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AGRICULTURE IN THE CLASSROOM • SPRING 2020 / VOLUME NO. 1

WHAT'S GROWING ON in Virginia



The foods we eat every day begin their journey on a farm.

Farm-to-table connections

All the food we eat has a story, and nearly every food story begins with a farmer.

Whether our favorite foods have been grown locally or have traveled a long way from farms to make it to our tables, they must go through a commodity chain—the process in which goods are created and distributed. On their journey through this process, raw products grown in fields and on farms are transformed into foods ready to be consumed at home.

The start of a commodity chain begins with food production as farmers grow and harvest

the foods we eat. In Virginia, farmers are experts in all kinds of agricultural goods. From raising chickens, turkeys and beef cattle to producing an assortment of vegetables, fruits, grains and dairy products, our farmers are keeping us fed year-round.

As crops and animals complete their growing cycles, they are harvested and transported away from the farm to be processed or turned into ready-to-eat products. For example, milk is pasteurized and is bottled or made into cheese and yogurt; wheat is used to make cereal and bread; and meat is prepared in a variety of ways.

Once foods are ready to be consumed, they are transported and distributed to places like grocery stores, farmers markets and restaurants where consumers can purchase them. While Virginia farmers produce a wide variety of foods, they are limited in what they can grow by climate, location and soil condition. Some of our favorite foods, like oranges and avocados, can be grown only in other parts of the country and require long-distance transportation.

Once the food is purchased and prepared for meals at home or in a restaurant, the chain is complete.

Do you ever wonder where your breakfast or peanut butter and jelly sandwiches come from?

When you're hungry and can't wait to eat dinner, do you know who to thank for the food?

With books and related activities designed to introduce the process of

providing food, from and how farmers make it all happen, you and your class will learn firsthand how your favorite foods move from the farm to your table every day!

The Cow in Patrick O'Shanahan's Kitchen

by Diana Prichard

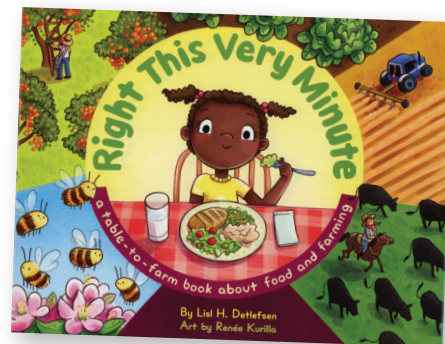
SYNOPSIS: In reading about where various food components come from, students will be encouraged to consider how their favorite breakfast foods arrive on their plates each morning.

ACTIVITY: Butter Making

Demonstrate how butter is made while working on scientific skills by observing different states of matter. You will need plastic cups and heavy cream. Place students into groups of four, and give each group one cup. Fill cups about halfway with heavy cream, and secure the lid. Have students take turns shaking the cup until the liquid inside has turned into a solid. Encourage students to look and listen as their cream turns to butter. The butter will first change into whipped butter before turning into solid butter surrounded by buttermilk.



Making butter from heavy cream will help students sharpen their science skills.

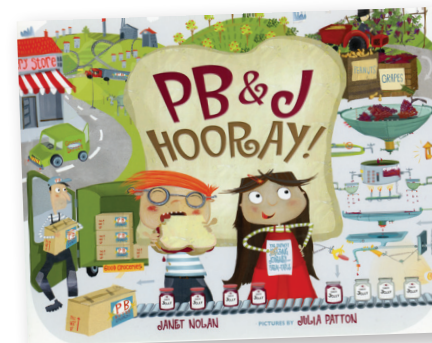


Right This Very Minute

SYNOPSIS: By showcasing farmers' stories, knowledge, hard work and dedication, this book about food production will connect students to the source of their breakfast, lunch and dinner.

ACTIVITY: Seed Buddy

Explore the first stages of a plant's life cycle by germinating a Seed Buddy. Give each child a small, jewelry-sized plastic bag with a hole punched above the bag's closure. Next, wet a cotton ball to simulate watering, and place one to two seeds on the cotton ball before placing it into the bag. Zip the bag shut, and thread it onto a pipe cleaner, twisting the pipe cleaner to form a bracelet for students to wear. Over the next week, monitor the changes of the seeds.



PB&J Hooray!

by Janet Nolan

SYNOPSIS: Follow the path of this lunchtime favorite as it travels from the field to your lunchbox. In sharing how peanut butter and jelly sandwiches are made, this fun book will have you cheering for agriculture!

