

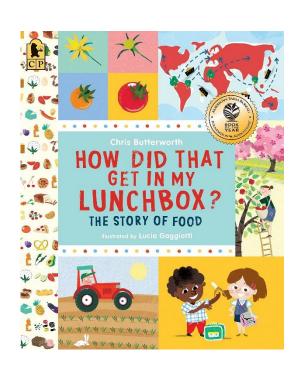




March 2019 How Did That Get In My Lunchbox?

By: Chris Butterworth

Who made the BREAD for your sandwich? What about the CHEESE inside? Who picked your FRUIT? And where did the CHOCOLATE in your cookie come from? Just how DID all that delicious food get in your lunchbox? Take a tasty trip to farms, dairies, and factories, and find out! 1



Did You Know? (Ag Facts) ²

- South Carolina is home to more than 25,000 farms.
- The agriculture industry contributes \$42 billion to SC's economy.
- Broilers (chickens) are the top commodity in SC.

Discussion Questions

- Where does our food come from?
- Have you ever been to a farm? Tell about your experience.
- What does a farmer's job entail?

Grade Level(s): K-3

Purpose: Students learn about the wide scope of agriculture, explore the variety of agricultural products in their daily lives, and discuss the difference between needs and wants.

Vocabulary:

- <u>agriculture</u>: the science or occupation of cultivating the soil, producing crops, and raising livestock
- <u>aquaculture</u>: the cultivation of living things (such as fish or shellfish) naturally occurring in water
- <u>nursery</u>: an area where plants are grown for transplanting or for sale
- <u>forestry</u>: the science of caring for or cultivating forests, and the management of growing timber
- <u>consumer</u>: a person who purchases the goods and services offered by a producer
- good: a physical item that can be held in the hand (e.g., toys, food, electronics)
- <u>need</u>: a good or service that is essential to the health and well-being of a person
- <u>producer</u>: a person who provides services or creates, grows, or manufactures goods that people buy
- <u>service</u>: a product that people can buy that is not an object (e.g., haircuts, doctor appointments, transportation)
- <u>want</u>: a good or service that a person would like to buy or have, but that is not essential to their health or well-being

Background Agricultural Connections ³

When you think of **agriculture**, you probably think of people growing crops or raising cows, pigs, sheep, and chickens on a farm. But agriculture includes much more than that. The people who work in factories building tractors and other farm machinery play an important role in agriculture. People in universities who research new agricultural products and new ways to grow food and fiber are involved in agriculture too. The grocer must buy agricultural products to fill the grocery shelves. The restaurant owner must buy agricultural products to prepare and serve his or her customers. The clothes you wear and the furniture on which you sit were probably made from agricultural products.

You may already know that steak and potatoes are agricultural products, but what about fish? Fish farming, or **aquaculture**, is also agriculture. One of the fastest growing areas of agriculture is growing and selling greenhouse and **nursery** plants. **Forestry** is another area of agriculture. Tree farmers plant, nurture, and harvest trees. Then they sell the trees to companies that make paper products.

Think of all the ways in which agriculture touches your life. When you wake up in the morning, you might be lying on cotton sheets. Your pillow could be filled with down feathers from a goose. The frame of your bed is probably made of wood. These are all agricultural products, and you aren't even out of bed yet! When you do get out of bed, you may put your feet onto a rug made from the wool of a sheep or a linoleum floor made from soybean oil. The soap you use in the shower might contain cottonseed oil or lanolin, a kind of oil from sheep's wool. The handle of your hairbrush might be made from the bones and horns of a beef animal, and the bristles might be the bristles, or hair, of a pig. The towel you dry off with and the jeans and T-shirt you put on are made from cotton. You've already used dozens of agricultural products, and you haven't even started eating.

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Materials:

- How Did That Get In My Lunchbox? by Christ Butterworth
- A Day Without Agriculture activity sheet, 1 per student

Procedures:

- 1. Introduce the inquiry topic of "Where does our food come from?" and explain that food is essential to our survival.
- 2. Discuss the meaning of the word agriculture.
- 3. Share information found in the *Background Agricultural Connections* section of the lesson.
- 4. Read students the first two pages of the book, "How Did That Get in my Lunchbox?" and ask them where they think the food presented in the lunchbox in the story came from and why they think that. Allow students time to brainstorm and think about how/where this food was made/came from. Depending on your class, you could get students to write their ideas down on paper or just have an open discussion where students share their ideas. Finish reading book with discussion added in.
- 5. Explain to students that we will continue to explore where food comes from through the topic of "agriculture". Explain to students that they will be playing a list-making game.
- 6. Hand out copies of the *A Day Without Agriculture* activity sheet. Explain that the students will have eight minutes to list all the agricultural products that touch their lives in a day.
- 7. After they've finished, go around the room asking students to read one item on their list aloud.
- 8. List each item on the white board.
- 9. Ask students who also have that item on their list to cross it off. Explain that the item cannot be used again, and that if a student rereads an item that was previously read, they are out of the competition.
- 10. Ask the last five students who still have items on their lists that have not been mentioned to come up to the front of the room for a championship round.
- 11. The last student with an agricultural product left on their list is the winner.

