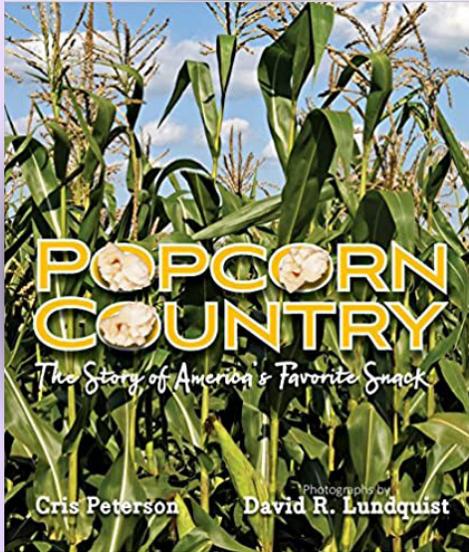


SNAPSHOT

Level: K-2

Time: 35 min.

Activity: Students will engage in a story and discover what makes popcorn pop and enjoy a healthy popcorn snack.



Purpose

Students will follow the journey of popcorn production from start to finish.

Materials

- **Popcorn Country: The Story of America's Favorite Snack** book by Chris Peterson
- **Popcorn on the Cob**-makes about 1 bag
- Caramel Popcorn
- Cheddar Popcorn
- White or Butter Popcorn
- Plate
- Microwave

LUNCHBOX Mysteries

Teacher's Guide

LESSON 8

Popcorn Country: The Story of America's Favorite Snack

PROCEDURES

1. Organize and Prepare Materials

2. Background Information

Source:

nda.nebraska.gov/publications/ne_ag_facts_brochure.pdf

Why is Nebraska called to the cornhuskers? Because corn can be found in almost every county in Nebraska. Nebraska ranks third in corn production producing four main types of corn called dent corn, popcorn, sweet corn, and food grade corn. Farmers plant their corn in the spring and harvest the corn using combines in the fall.

Most of the corn grown in Nebraska is called dent corn or field corn. Dent corn is grown to feed our cattle, pigs, and chickens. This corn is also used for by products to make fuel called ethanol, corn starch, corn oil, and corn syrup, which is used in products that consumers use each day. Dent corn is harvested after it begins to dry in the fields in the fall. As it dries the kernels shrink and dents appear in the kernels.

Sweet corn only makes up about one percent of the state's overall corn production. Sweet corn is tasty and sweet and is harvested in late summer when the

corn kernels are tender. Sweet corn can be found at local grocery stores and farmers markets. Sweet corn contains more sugar than other types of corn making it the tastiest choice to eat right off the cob.

Food grade corn includes corn grown for food production. Nebraska grows food grade yellow and food grade white corn. This corn is used for corn chips, tortillas, and corn cereals such as corn flakes, corn pops, and corn Chex.

The fourth type of corn grown in Nebraska is popcorn! Popcorn grows on a cob just like dent corn, sweet corn, and food grade corn but the kernels are rock hard, and must be popped to eat. Nebraska is the number one producer of popcorn in the United States growing about 34 percent of the nation's supply. That is about 360 million pounds each year. Popcorn has moisture inside each kernel. As the kernel is heated up that moisture expands turning to steam. The steam turns to liquid causing the kernel to pop creating a tasty nutritional and low-calorie snack. The kernels are then packed into bags for large events, movie theaters, or microwavable bags. The United States grows nearly all the world's supply of popcorn. Nebraska ships popcorn to other countries all over the world.

Flint is another type of corn grown in the United States, but it is not as widely or commonly grown in Nebraska when compared to dent corn, sweet corn, food grade corn, and popcorn. Flint corn can be colorful and look like popcorn, but it doesn't pop well.

In the story *"Popcorn Country, The Story of American's favorite Snack"* by Chris Peterson, students will explore popcorn production and make a tasty popcorn snack.

3. Interest Approach

- a. Ask students to think about their favorite snack that they might enjoy at a movie.
 - Where does your favorite movie snack come from?
 - What are the ingredients in your favorite movie snack? *Make a list of these ingredients on the board.*
- b. Which of these ingredients can farmers grow in Nebraska?
 - Share that many foods we enjoy grow right on farms in Nebraska. These may include products that contain wheat like cakes, cookies, brownies, and crackers. Some snacks may have corn in them like Fritos, corn chips, and Cheetos. Others may come from potatoes like potato chips. The snacks that contain sugar come from a plant; farmers grow called sugar beets. Sugar beets make sugar that we use in our sweet treats and candies that we eat. These are just a few of the plant's farmers grow to make our tasty movie snacks!
- c. Share with students that we are going to read a story called *"Popcorn Country, The Story of America's Favorite Snack"* by Chris Peterson.
 - Who likes to eat popcorn? Explain that this story explores popcorn production. This story will make the connection back to the farm and share the journey of popcorn production from start to finish.

