



Kansas Grown Pizza

Suggested Grade Level: K-5th grade

Time: 40 minutes

Subject: Science, Social Studies

Overview: Students will be introduced to Kansas Agriculture by exploring ingredients used to make a cheeseburger that are grown or produced in the state. Students will learn about Kansas's key agricultural products and see a Kansas Cheeseburger demonstration to represent locally sourced ingredients.

Objectives:

Students will be able to:

1. Identify key agricultural products grown in Kansas
2. Understand how local ingredients contribute to food production
3. Recognize the connection between agriculture and everyday food choices.

Kansas Connections:

Kansas is known for its rich agricultural industry. The state is a top producer of wheat, cattle, dairy, and pork - key ingredients for making pizza. Kansas wheat is milled into flour to make pizza crust, while dairy farms produce cheese. The state's pork industry supplies sausage and pepperoni, and fresh vegetables like tomatoes and onions are commonly grown by local farmers. Kansas is one of the top wheat-producing states in the US, providing the flour needed for pizza dough. Dairy farms across the state supply milk for cheese production, an essential pizza ingredient. Kansas also has a strong beef and pork industry, contributing to popular toppings like sausage and pepperoni. Additionally, local farmers grow vegetables such as tomatoes for pizza sauce and onions for toppings, making Kansas a key contributor to many of the ingredients that make up a delicious pizza.

Materials Needed:

- Large tan felt piece (pizza crust)
- Red felt (tomato sauce)
- White or yellow felt (cheese)
- Brown felt (sausage or beef toppings)
- Green and purple felt (vegetables, ex., onions and peppers)
- Scissors
- Glue or Velcro dots (to attach ingredients to the pizza)
- Printed image or real example of Kansas agricultural products

Instructional Format:

1. Review background and Kansas connections information.
2. Conduct engagement exercises.
3. Reflection and Discussion.
4. Follow the procedures to complete the activities.

Procedures:

Activity 1:

1. Begin the lesson by asking students what their favorite pizza toppings are.
2. Introduce Kansas agricultural products and how they contribute to making pizza.
3. Bring in all of the raw ingredients or photos of the ingredients that make up a pizza, and tell how they relate to Kansas Agriculture. As you explain the actual product, have the student place the felt that correlates with their pizza.
 - a. **Crust** - Pizza crust is made from wheat, which has traveled through many processes before we take a bite.
 - i. The farmer plants wheat kernels in the ground. When the wheat is ready to harvest, the farmer combines the wheat in the field, then loads it into trucks to haul it to the elevator.
 - ii. The wheat is taken from the elevator to a terminal, where it is cleaned.
 - iii. Next, the wheat is sold to various industries that use it to make food or feed.
 - iv. If the wheat is used for food, it is shipped to a mill where it is processed to become flour.
 - v. Wheat flour contains a protein called gluten. To make bread, active yeast, warm water, and other ingredients are added to the flour. The gluten traps the air bubbles that the yeast releases and causes the bread to rise.
 - b. **Cheese** - Cheese is a healthy food made from milk. Farmers once milked their cows by hand. Today, they use milking machines with a vacuum to pull the milk from the cow's udder. The process of making cheese involves these basic steps:
 - i. Processing the milk. The milk is heated and quickly cooled, a process called pasteurizing. This kills any harmful bacteria.
 - ii. Separating the curd. After the milk has been processed, it is treated to form a soft, custard-like substance called curd. Curd contains a liquid called whey, which must be taken through a special process before making cheese.
 - iii. Treating the curd. Curd is broken into small pieces for pressing. During pressing, more whey drains, and the curd is shaped into blocks or wheels.
 - iv. Ripening. Cheese is aged in storage rooms or warehouses (this helps give cheese its flavor). Aging times vary for different types of

- cheese. The longer the aging period, the sharper the cheese's flavor.
- v. Packaging. After aging, cheese is packaged in a wide variety of shapes and sizes. Some cheeses are sliced at the factory and sealed in foil or plastic.
- c. **Pepperoni and Sausage** - You only need a few minutes to eat a piece of pizza, but do you know it takes almost six months from the time a pig is born to produce a 250-pound animal ready for processing?
- i. Often, a farmer has many sows (mother pigs) in his care and depends on these sows to produce pigs for his income. Therefore, it is in the farmer's best interest to have healthy animals.
 - ii. Pigs may be sold at an auction market or sale barn, or may be bought directly by an order buyer who comes to the finishing houses to buy for a packer.
 - iii. Meat inspectors employed by the United States Department of Agriculture inspect live pigs, pig carcasses, and the entire packing plant to make sure that pork is safe to eat.
 - iv. About half of the pork produced in the United States is sold in supermarkets. The remaining pork is consumed in restaurants, hospitals, schools, and business cafeterias.
- d. **Peppers** - There are many varieties of garden peppers, but most American gardeners prefer the large-fruited sweet pepper.
- i. Peppers are usually eaten in their immature green stage, but are also delicious after they have fully ripened and turned red or yellow. Green peppers grow on small bushy plants in Kansas gardens. The peppers have seeds in them, so they are the female part of the plant, thus, they are fruits.
- e. **Onions** - Onions are a tasty vegetable that adds flavor to our food. Onions are raised either from seed or from "sets."
- i. Onion bulbs grow underground and have long green tops. Young onions, before the bulb develops, are called scallions. Onions are often picked by hand or machine, cleaned, and sent just as they are to grocery stores or processing plants. In Kansas, onions are grown mostly in gardens, with very few commercial operations.

Kansas Academic Standards:

Kansas Science Standards

K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

1-LS3-1. Make observations to construct an evidence-based account of how young plants and animals are like, but not exactly like, their parents.

2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

Kansas History, Government, and Social Studies Standards

1.1 The student will recognize and evaluate significant choices and consequences that have impacted our lives and futures.

4.1 The student will recognize and evaluate continuity and change over time.

4.2 The student will analyze the context and draw conclusions about continuity and change.

National Agricultural Literacy Standards:

Plants and Animals for Food, Fiber, and Energy

T2 3-5 e. Understand the concept of stewardship and identify ways farmers/ranchers Cared for soil, water, plants, and animals

Food, Health, and Lifestyle

T3 3-5 b. Diagram the path of production for a processed product, from farm to table

T3 3-5 c. Distinguish between processed and unprocessed food

T3 3-5 d. Explain the costs associated with producing and purchasing food

T3 3-5 e. Explain the practices of safe food handling, preparation, and storage

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Adapted from “Did You Know We Grow Pizza in Kansas?” by Kansas Farm Bureau.

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