

SC Farm Bureau Ag in the Classroom Post Office Box 754 Columbia, SC 29202

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SC Ag in the Classroom
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FRESH-PICKED POETRY: A Day at the Farmers' Market By Michelle Schaub Illustrated by Amy Huntington



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Grade Level(s):

PreK- Fifth Grades

Reading Levels

Fourth and Fifth grades (independent)

Estimated Time:

• 45 minutes (enriching activity)

Purpose:

•___Students will discover the value of farmers and farmer's markets to their local community.

Vocabulary:

consumer: a person who buys and uses goods and services

economy: the wealth and resources of a country or region, especially in terms of the production and consumption of goods and services

farmers market: a marketplace where farmers sell the food they produce directly to consumers

food miles: the distance food is transported from the time of its production until it reaches the consumer

Background Agricultural Connections: 1

Food sold close to where it was grown or produced is considered "locally grown." Buying food from local farmers is believed to be good for communities, the local **economy**, and the environment. Locally sold produce can be harvested at its peak ripeness and reaches the **consumer** faster and at a fresher stage. When consumers buy local, more of their money stays in their community. Buying locally-grown food also reduces **food miles** (the distance food is transported), which is good for the environment. Local food can be found at **farmers markets**, restaurants, **Community Supported Agriculture** programs (CSAs), food co-ops, food hubs, food stores, and online.

Early in our nation's history, farmers began taking their products to the nearest town to trade for items they could not produce on their own farms. If the farmer had products left after trading, they would take it to a market and sell it directly to consumers. This was the beginning of farmers markets in the United States. In 2002, the Farmers' Market Promotion Program was added to the Farm Bill to provide federal support for farmers markets for the purpose of strengthening direct producer to consumer marketing channels. Farmers markets continue to grow in popularity because customers appreciate the quality of local, in-season food available.

The fruits and vegetables we eat come from parts of plants. Flowering plants have six main parts—roots, stems, leaves, flowers, fruits, and seeds. Each plant part serves a different function.

Roots act as anchors, holding a plant in place. They take up water and nutrients a plant needs from the soil. Roots can also store extra food for future use. Beets, carrots, radishes, and turnips are examples of edible roots.

Stems provide support for leaves, flowers, and fruit. Water, nutrients, and sugars travel to and from other parts of the plant through the stem. Asparagus is a stem that can be eaten. Potatoes, often mistakenly thought to be roots, are actually enlarged underground stems called tubers.

Leaves use energy from sunlight to carry out photosynthesis and make food for the plant. Edible leaves include arugula, cabbage, lettuce, mint, and spinach. Celery and rhubarb, commonly thought to be stems, are actually the part of a leaf called the leaf stalk or petiole.

Flowers contain the parts of the plant necessary for reproduction and play an important role in pollination. The shapes, colors, and scents of some flowers attract insect and animal pollinators. Following pollination, the fertilization process occurs within the flower. During fertilization, the ovary swells and seeds are produced. The flowers of some plants are edible. Broccoli and cauliflower are flowers that can be eaten.

Fruit is the part of the plant that contains seeds. This botanical definition includes many foods that are typically considered to be vegetables, such as cucumbers and green peppers, as well as more commonly recognized fruits, such as apples, oranges, bananas, and strawberries.

Seeds have three main parts—the embryo, the endosperm, and the seed coat. The embryo grows into a new plant, the endosperm provides nutrients for the embryo, and the seed coat is the protective outer covering that encloses the embryo. With proper conditions, seeds will grow into new plants. Corn, wheat, peanuts, black beans, and sunflower seeds are examples of edible seeds.

It is important for students to understand that not all roots, stems, leaves, flowers, fruits, and seeds are edible and that some may even be harmful to humans if eaten. Stress the importance of not eating parts of wild plants unless a trusted adult is confident that the plant parts are safe to eat.

Enriching Activities

Materials:

Transformations- (Activity is the companion to the poem Transformation)

A bunch of Red Seedless grapes for each student to have 5-10 grapes

Baking sheet(s)

Pillowcase or towel

Interest Approach – Engagement: (Kiddle)

Have you ever wondered about how a grape transforms into a raisin?

A **raisin** is a dried <u>grape</u>. Raisins are produced in many regions of the world and may be eaten raw or used in cooking, and baking. Raisins are sweet due to their high concentration of sugars (about 30% fructose and 28% glucose by weight). The sugars can crystallize inside the fruit when stored after a long period, making the dry raisins gritty, but that does not affect their usability. These sugar grains can be dissolved by <u>blanching</u> the fruit in hot water or other liquids. Global production in 2016 was 1.2 million metric tons, with the US as the top producer contributing 24% of the global harvest.

Raisins are produced commercially by drying harvested grape berries. For a grape berry to dry, water inside the grape must be removed completely from the interior of the cells onto the surface of the grape where the water droplets can evaporate. However, this diffusion process is very difficult because the grape skin contains

wax in its cuticle, which prevents the water from passing through. In addition to this, the physical and chemical mechanisms located on the outer layers of the grape are adapted to prevent water loss.

During this activity, the students should notice that the raisins will be smaller because the heat from the sun causes the water to evaporate from them. After the water evaporates it causes the grape to shrink and shrivel which causes it to be lighter.

