Wheat

*Lesson Plan for Grade 3, Social Studies & Mathematics*

*Prepared by NAITC*

*Modified by Mississippi State University, School of Human Science*

*for Mississippi Farm Bureau Federation - AITC*

# OVERVIEW & PURPOSE

Students will use pizza as a basis for learning about agriculture, geometry, and mathematics.

# EDUCATIONAL STANDARDS

**Mississippi College-and-Career Readiness Standards:**

SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally

3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.

ELA-RL.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

**NALOs:**

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

# OBJECTIVES

* Students will be able to discuss the process of food production.
* Students will be able to record different types of data using different types of graphs.

# MATERIALS NEEDED

Activity 1: Fabulous Fractions and Pizza Probability

* [*Pizza Starts on the Farm* activity sheet](https://cdn.agclassroom.org/media/uploads/2015/05/15/Pizza_Starts_on_the_Farm.pdf)

Activity 2: Pizza in Real Time

* [*Ingredients—Where Do They Come From* handout](https://cdn.agclassroom.org/media/uploads/2015/05/15/Ingredients-Where_Do_They_Come_From.pdf)
* [*In Real Time* activity sheet](https://cdn.agclassroom.org/media/uploads/2015/05/19/InRealTime1.pdf)
* Optional: [Pizza Time Bulletin Board](https://agclassroomstore.com/pizza-time/)

Activity 3: Pizza Math

* [*My Favorite Pizza* activity sheets](https://cdn.agclassroom.org/media/uploads/2015/05/15/My_Favorite_Pizza.pdf)

Activity 4: Cracker Pizzas

* 2-3 crackers per student
* 1-2 jar(s) of pizza sauce depending on number of students
* Cheese, pepperoni, and pizza toppings of your choice (Amount depends on number of students)

### Essential Files (maps, charts, pictures, or documents)

* [Ingredients-Where Do They Come From? handout](https://cdn.agclassroom.org/media/uploads/2015/05/15/Ingredients-Where_Do_They_Come_From.pdf)
* [My Favorite Pizza](https://cdn.agclassroom.org/media/uploads/2015/05/15/My_Favorite_Pizza.pdf)
* [Pizza in Real Time](https://cdn.agclassroom.org/media/uploads/2015/05/19/InRealTime1.pdf)
* [Pizza Starts on the Farm](https://cdn.agclassroom.org/media/uploads/2015/05/15/Pizza_Starts_on_the_Farm.pdf)

# VOCABULARY

**farm:** piece of land used for growing crops or raising animals

# Ag Facts:

* 860,000 bushels of wheat produced in Mississippi in 2020.
* 20,000 acres harvested in Mississippi.
* 162 farms in Mississippi produced wheat in 2020.

# Background information for teachers:

Farming and agriculture are a part of everyone’s life in one way or another. From the job you might have someday to the lunch you eat today—many things in our lives are related to agriculture.

Take a look at a typical school cafeteria lunch of ham, corn, tater tots, chocolate pudding, and a bread roll. Each part of the meal is related directly to agriculture. Milk comes from cows on a dairy farm and is pasteurized at a dairy plant. Ham is a pork product that comes from pigs, and bread is made from flour, a product of wheat. Wheat is grown and harvested on a farm, then ground to make flour at a mill. Corn is also grown on a farm, as are the potatoes that were shredded for the tater tots. The corn was probably canned in a factory, while the potatoes were peeled, shredded, cooked, frozen and packaged at a different factory before being shipped to the school. Even the chocolate pudding is made of milk, soybeans, and corn from farms.

As you go through this lesson, remind students that all food begins on the **farm**. Now it’s pizza time!

# LEARNING PROCEDURES

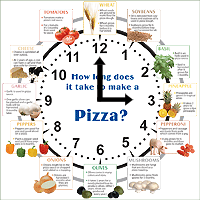
**Interest Approach:**

* Ask students to identify their favorite pizza toppings. List them on the board.
* Ask your students if they know where the pizza toppings came from.
* Inform your students that they will do the following:
  + Identify where pizza ingredients were produced;
  + Calculate how long it takes to produce pizza ingredients beginning with production on the farm;
  + Practice skills in division and graphing using the pizza; and
  + Locate the states where pizza ingredients were produced.

