



Agricultural Literacy Week

New York Agriculture in the Classroom

Educator Resource Guide 2018

Dear Educator,

Food is not just essential to our lives, it is also central in so many ways. From family gatherings with shared dishes, our cultural heritage represented through recipes, and a school day built around meals to feed hungry children and increase classroom focus, food is everywhere - every single day.

Understanding not only how food grows, but the systems in place to safely move that food to our plates, is powerful. New York's agriculture industry boasts opportunities for careers in food production, food science, technology, and more. Through building student awareness and understanding of local food systems, we are empowering them to choose a career that will directly impact their local economies and the health of their communities.

Thank you for inviting a volunteer to read *Before We Eat* by Pat Brisson in your classroom. The conversation about food and agriculture can fit so naturally in your curriculum, and we are happy to help you provide unique learning contexts of a hands-on nature. Our volunteer readers bring a wealth of personal knowledge to share with your students, and we hope the visit inspires discussion, questions, and excitement about the journey our food takes from farm to table.

Sincerely,
Katie Carpenter
Director, New York Agriculture in the Classroom

Even More Agriculture in Your Classroom

Your Seat is Saved!

Earn one of 60 scholarships for New York teachers to attend the National Agriculture in the Classroom Conference in Portland, Maine. Expenses paid, CTLE awarded. Applications due **April 4, 2018**.



Agricultural Literacy Grants
Visit a farm? Purchase agriculturally accurate books? Build a chicken coop? Plant a garden? Earn up to \$1,500 in support of your creative idea to infuse agriculture into your classroom. Rolling grant applications will be reviewed until **May 15, 2018**.

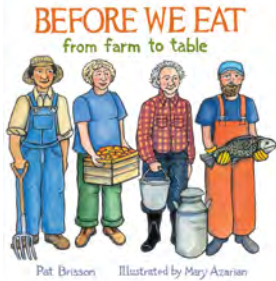
Agricultural Literacy Week Learning Extensions

Access additional lessons, vocabulary, virtual field trips to processing plants, and more. Extend your student's learning of food systems by visiting the Agricultural Literacy Week page: agclassroom.org/ny





Mapping the Food System



Grade Level: 2
Adaptions for
K, 1, 3, 4, 5 included

Time:
40 minutes

Materials:
-Before We Eat book
-4 sequencing signs
-Tote bag with apple
and Chobani yogurt
cup

Extensions:
For related lessons and
learning extensions
please visit
agclassroom.org/ny

**Common Core
Domain Connections:**
Kindergarten
The Five Senses,
Plants, Farms,
Seasons & Weather,
Taking Care of the
Earth
1st Grade
Animals & Habitats
2nd Grade
Cycles in Nature,
Insects, Human Body

Helpful Hints and Presentation Preparation

- Watch the volunteer training video, found on the New York Agriculture in the Classroom website (agclassroom.org/ny), as a helpful example of how to present the activity and to learn best practices when reading the book.
- Read the book and activity plan several times before you present.
- Each classroom has been provided a tote bag with two agricultural products for the activity. If you would like to add additional products to your bag, or include an item you produce, see our website for additional ideas and descriptions.

Introduction (3 minutes)

- Introduce yourself: share your connection to agriculture, and why agriculture is important to you.
- Explain the plan for your time together: We will be learning about the many steps and changes food products go through from the time it is grown on the farm, to the moment it ends up on our plates.

Read Aloud (15 minutes)

Read *Before We Eat: From Farm to Table* by Pat Brisson, illustrated by Mary Azarian.

- The book has an excellent rhyme and cadence. Read the book through to the end, and then go back to your favorite 3-4 pages to discuss the illustrations.
- While there is a lot to talk about in the book, discussing the images on every page may take too long.

Paired PowerPoint Presentation

The book's illustrations highlight how some farmers grow food and raise animals; but we know that family farms of all sizes care for the environment, use technology, and produce safe and abundant food for their families and ours. Consider using the provided PowerPoint from our website to project on the classroom's SmartBoard.

- Ask the students to **compare** and **contrast** the book's illustrations with the photographs of real New York farms on the 3-4 pages you decide to discuss.
- Feel free to delete photographs or slides you do not plan to discuss with the students. Add photos of your own agricultural operation as examples.

Lesson and Activity (20 minutes)

Background:

Growing food and moving it from farm to fork involves several steps and many hands. It is important for students to understand the steps in the food system, especially in today's efficient, modern, and productive agricultural industries.

New York State abounds with productive farms, innovative food processing facilities, efficient means of transportation, and hosts some of the largest markets in the world for food products and our natural resources. Gaining insight into food's journey will enable students to accurately communicate the source and value of agriculture, but will also expose students to careers in the food and fiber industries.

In this activity, students will identify processed and minimally process New York foods. Students will explore the food system by discussing the raw state of two agricultural products, and mapping how the processed food item achieved its current form available in our markets, schools, and homes.