Agriculture and Me 4

Materials:

- Matching Product to Source activity sheet
- Farming by Gail Gibbons
- Alphabetizing Agriculture activity sheet

Procedures:

Part 1 -

- 1. Discuss the information contained in the *Background Agricultural Connections*, then pass out the *Matching Product to Source* activity sheet. Students should match the product with its agricultural source.
 - Answer Key:
 - o **Timber:** paper, pencils, potpourri, houses
 - o **Dairy Cattle:** cheese, ice cream, yogurt
 - o Cotton: blue jeans, paper, shirts
 - o Flowers: perfume, potpourri
 - o Wheat: spaghetti, tortillas, cereal
- 2. Read *Farming* by Gail Gibbons aloud to the class and highlight the sources of the agricultural products mentioned in the book. Point out the different plant and animal habitats found on the farm and compare their survival needs.

Part 2 -

- 1. Discuss other products that come from agriculture.
- 2. Hand out the *Alphabetizing Agriculture* activity sheet. Discuss the bold-faced heading words to ensure the students' understanding.
- 3. Discuss the vocabulary words to make sure students are familiar with each agricultural product.
- 4. Review the skill of alphabetizing. Have students write the vocabulary words in alphabetical order on the lines under each heading. (This could be a homework exercise with parental input). Answer key:

Crops	Livestock	Horticulture	Dairy			
corn	beef cattle	apples	butter			
cotton	dairy cattle	flowers	cheese			
rice	poultry	trees	ice cream			
soybeans	sheep	turf grass	sour cream			
wheat	swine	vegetables	yogurt			

- 5. After students complete the alphabetizing exercise, they should complete the Word Find.
- 6. Review terms found in the Word Find and ask the students to either identify what agriculture commodity the item comes from or to identify what items the commodity produces. For example, *butter* comes from dairy cattle and *sheep* produce wool that is woven into socks or sweaters.

Farm Economics and Food Processing 5

Materials:

- Starbursts candy-one per student
- Chart paper and markers
- Plain white paper
- Optional: various goods with ingredients from corn (list below)

Procedures:

- 1. Give each student a starburst and allow them to eat it! Let them know that there are ingredients in starbursts that come from corn!
- 2. Review with students what a farmer is and some things a farmer might grow or raise. Share with students the definition of a **producer**. A farmer is a producer.
- 3. Tell students that today we are going to focus on crops and livestock and where we might be able to get them for our home. These are the farmer's products.
 - i. Define with students: crop, livestock, product
- 4. Farmers must invest a lot of time and money into raising and producing crops and livestock. There are important resources that are naturally occurring in our environment that they can use that don't cost them any money!
 - i. Outline the idea of **natural resources** and **renewable resources**. Talk about how plants and animals need sun, water, and air. Do farmers pay for sunlight or air? What about rain water?
- 5. Allow students time to think/turn and talk about different places they may find different foods.
- 6. List these on a piece of chart paper. Some examples: BiLo, Food Lion, WalMart, etc. Help students if they get stuck with just a few.
- 7. Discuss the word **consumer** and tell students that when we go to get things from a store or other place with **products/goods**, we are consumers. Define consumers with students.
- 8. Ask students: how do we get these products to our house? Do we just take them? Do we pick them from the farm? Allow students to answer but essentially we want them to get to using money to purchase items!
- 9. Talk about **exchanging** money for a product from the farmer (think farm stands OR farmers markets) or the store.
 - This can be a nice place to tie in wants and needs. Food that farmers
 produce is something we need to survive. Toys and other fun things are
 items we want.
- 10. Pose question to students: Do you think everything a farmer grows or raises goes right to a grocery store or to a stand to sell? Allow time for discussion. The answer is no.
 - i. Examples of things that are processed further are livestock for meat, milk, cheese, lunch meat, yogurt, ice cream, etc. Fruits, vegetables, and eggs are also processed to be clean, ripe, and shiny at the grocery store.