ACTIVITY: Wheat Grinding

Teach your students how wheat is transformed into flour, which is used to make foods such as pasta, bread and cereal. Create your own flour by placing wheat seeds or wheat berries in a pepper grinder, grinding the wheat over a bowl. Give each child a turn grinding the wheat, and discuss how wheat is processed today compared to how it would have been done hundreds of years ago. Ask children if they have enough flour for a loaf of bread. Tell them that it takes about four cups of flour to make one loaf.



Students will create flour by running grain through a pepper grinder.

RESOURCE HIGHLIGHTS

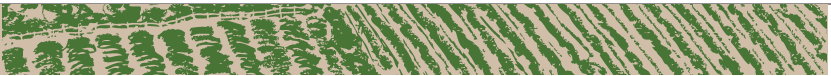


Ag Today

Download this digital magazine, and explore how agriculture is part of everyone's life! The first issue of *Ag Today* is designed to help students define how agriculture plays a part in everyday activities such as eating breakfast in the morning and doing math homework at night. *Ag Today* covers a wide range of topics, including food production, healthy eating and seed science, and students will find a wealth of information, activities and quizzes between the covers. Download the magazine at yumpu.com/en/document/view/59521228/ag-today-issue-1.

Before the Plate

With interactive diagrams, videos and articles, the *Before the Plate* documentary's website contains information that maps out each step of the farm-to-table processes for beef, potatoes, honey, milk and sunflower products. Visit beforetheplate.com to learn more about these immersive lessons.



CONTENT AREA

SOL: Science: Resources

Literacy: Vocabulary

Objective: for students to:

- Match plants and animals with the products they make.

Materials:

- Empty food cartons such as:
 - Cereal boxes
 - Egg cartons
 - Spaghetti sauce jars or ketchup bottles
 - Yogurt cups or milk cartons
 - Applesauce jars or apple juice boxes
 - Bread bags
- Corresponding pictures (or real/artificial items) of:
 - Corn
 - Chickens
 - Tomatoes
 - Dairy cows
 - Apples
 - Wheat



Household grocery items will help teach students where their food comes from.

LESSON PLAN

Grocery Matching Game

Background Knowledge

Help your students connect everyday grocery items and foods they enjoy with their origins on the farm. This lesson will help students understand that almost all the foods they see on a trip to the grocery store have one thing in common—they began on the farm. By recognizing this fact, students will begin to understand the importance of farms and the resources they provide.

Procedure

1. Bring a grocery bag filled with various empty food cartons as listed. Take each item out of the bag, and ask students if any look like items they may have seen in the store or in their home pantries or refrigerators.
2. Ask students to brainstorm similarities and differences between the items. Depending on the age or ability of the group, you may choose to organize their answers using a Venn diagram.
3. Explain to students that a key similarity between each of the items is they all began on a farm. Discuss how farmers raise crops and livestock to provide us with the food that we eat each day.
4. Display the pictures or items from the second list, and ask students to match the farm animal or plant with the grocery item.

Extension

Have students bring in an empty food container from their favorite food at home. Then, have the class correctly identify the on-the-farm source of the food item.



CONTENT AREA

SOL: Science: 3.10, 3.11, 4.9
Social Studies: 2.7

Objective: For students to:

- Identify and match plants and the crops produced.
- Identify and match animals and the raw commodities produced.
- Correlate plants and animals with relevant byproducts or goods.
- Explore the role of agriculture in their daily lives, and understand how most of the necessities of life can be traced back to the farm.

Materials

- Farm web pictures, accessible at **AgInTheClass.org** in the digital version of the newsletter, which includes all pictures and graphics
- 30 pieces of yarn



You will need 30 pieces of yarn and cutouts of crops and farm animals.

LESSON PLAN

Farm Web

Background Knowledge

Food is made from the raw products derived from the farm. Some products, like corn, can be consumed in their raw state, or they can be processed into an entirely different product like corn chips and soda. Other raw products, meanwhile, can be made into items like peanut butter, detergents or medicines. Other farm products need to be processed from their raw state into a more palatable and digestible form before they can be eaten. Wheat, for example, is the most important grain in the U.S. We would have to eat hundreds of raw or whole-wheat seeds to get the same nutrition we can get from processing the wheat into flour. By using flour to make bread, bakers make the wheat more palatable. Flour is used in hundreds of other products like tortillas, pastas, doughnuts, muffins, pancakes, cookies, pie crusts and pretzels.

