Equipment, References, and Other Resources:**
- PowerPoint (under “Resources tab at www.mocorn.org)
 - Sweet vs. Field poster
 - Corn in the Classroom Activity Book pages 3 and 4 (map of U.S., map of continents)
 - Chalkboard/whiteboard
 - Activity book page 5
- ***Helpful visuals might include a can or ear of sweet corn, popcorn kernels and an ear of field corn if available.
- Additional resources include: www.mocorn.org; <http://ncga.com/upload/files/documents/pdf/woc-2014.pdf>

Introduction:

- **Show** the class an ear of field corn and can/ear of sweet corn (either physical items, Sweet vs. Field poster or PowerPoint [slides 2,4]) and ask which they would rather eat. Most will pick the sweet corn.
- **Ask** why they would not want to eat the other. Possible answers: it is hard, dry, etc.
- Some will still say the field corn. **Explain** that it is actually the can of sweet corn they want to eat. Field corn is more dense, starchy and less sweet.

Segway:

- Today we are going to learn the difference between the sweet, juicy corn we like to eat and other types of corn grown for various uses.

Instructor Directions/Materials:	Content Outline, Instructional Procedures and/or Key Questions:
PowerPoint	<ul style="list-style-type: none"> - Distinguish between various types of corn - Identify nation’s #1 crop <ul style="list-style-type: none"> o <u>Sweet Corn</u> (show slide 2) – Sweet corn is the kind of corn you buy at the grocery store to eat. You can eat it off the ear (corn-on-the-cob). You can also buy it in cans or in the frozen food aisle. Fresh sweet corn is found most often during the summer and is sweet and juicy. <ul style="list-style-type: none"> ▪ Question: Do you think we grow more sweet corn in the U.S. or other types of corn? Answer: Sweet corn represents <i>less than one percent</i> of corn grown in the U.S. (correlates with page 5 of the activity book).

Instructor Directions/Materials:	Content Outline, Instructional Procedures and/or Key Questions:
PowerPoint	<ul style="list-style-type: none"> ○ <u>Popcorn</u> (show slide 3) – Questions: What does popcorn look like? What does it look like before it pops? What makes it pop? Answers: Kernels are generally darker in color and have a rounder shape than other types of corn. <ul style="list-style-type: none"> ▪ The composition of the kernel distinguishes popcorn from the other varieties. Corn in general is made of starch, protein, fat and water. Water is stored in a small circle of soft starch in each kernel. As the popcorn kernel is heated, the water heats, builds up pressure and takes up any available room until the outer surface gives way and the water explodes into the fluffy white snack we all love. ▪ Many of us enjoy popcorn at the movies, at home and other fun places. Even though we enjoy eating lots of it, popcorn also represents very little of the corn grown in the U.S.
PowerPoint	<ul style="list-style-type: none"> ○ <u>Field Corn (dent corn)</u> (show slide 4) - The most abundant type of corn grown in the United States is actually field, or dent, corn. Almost all of the corn you see in fields is dent corn. Unlike sweet corn, dent corn has a hard outer portion about the thickness of your fingernail. The inner portion of the corn kernel is soft and floury. Field corn is referred to as dent corn because of the indentations or “dents” on the top of each kernel. <ul style="list-style-type: none"> ▪ Field corn makes up 99% of the corn grown in the U.S. ▪ More field corn is grown in the U.S. than any other crop, including wheat (what we use for bread) and soybeans.
-Identify continents Activity book page 3 Activity book page 4 - Identify corn producing states - Identify and label a region	<ul style="list-style-type: none"> - Identify where field corn is grown <ul style="list-style-type: none"> ○ Field corn is grown on every continent but one. <ul style="list-style-type: none"> ▪ Question: Which continent do you think does NOT grow corn? (Hint: it is too cold) Answer: Antarctica ▪ <i>On page 3 in your activity book, label all seven continents and color each continent that grows corn green.</i> ○ Corn is grown in nearly every state. In fact, only two states do not grow corn. <ul style="list-style-type: none"> ▪ Question: Can you guess which two states don't grow corn? (Hint: They don't touch other states) A: Alaska and Hawaii ▪ <i>On page 4, color the states that grow corn.</i> ○ The majority of the corn is grown in 12 states known as the “Corn Belt.” Corn grows well in this region. <ul style="list-style-type: none"> ▪ Question: Can you guess why corn grows well in this region? Answers: good soil, right amount of moisture, relatively level ground and the correct temperatures (not too hot or cold during growing season).

Instructor Directions/Materials:	Content Outline, Instructional Procedures and/or Key Questions:
	<ul style="list-style-type: none"> ▪ On page 4 in your activity book, label each state that is in the Corn Belt. ▪ Help them identify the following Corn Belt states: (Leading questions that might help them guess correctly might include "What about Texas - do you think they grow a lot of corn? How about South Dakota?") <ul style="list-style-type: none"> • South Dakota • Nebraska (hint: What state is known as the corn huskers?) • Kansas (hint: Are there any Mizzou fans in the class? If so, who is the Tiger's biggest rival?) • Minnesota • Iowa • Missouri • Wisconsin (hint: What state is known for cheese and dairy cows? They also grow a lot of corn!) • Illinois • Michigan • Indiana • Ohio • Kentucky ▪ All of the states surrounding Missouri grow corn, but only five of the eight are considered in the Corn Belt. ▪ Question: Which states border Missouri but are not a part of the Corn Belt? Answer: Oklahoma, Arkansas, Tennessee. (Students can use page 4 for reference.) ▪ Question: Why might these states not grow as much corn as their neighbors? Examples: Arkansas has rocky soil; Tennessee soil has a lot of clay. Oklahoma is very dry.
<p>PowerPoint</p> <p>Whiteboard/Chalkboard</p> <p>Subtract 2-3 digit numbers.</p>	<ul style="list-style-type: none"> - Recognize who grows corn <ul style="list-style-type: none"> o Show slide 5. o There are approximately 400,000 farms in the United States. o Thousands of families, individuals and business grow corn in the U.S. In Missouri approximately 16,000 farms grow corn. o Individuals or families own 95% of corn farms <ul style="list-style-type: none"> ▪ Question: For every 100 farms, 85 are owned by family farmers. How many of those 100 are not owned by family farmers? A: 15 (Students could complete this on their coloring page or on the board.) o One farmer can provide enough food to feed approximately 155 people.
	<ul style="list-style-type: none"> - Identify how much corn is grown <ul style="list-style-type: none"> o In 2013 U.S. farmers grew nearly 14 BILLION bushels of corn. (Reference point - one bushel is the equivalent of 56 lbs. or about 1 big bag of dog food.) o In Missouri we grow more than 435 million bushels of corn. (Slide 6) **Basket is representative of a bushel.

Instructor Directions/Materials:	Content Outline, Instructional Procedures and/or Key Questions:
PowerPoint	<ul style="list-style-type: none"> ○ (Show slide 7) Can you guess how many little kernels are on one ear of corn? A: approximately 800 (Slide 8)
Closure/Summary:	Review: <ul style="list-style-type: none"> - What kind of corn do we buy at the grocery store? A: Sweet - What is the number one crop in the U.S.? A: Field corn - Where is most of the corn grown in the U.S.? A: Corn Belt - What is the only continent where corn is not grown? A: Antarctica
Evaluation:	Results from coloring pages.