- 11. Introduce the idea of companies that process raw agricultural goods. Help the students understand that the farmer sells them their goods and doesn't just give them away.
- 12. Give the students an example scenario of one such company. Explain to students that the company Cargill uses corn (and soybeans) to make other ingredients to put in different kinds of products. Use the products listed in the "Did you know" section to discuss that some ingredients in these products come from the corn that farmers sell to Cargill. Remind students that Cargill had to pay for the corn that the farmers grew. The farmers will use that money to plant more corn! Discuss the cycle of exchanging money for products.
- 13. Create a four-box cycle with students. Each student needs a plain piece of paper and then give directions on how to fold into four squares.
 - i. Ask students: What is the first thing a farmer needs to do to grow corn? Allow students to answer: Plant it. Write 'plant corn' and draw a picture in the top left box.
 - ii. Ask students: After the corn has grown, what happens? Allow students to answer: Harvest/pick it. Write pick corn and draw a picture in the top right box.
 - iii. Ask students: What does the farmer do next? Allow students to answer: Sells it. Write 'sells corn' and draw a picture of the farmer getting money for the corn in the bottom right box.
 - iv. Ask students: Last what will the farmer do with his money? Allow students to answer: Buy more corn seeds. Write 'buy corn' and draw a picture of the farmer buying corn seeds in the bottom left box.
 - v. Lastly, draw arrows showing that the cycle repeats itself over and over.
- 14. Take a walk outside. Be noteworthy of things that are here and don't need "human help" to continue to be here. Talk about soil, sun, air, water. What about the playground? Pose different questions to students to allow them to think about if something can always be here without help. Do research with students on the items they listed to see if it is a natural resource.
- 15. Review lesson with students and answer any questions students may have.

Enriching Activities 4

- Download the <u>Farm To Cart</u> game from American Farm Bureau. Divide the class into two groups to play the game.
- Have the students make mosaic pictures about agriculture using seeds (wheat, corn, soybeans, etc.). These seeds can be obtained from a farmer, local grain elevator or some hobby and craft supply stores. Help the students identify each seed before starting the art project. Ask students to draw a simple agricultural scene on poster board. Spread glue in just one section of the picture and add seeds. Continue to spread glue in sections one at a time, and add seeds until the picture is complete. Let the picture dry thoroughly before moving it. Allow time for the students to share their mosaics with the class and explain how their picture represents agriculture.
- Using a wall map of the United States, ask students to think about agricultural products grown or raised in certain parts of the country (examples: Florida and California-oranges, Gulf of Mexico-seafood). Ask the students to consider why the products are produced in these locations? Have groups draw the products or cut pictures out from magazines to attach to the classroom map.
- Adopt an Agriculturalist. Many teachers find it educational to have someone involved in production agriculture "adopt" their class. The students correspond regularly with the farmer or rancher's family to practice writing skills and learn about the day-to-day operation of the farm or ranch. The family may send photographs or videos, grain or feed samples, and other items from the farm or ranch. In turn, the students can write to the family to ask questions or react to what they have learned. Before students are involved, the teacher and family should set goals for the program. Establish a regular correspondence schedule to keep students interested. Invite the farm family to visit the classroom or schedule a field trip to the farm.

Suggested Companion Resources

- Farming (book)
- Ag Today (booklets and readers)
- Ag Day (website)

Sources/Credits

- 1. Butterworth, C. (2011). *How Did That Get In My Lunchbox? The Story of Food.*Massachusetts: Candlewick Press.
- 2. SC Department of Agriculture
- 3. Oklahoma Agriculture in the Classroom
- 4. Utah Agriculture in the Classroom
- 5. Iowa Agriculture in the Classroom

Suggested SC Standards Met:

English/Language Arts -

- K.RI.5.1 With guidance and support, ask and answer who, what, when, where, why, and how questions about a text; refer to key details to make inferences and draw conclusions in texts heard or read.
- K.RI.5.2 With guidance and support, ask and answer questions to make predictions using prior knowledge, pictures, illustrations, title, and information about author and illustrator.
- K.RI.6.1 With guidance and support, retell the central idea and identify key details to summarize a text heard, read, or viewed.
- 1.RI.5.1 Ask and answer who, what, when, where, why, and how questions to demonstrate understanding of a text; use key details to make inferences and draw conclusions in texts heard or read.
- 1.RI.5.2 Make predictions using prior knowledge, pictures, illustrations, title, and information about author and illustrator.
- 1.RI.6.1 Retell the central idea and key details to summarize a text heard, read, or viewed.
- 2.RI.5.1 Ask and answer literal and inferential questions to demonstrate understanding
 of a text; use specific details to make inferences and draw conclusions in texts heard or
 read.
- 2.RI.5.2 Make predictions before and during reading; confirm or modify thinking.
- 2.RI.6.1 Retell the central idea and key details from multi-paragraph texts; summarize the text by stating the topic of each paragraph heard, read, or viewed.
- 2.RI.7.1 Compare and contrast topics, ideas, or concepts across texts in a thematic, author, or genre study heard, read, or viewed.
- 3.RI.5.1 Ask and answer literal and inferential questions to determine meaning; refer explicitly to the text to support inferences and conclusions.
- 3.RI.6.1 Summarize multi-paragraph texts using key details to support the central idea.
- 3.RI.7.1 Compare and contrast diverse texts on the same topic, idea, or concept.