4. Read the Story

- a. Read the story *"Popcorn Country, The Story of America's Favorite Snack."*
- b. Ask questions throughout the story to engage students in conversation about corn and popcorn production.
- c. Ask follow-up questions at the end of the story.
 - Do Nebraska farmers grow corn?
Yes! Nebraska farmers grow different types of corn like dent corn, sweet corn, food grade corn, and popcorn! Nebraska is the number one popcorn producer in the United States. Nebraska farmers grow over 360 million pounds of popcorn each year.

- When do farmers plant their corn popcorn fields?
Farmers plant their fields in the spring as the ground starts to warm up. The corn begins to grow and will reach up to 10 feet tall by the end of summer.
- When will farmers harvest their popcorn?
Farmers use a combine and will harvest their popcorn fields in the fall as the popcorn begins to dry out. The rest of the kernels will be dried after they are delivered to the popcorn bins.
- Can all corn pop like popcorn does?
No. Not all corn pops like popcorn does, popcorn has rock hard kernels which is different from the dent corn, sweet corn, and food grade corn that has more of a softer kernel.
- What causes the popcorn to pop?
When the popcorn kernels are heated up, the moisture inside each popcorn kernel expands creating steam. The steam turns to liquid and causes the kernels to pop, making a tasty nutritional snack to eat!
- Can popcorn be a nutritional snack?
Yes, popcorn is a low-calorie snack that makes it an excellent snack. Especially for one to enjoy at the movies.

d. Now that we know that farmers in Nebraska the most popcorn in the United States, we are going to sample different flavors of popcorn!

5. Snack Activity-Popcorn Taste Test

Ingredients

- **Popcorn on the Cob**-makes about 1 bag
- Caramel Popcorn-enough to share for all students
- Cheddar Popcorn- enough to share for all students
- Buttered Popcorn-enough to share for all students
- Paper plates, 1 per student
- Microwave

Instructions

1. Show the class the popcorn cob. Ask them if they know what kind of corn it is? (If you do not have a popcorn cob, show the class a container of Jiffy Pop popcorn or a bag of microwave popcorn. Ask the students what they think is inside the packaging.)
2. With your students, pop popcorn right off the cob. Place the cob in a paper bag, fold the top of the bag down twice to secure the top, place in the center of a microwave, and heat on high power for 1-1/2 to 3-1/2 minutes (time will vary with the wattage of the unit). Stop the microwave when fast popping slows to 1-2 seconds between popping. Carefully open the bag. The cob is very HOT! Note: some kernels may not pop due to uneven heat distribution in the microwave. (If you are popping Jiffy Pop over a hot plate or microwave popcorn, follow the directions on the packaging.)
3. Ask the students to describe what they observe. Discuss the steam that is present the moment the bag is opened.
4. Give each student a piece of the popped popcorn to observe. Ask the students what differences they observe between the un-popped and popped popcorn.
5. Ask the students, "How does popcorn pop?" Have them recall what they learned from the story.
6. Explain that popcorn can have many different flavors, but we must add ingredients to the popcorn to get the taste we desire. For example, someone may want popcorn to taste salty or even sweet.

7. Pass out paper plates to each student. Tell the students that they are going to get to taste three to four different flavors of popcorn.
8. Pass out the different flavors of popcorn for each student.
9. As you go through each flavor of popcorn have the students predict what it will taste like. Will it be sweet, salty, plain, or maybe a specific flavor like butter or cheddar?
10. Enjoy the remaining popcorn snack!

6. Ask Follow Up Questions and Make Connection to Agriculture

- a. Where does our food come from?

Our food must come from the farm. Either as a plant or a food product that we get from an animal.

- b. Can we grow popcorn right here in Nebraska?

Yes! In fact, Nebraska is the number one producer of popcorn in the United States.

EXTENSION ACTIVITIES

Get Popping

www.agclassroom.org/matrix/lesson/642/

Students discover how popcorn is grown and explore the phenomenon of how popcorn pops.

Farming in a Glove

www.agclassroom.org/matrix/lesson/66/

Students observe how a seed sprouts and investigate the conditions necessary for germination to occur.

My Little Seed House and Seed Book

www.agclassroom.org/matrix/lesson/233/

Students observe the growth and development of seeds and explore what conditions are necessary for seeds to germinate.