Procedure

1. Ask students if they have eaten or used anything from a farm today. Point out that if they’ve eaten and are wearing clothes, they are using a farm product.
2. Help students understand that agriculture begins on a farm and that there are all kinds of farms producing different goods, such as:
 - Cattle ranches for beef and leather.
 - Dairy farms for milk and all other products made from milk.
 - Orchards, which grow apples for snacking and juices.
 - Pig farms for pepperoni, bacon and ham.
 - Grain farms that grow corn for fuel and corn syrup for sodas, or wheat that is grown for bread and cereal.
 - Cotton farms for blue jeans.
 - Tree farms for paper and landscaping. In fact, there is a different kind of farm for nearly every type of product.
3. Farms specialize in what they grow based upon their location, climate and soil. Farmers choose only a few crops because the type of equipment used to plant and harvest each crop is very specific and expensive.
4. Inform the students they are now going to create a “farm web” to help them understand agriculture and where the items they use every day originate.
5. Have students move to the area where they will begin building the farm web. You may choose to have students work in groups or together as a class.
6. Place the farm picture in the center of the floor. Mix up the remaining pictures, and either put them in a pile or hand a picture to each student.

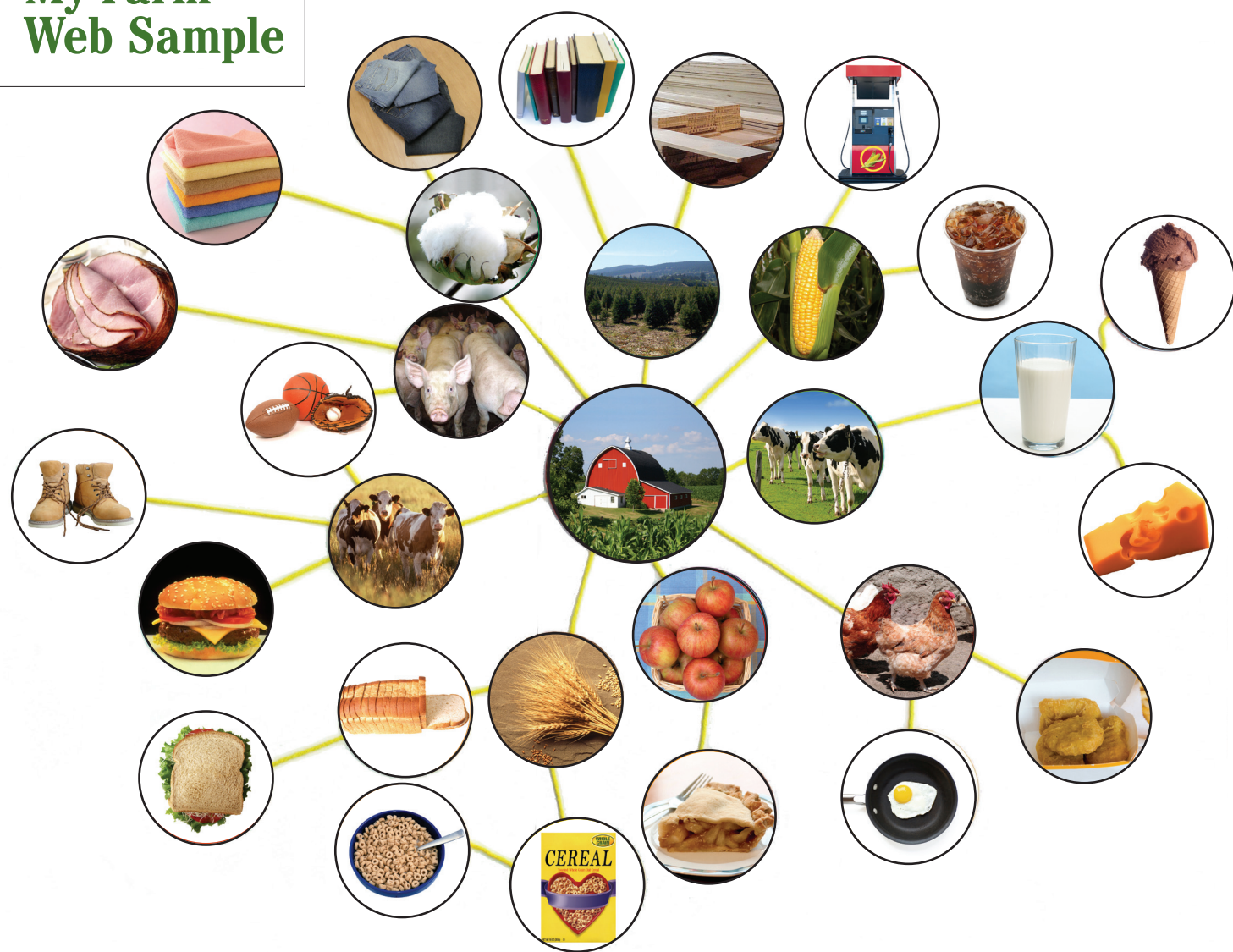
LESSON PLAN 2

Continued from page 5

7. Ask students which pictures will be closest to the farm picture in the center of the web, as pictures of plants or animals grown or raised on a farm will be closest to the center.
8. Students with products made from ingredients produced on a farm should place their pictures onto the web after the farm-raised item is placed.
9. When all pictures have been correctly placed, review and ask students if they think other pictures could be added to the farm web.

Credit: Lesson adapted from Utah Agriculture in the Classroom

My Farm Web Sample



A completed farm web displays the agricultural origins of everyday products.

BOOK CORNER

Bread Comes to Life, George Levenson, Tricycle Press, ISBN: 9781582462738

Journey of a Bowl of Cornflakes, John Malam, Heinemann, ISBN: 9781432966089

