



Football Bracelet

Suggested Grade Level: K-5th grade

Time: 20 minutes

Subject: Science, Social Studies

Overview: Students will explore the connection between agriculture and football by identifying how common farm products contribute to the foods, clothing, and equipment found at a football game. Through guided discussions and creative bracelet making, students will learn how crops and livestock in Kansas play a role in a popular game day experience.

Objectives:

Students will be able to:

1. Explain how agricultural products are used in everyday items and experience, specifically football.
2. Connect specific agricultural products to their uses in game day foods, clothing, and equipment.
3. Demonstrate an understanding that agriculture plays a role in both food and nonfood items through discussion and hands-on activities.

Background Information:

The field is set, and a quarterback is under center. You're on the edge of your seat thinking about that pass, not about agriculture. But without agriculture, you wouldn't be watching the game! Agriculture is the source of the food you eat, the clothes you wear, and the fuel that gets you to the game. Football has been around for decades, played in backyards, streets, parks, and professional stadiums. Have you considered that agriculture plays an important role in the game day experience that fans have come to expect? The food, the equipment, and the field all got their start because of agriculture. So, as you head out to football games this season, think of agriculture. Farmers and ranchers have a dedication to the products they provide.

Kansas Connections:

In Kansas, agriculture isn't just about farms and fields; it's a vital part of the game day experience. From the tailgate to touchdown, Kansas farmers and ranchers help make it all possible. The burgers on the grill start with Kansas-raised beef and wheat-grown buns. The dairy farms provide the milk that becomes cheese, and crops like corn and soybeans contribute to everything from cooking oil to biofuels that power vehicles headed to the game. Even the football field itself, grass seed, turf materials, and leather

equipment have roots in agriculture. Kansas agriculture touches every part of our lives, including the traditions and foods we enjoy during football season.

Materials Needed:

- Pipe cleaners
- Football beads
- Brown Beads
- Purple beads
- White beads
- Yellow beads
- Pink beads
- Green beads

Instructional Format:

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

Procedures:**Activity 1:**

1. Ask the youth, "What are some examples of crops and livestock that farmers raise in Kansas?" Accept answers and guide youth to the understanding that the products people use every day come from a farm or a natural resource. Continue by asking the youth if they enjoy football. Share that the game of football could not exist without agriculture. Ask students, "What objects or food at a football game come from a farm?" Accept answers and explain to students that they will be making a football bracelet to learn more about objects and foods at a football game, made with items grown or raised on a farm.

Activity 2:

1. Have each youth take a pipe cleaner. Explain that they will be placing one bead of each color onto the pipe cleaner. Below is what each bead represents in football and agriculture.
 - a. Football Bead - Beef
 - i. Beef hides can be used to make the footballs in the game
 - b. Purple Bead - Cotton
 - i. Cotton is used to make the players' jerseys and is dyed to be the team's colors.
 - c. Brown Bead - Wheat
 - i. Wheat is used to make the buns for your favorite game-day burger or hot dog.
 - d. White Bead - Dairy
 - i. Dairy cattle produce the milk needed to make ice cream and nacho cheese.
 - e. Yellow Bead - Corn
 - i. Corn is used to make tortilla chips for nachos and bubbles in sodas.

- f. Pink Bead - Pigs
 - i. Pork can be found in hot dogs at the concession stand.
- g. Green Bead - Soybeans
 - i. Soybeans can be used as oil to dry foods at the concession stand, and can be found in the football field turf that the K-State Wildcats play on.

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 that 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 care 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

Author: Ella Pachta, an agricultural education major at KSU and a KFAC intern.

References:



Debes, Julia. "Which Wheat for What?" *Kansas Wheat*, [kswheat.com/news/which-wheat-for-what#:~:text=Hard%20Red%20Winter%20\(HRW\)&text=In%20fact%2C%20Kansas%20farmers%20grow,flour%20and%20Asian%2Dstyle%20noodles](https://kswheat.com/news/which-wheat-for-what#:~:text=Hard%20Red%20Winter%20(HRW)&text=In%20fact%2C%20Kansas%20farmers%20grow,flour%20and%20Asian%2Dstyle%20noodles). Accessed 1 May 2025.

"How Hot Dogs Are Made and the Science Behind It?" *SCIENCE UNFILTERED*, 18 July 2018, phenomenex.blog/2018/07/17/hot-dogs/.

"How Is Cotton Obtained to Make Fabrics and How Are They Manufactured?" *Recovo*, recovo.co/en/blog/article/how-is-cotton-obtained-to-make-fabrics-and-how-are-they-manufactured. Accessed 1 May 2025.

Moyer, Karyn. "Highest Quality Cowhides Used for the NFL." *AgHires Blog*, AgHires, 14 Oct. 2021, blog.aghires.com/cowhides-used-make-footballs/.

Rohrig, Brian. "Ice, Cream... and Chemistry." *American Chemical Society*, Feb. 2014, www.acs.org/education/chemmatters/past-issues/archive-2013-2014/ice-cream-chemistry.html.

"Tortilla Chips." *Tortilla Chips - an Overview | ScienceDirect Topics*, www.sciencedirect.com/topics/food-science/tortilla-chips#:~:text=Extruded%20corn%20chips%20are%20made,and%20the%20deep%20fat%20frying. Accessed 1 May 2025.

USSOY Staff. "What Is Soybean Oil and How Is It Made?" *U.S. Soy*, 30 May 2024, ussoy.org/https-ussoy-org-what-is-soybean-oil/#:~:text=How%20Is%20Soybean%20Oil%20Made,mechanical%20pressing%20or%20solvent%20extraction.