### **Procedures**

**Activity 1: Fabulous Fractions and Pizza Probability**

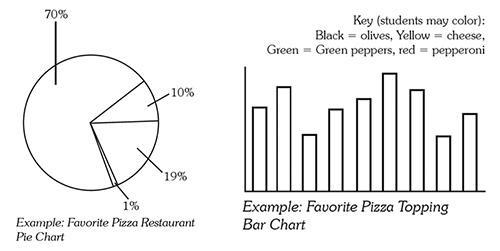
1. Have students complete the *Pizza Starts on the Farm* activity sheet.

**Activity 2: Pizza in Real Time**

1. Share the information from the attached *Ingredients—Where Do They Come From?* handout with students, and have them consider the time it actually takes to produce a pizza. Then have them complete the *In Real Time* activity sheet.

* Optional: Use the Pizza Time Bulletin Board to have your students use the skill of "telling time" with the time it takes to grow, process, and produce the ingredients of a pizza. The bulletin board can easily be used to teach concepts of time, community involvement, raw to finished products, careers, and much more.

**Activity 3: Pizza Math**

1. Have students interview their classmates about what their favorite pizza toppings and/or pizza restaurants are and graph the results. You may use the *My Favorite Pizza* activity sheets included with this lesson, or you may simply use them as a guideline for other interview questions and charts that your students may enjoy.
2. This is also an opportunity to introduce or review with your students how to read and create different types of graphs for different kinds of data.

**Activity 4: Cracker Pizzas**

1. To conclude the lesson, provide ingredients for students to build their own cracker pizza. As each ingredient is distributed, review with students where the ingredient originated or how it was produced or processed.
2. Display a map of the United States and have students locate the state that is the top producer of that pizza ingredient. As each state is identified, point out it's characteristics such as climate and open space. Explain to students that pizza ingredients, with the exception of pineapple, can be produced in any state. However, some states, due to their climate or other available resources can produce certain food products more efficiently. For example, California is the highest producing state for milk, peppers, and tomatoes. California's warm and temperate climate makes farming very easy and efficient. Tomatoes and peppers *can* grow in any state, but the natural growing season may be too short, requiring the added expense of using a greenhouse. Cattle require open land and pastures to graze. Texas is a large state that can provide the open space for cattle to grow.

* **Pizza Crust (cracker):** The primary ingredient of a pizza crust is wheat. Kansas is the highest wheat producing state in the United States.
* **Pizza Sauce:** The primary ingredient of pizza sauce is tomatoes. California produces the most tomatoes for commercial sale.
* **Pepperoni:** Pepperoni is seasoned beef and pork meat. Texas produces the most beef cattle of any state. Iowa is the highest producing state for market pigs.
* **Peppers:** California is the leading producer of peppers.
* **Cheese:** California is the leading producer of milk. Cheese is one of many dairy products produced from milk.
* **Mushrooms:** Pennsylvania is the leading producer of mushrooms.
* **Pineapple:** Hawaii is the leading producer of pineapple in the United States. Pineapples require a tropical climate to grow.

1. When all toppings have been distributed, allow students to eat their cracker pizzas.

**Concept Elaboration and Evaluation:**

After conducting these activities, review and summarize the following key concepts:

* All food products (including pizza) begin on the farm, are processed, and then sold to consumers.
* The ingredients to make a pizza take months and even years to grow on the farm before the pizza can be assembled.

# Additional Learning Procedures

To help students review and elaborate more about wheat, try using the [“Think Pair Share”](https://drive.google.com/file/d/1xwalqUwFYxB3MIwpZNpr7o5GHBd_wz2t/view?usp=drive_link) method to allow students to think deeper and make new connections.

Additional Texts to Include:

[Wheat Ag Mag](https://www.dmsfulfillment.com/FarmBureau/DMSStore/Product/ProductDetail/26334)

[From Wheat to Bread](https://www.amazon.com/Wheat-Bread-Who-Made-Lunch/dp/1681511185/ref=sr_1_4?ie=UTF8&qid=1526916168&sr=8-4&keywords=from+wheat+to+bread)

[Bread Lab!](https://www.amazon.com/Bread-Lab-Kim-Binczewski/dp/0998436607)

[PB&J Hooray!](https://www.dmsfulfillment.com/FarmBureau/DMSStore/Product/ProductDetail/24342)

Source: <https://www.agclassroom.org/teacher/matrix/>

*For more information and additional lessons visit*

*https://msfb.org/ag-in-the-classroom/lesson-plans/.*