On the Farm, At the Market, G. Brian Karas, Henry Holt & Co., ISBN: 9780805093728

From the Apple Trees to Cider, Please!, Felicia Sanzari Chernesky, Albert Whitman & Co., ISBN: 9780807565131

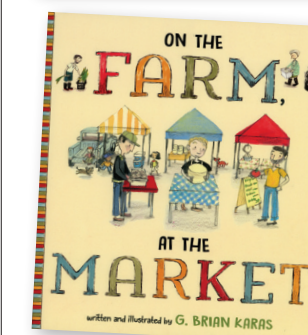
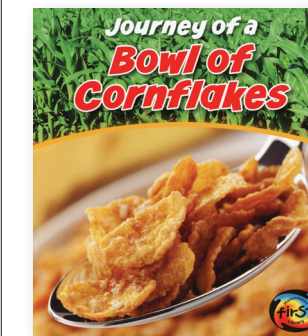
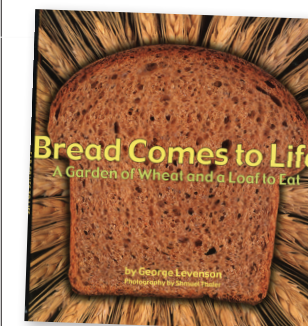
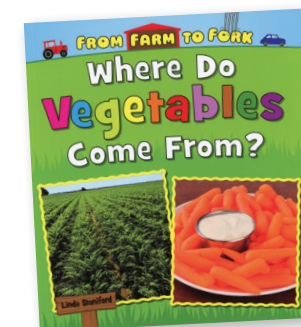
From Tomato to Ketchup, Roberta Basel, Capstone Press, ISBN: 9780736842860



Where Do Vegetables Come From?, Linda Staniford, Heinemann, ISBN: 9781484633557

Extra Cheese, Please!, Chris Peterson, Boyds Mills Press, ISBN: 9781590782460

How Did That Get in My Lunchbox?, Chris Butterworth, Candlewick Press, ISBN: 9780763665036



PROGRAM HIGHLIGHTS

Educator grant and recognition programs

Virginia Agriculture in the Classroom encourages teachers to integrate agriculture into their daily curriculums. To celebrate and support teachers who do so, AITC offers its Teacher of the Year Award, as well as Garden, Agriculture Experience and STEM grants.

In 2019, Virginia AITC awarded more than \$30,000 through 83 grants in 38 Virginia localities for

the 2019-2020 school year. The funding provided agriculture experiences related to gardening, animal agriculture, health and nutrition and STEM concepts to over 25,000 elementary and secondary students. For more information on these programs, including deadlines and applications for grants, visit AgClassroom.org/va/teachers/grants.cfm.

Farm Life 360

Join farmers across the state on a virtual field trip where you can peek inside a chicken house or ride along as cotton is harvested. Filmed with virtual reality technology, the videos allow viewers

to explore all around the farm. Visit the Farm Life 360 YouTube channel at YouTube.com to discover 360-degree tours.



WHAT'S GROWING ON IN VIRGINIA

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Discovering how food moves through the commodity chain is
What's Growing on Virginia!

About the Newsletter

What's Growing On In Virginia? is a semiannual publication for Virginia educators and those who want to connect children with agriculture through education.

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For additional information and activities, visit our website at
AgInTheClass.org or call **804-290-1143**