Lesson Plan & Extension Activities

Lesson Procedures:

- After reading the book, describe to the students your favorite food and the food's journey from farm to table.
 - Example: *My favorite food is tomato sauce that I can put on pizza or eat with spaghetti and meatballs. I know that my tomato sauce was grown as juicy, red tomatoes and harvested by a farmer. After they were picked, the tomatoes were processed. People, or machines, washed and cooked the tomatoes until they turned into a thick sauce. The sauce was put in a jar, loaded on a truck, and delivered to my favorite store to buy and eat with my family.*
 - Just like it was pictured in the book, my tomato travelled through the same steps in the food system. A **food system** includes the activities involved in getting food from farms, forests, and oceans to our homes and tables.
- Explain to the students that you have four signs illustrating the different steps of the food system, and you need their help putting them in order from the first step to the last step.
 - Ask four students to join you at the front of the room, each holding one sign, given to them in the incorrect order.
 - Ask the class to identify the first step in the food system, the second, etcetera, until they have placed the signs in the correct order. The students holding the signs should move into the correct order.

Note: Definitions for some of the vocabulary words are on the signs, and leading questions are below in italics to help the students understand each step. These are provided as inspiration for your conversation, you do not have to ask each question.

 - Producing & Harvesting: *What does a farmer need to grow food? What tools do they need to harvest their crop?*
 - Storage & Processing: *How might food be stored? Describe how my tomato was processed.*
 - Transportation: *How does food travel from storage to the store?*
 - Selling & Eating: *Where can you buy food? What are your favorite foods?*
 - Using tape or magnets, post the signs in the correct order.
- You are provided two agricultural products from New York State farmers in their final, processed stage, an apple and a Chobani yogurt cup. **See an overview of the items on the next page of this lesson.**
 - Before taking your first item out, ask for one student volunteer.
 - Ask the student's name. *"Can everyone say, "Hello Farmer NAME?"* Class responds, "Hello Farmer NAME!"
 - Explain: *I am going pull an agricultural product out of my bag that has been processed, tell you what the product is, and then give it to Farmer NAME. Farmer NAME is going to stand under our first step, Producing & Harvesting. We are going to work together as a class to identify what the product looked like, or how it changed at each stage of the food system.*
 - Pull out the apple from your bag. Once the conversation is complete at each sign, the farmer should move to the next sign.
 - If the students do not come up with answers themselves, leading questions and answers are prepared as a guide.
 - After the last sign, your farmer should sit down with their item.
 - Follow the same process with your second item, the Chobani yogurt cup.

Conclusion:

- Ask your two farmers back to the front of the room and to hold up their item. Ask:
 - Does the apple look different than it did when it was harvested? *No.*
 - Does yogurt look different than it did when it was milked from the cow? *Yes.* How does it look different? *Solid instead of a liquid, flavors added, in a container*
 - The apple had a small amount of processing and the yogurt had a lot of processing, did both products travel through a food system? *Yes.*
- Leave the bag, materials, Educator Resource Guide, and book with the teacher as a donation.

Product Leading Question Examples:

Apple

- (1) Producing & Harvesting: Where do apples grow? *On trees, in New York.* How are they harvested? *By hand, and put into large crates.*
- (2) Storage & Processing: Where do you store apples? *In a sealed room at a cold temperature to keep the apples fresh for up to 1 year.* How was this apple processed? *It was washed, sorted by variety and size, and packed into a plastic bag.*
- (3) Transportation: How did this apple travel from the processor to the store? *Packed in cardboard containers, in a refrigerated truck.*
- (4) Selling & Eating: Where can you buy apples? *Grocery stores, farmers markets, schools.* What is your favorite apple? What other ways can you process an apple? *Applesauce, apple slices, juice, dried chips, etc.*

Chobani Yogurt

- (1) What is the raw product yogurt is made from? *Milk.* Is milk harvested? *Dairy animals (primarily cows, sometimes goats or sheep) are milked 2-3 times a day. Farmers use machines to milk the cows, usually with the help of humans, but sometimes with a robot.*
- (2) Where is the milk stored? *Milk travels from the cow to a storage tank where it is cooled and kept fresh. An insulated truck transports the milk to Chobani, or another processing plant.* How is the milk turned into yogurt? *The milk is heated to a safe temperature, cooled, mixed with live yogurt cultures, or good bacteria, and strained to remove excess water. Flavors are added. The product is packaged.*
- (3) How do you transport yogurt? *In a refrigerated truck.*
- (4) Where can you buy Chobani yogurt? *Grocery stores, convenience stores, schools.* What are your favorite flavors? What other products can you make from milk?

Teaching Tips:

- If you are presenting in grades 3-5, you may consider breaking students into small groups using the “Food Mapping” worksheet found on the website with one agricultural item. Each group shares their item with the class.
- The same worksheet can be used with students in grades K-2. Students can draw or fill in their answers as you work together mapping the agricultural products at each step in the food system.

Vocabulary

Aquaculture – The rearing of aquatic animals or the cultivation of aquatic plants for food

Food System – activities involved in getting food from farms, forests, and oceans to our homes and tables

Gratitude – The quality of being thankful

Graze – To eat grass in a field

Harvest – The process or period of gathering in crops after they have reached full growth

Plow – To turn up the earth or to prepare soil for seeds

Processing – To perform a series of mechanical or chemical operations on something in order to change or preserve it

Sow – An adult female pig

Storage – Saving or preserving something for future use

Tend – To care for or look after

Transportation – The movement of humans, animals and goods from one location to another

For additional vocabulary with photos, visit our Quizlet at agclassroom.org/ny.

Special thanks to Chobani for their donation of yogurt cups. We appreciate your continued support of education and agriculture as a leader in New York's food industry.

Chobani.



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