Social Studies -

- K-4.3 Recognize the ways that community businesses have provided goods and services for families in the past and do so in the present.
- 1-1: The student will demonstrate an understanding of how families interact with their environment both locally and globally.
- 1-4: The student will demonstrate an understanding of how individuals, families, and communities live and work together in America and around the world.
- 2-3: The student will demonstrate an understanding of the role of goods and services and supply and demand in a community
- 3-1: The student will demonstrate an understanding of places and regions in South Carolina and the role of human systems in the state.

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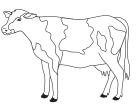
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Matching Product to Source

Match the product on the right with the pictures of the product's agricultural source on the left.



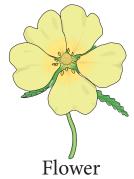
Timber



Dairy Cattle



Cotton





paper

spaghetti

perfume

ice cream

pencils

tortillas

shirts

potpourri

houses

yogurt

cereal

vegetables

wheat

cotton

rice

Alphabetizing Agriculture
Place the vocabulary words in alphabetical order under the appropriate topic.

	<u>Crops</u>	<u>Livestock</u>	<u>Horticulture</u>				<u>Dairy</u>							
			 						- - –					
<u>Vocal</u>	bulary Words													
beef cattle corn		corn	soybeans					apples						
cotton	1	vegetables		ice cream					bı	butter				
sour c	ream	cheese	poultry						swine					
sheep		dairy cattle	flowers				rice							
turf gr	cass	wheat	yogurt				tr	trees						
Find the words.														
	butter	sheep	С	O	r	n	a	С	t	b	O	e	g	
	cheese	swine	o	q	t	S	n	S	a	u	m	S	S	
	corn	trees	t	r	e	e	S	h	m	t	r	e	W	

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How Did That Get in My Lunchbox?

RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

SCIENCE, MATH VISIONS OF VEGGIES

Materials: vegetable seeds, disposable cups, soil

Provide different types of vegetable seeds that grow quickly, like lima beans, pumpkins, or peppers. Let each student choose a seed to plant in a cup of soil. Have students chart the growth of their plants

over the course of two or three weeks. Compile the results into a class chart or graph. For older students, find the mean, median, and mode for the class as a whole and for each kind of plant.



TECHNOLOGY, MATH

Ask students to bring in a favorite recipe to add to a class cookbook. Walk the class through the nutrition facts of a sample recipe to explain the important concepts, then have students visit recipes.sparkpeople.com/recipe-calculator.asp to find the nutritional value of their own recipes. Once completed, compile recipes into a class cookbook to share.

ENGINEERING, SCIENCE COOKIE CRUSH

Materials: 3" cardboard squares, tape, glue, foil, plastic wrap, toothpicks, 5 lb. weight

Challenge: Build a container for a chocolate chip cookie that can withstand five pounds being dropped on it without crushing the cookie.

Put students into groups. Let them feel how heavy a five pound weight is for reference, then work together to design and build the container. After construction, test the designs. Place the containers on the ground and drop the weight onto each one from a height of three feet. Observe the results and record whether the cookie inside was crushed.

ART

FAMOUS FRUIT

Materials: painting supplies, fruit

Frida Kahlo, a famous Mexican painter, painted fruit she found in her garden in Mexico. Have students visit this site (www.fridakahlofans.com/c0640.html) for a look at her work. Bring in fruit and allow students to arrange it for a still life painting. Encourage them to incorporate a "statement" into their pieces as Frida did with her peace dove.

MATH, GEOGRAPHY FOOD TRAVELS

How far does food have to travel before it gets to your table? Have each student bring in one food product of their choice. For each food, find the country of origin. Have students calculate the distance between that country and your school. Label and track each food on a world map. Which food traveled the farthest? Was one country the source of multiple foods? Did any foods come from the United States? Why does

our food have to travel so far? Has it always been this way?



FIND A FARM

Find a local farm by logging on to www.localharvest. org. What questions do your students have for the farmer who runs the farm? Have them write letters to the farmer to find out the answers. They might ask about what types of crops grow on the farm, how many people work there, what machines they use to help them harvest, etc. Compile the letters into one big envelope and send them to the farm. Don't forget to include a self-addressed, stamped envelope for the reply.