Procedures:

- 1. Wash and dry grapes
- 2. spread the grapes on the baking tray(s) so they are not touching or will not touch
- 3. cover with a pillowcase or a towel (so that bugs or moisture cannot get to the grapes)
- 4. place outside and let sit covered for three days
- 5. Check them daily to remove any that may have rot
- 6. If there will be moisture in the air, bring them to a dry area
- 7. After three days make sure the grapes have dried and shriveled
- 8. Enjoy!

Assessment:

What did you notice about the grapes? Are the grapes larger or smaller, now? Why? Are they lighter or heavier? Why?

Materials: (Activity companion to the poem Goose Chase)

Pie Crust cut into rectangles large enough for a spoon full of berries 1-2 cans of Blueberry pie filling Carton of blueberries (enough for each student to have 4-5 blueberries) One stick of butter (melted) Spoon Plates Baking sheet Pastry brush

Interest Approach

Did you know?

Blueberry How did it Grow?

- o Native Americans picked wild blueberries years ago. These small, sweet berries are native to America.
- o Blueberries are full of vitamin C, fiber, and antioxidants. Scientists believe these berries can fight disease, prevent some kinds of cancer, and even build healthy brain function.
- o Blueberries are the state fruit of New Jersey. Blueberries are planted in the White House kitchen garden.
- o Today, blueberries are very popular. They are found in everything from snack foods to dog food.

- o Blueberries grow on five continents. In the U.S., most of the blueberries that go to grocery stores grow in California, Florida, Georgia, Indiana, Michigan, Mississippi, New Jersey, North Carolina, Oregon, and Washington.
- o Highbush blueberries are the kind you find fresh in the grocery store. Lowbush blueberries are smaller and sweeter. They're dried or used in syrups or muffin mixes.

<u>Procedure</u>

- 1. Each student needs a plate, a rectangle piece of pie crust
- 2. The student will spoon filling and then blueberries onto one half of the pie crust
- 3. Fold and pinch the edges of the pie crust
- 4. The teacher moves pies to the baking sheet
- 5. Apply melted butter to the tops of each of the pies.
- 6. Bake at 375 for 15-18 minutes
- 7. Enjoy!

Materials (activity for grades 4-5) Farmer's Market VS Grocery Store

- 1- Farmer's Market List worksheet (see RESOURCES)
- 2- Compare and Contrast Sheet
- 3- Pencil
- 4- Recording Sheet on Benefits of Buying Locally (Farmer's Market)
- 5- Websites for research on benefits <u>https://arrowquip.com/blog/animal-science/top-benefits-buying-locally-grown-food</u> <u>https://extension.unh.edu/blog/2021/06/5-benefits-visiting-your-local-farmers-market</u> <u>https://www.usda.gov/media/blog/2012/07/02/top-reasons-shop-farmers-market</u>

Procedure

Farmer's Market Video

- <u>1-</u> Using the Farmer's Market List, the students will record items that they can purchase locally at the Farmer's Market
- 2- Discuss with the class
- <u>3-</u> Use the Compare and Contrast sheet to compare what can be purchased locally, at the grocery store, and both.
- <u>4-</u> Discuss with the students that they will read about the benefits of buying locally and how it can impact their community.
- <u>5-</u>Students will work in small cooperative groups to explain the benefits of buying locally.
- <u>6-</u>Share with the class their findings.

Lesson Plans Available Online at scfb.org/book-of-the-month

Sources/Credits: https://youtu.be/aB9U1wTsx2c https://kids.kiddle.co/Raisin https://easyscienceforkids.com/blueberry/ https://agclassroom.org/matrix/lesson/833/



Be sure to check out our Fall Reading Collection on Epic! and share with your class!



Suggested SC Standards Met:

ENGLISH/ LANGUAGE ARTS

K.I.1.1 Engage in daily opportunities for play and exploration to foster a sense of curiosity, develop the disposition of inquisitiveness and begin to verbally articulate "I wonders" about ideas of interest. KRL..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. KRL..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. KRL..6.1 Describe the relationship between illustrations and the text.

K.RL.9.2 With guidance and support, identify how an author's choice of words, phrases, conventions, and illustrations suggest feelings, appeal to the senses, and contribute to meaning.

K.RL.11.1 Identify the author and illustrator and define the role of each.

1.RL. 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.RL. 5.2 Make predictions using prior knowledge, pictures, illustrations, title, and information about author and illustrator.

1.RL.9.1 Identify the literary devices of rhythm, repetitive language, and simile and sound devices of rhyme, onomatopoeia, and alliteration; explain how the author uses each.

1.RL.9.2 Identify how an author's choice of words, phrases, conventions, and illustrations suggest feelings, appeal to the senses, and contribute to meaning.

1.RL 11.1 Identify the author's purpose—to explain, entertain, inform, or convince.

2.I 1.1 Ask self-generated questions that lead to group conversations, explorations, and investigations.

2.RL. 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.RL.5.2 Make predictions before and during reading; confirm or modify thinking.

2.RL 6.1 Use information gained from illustrations and words in a print or multimedia text to demonstrate understanding of its characters, setting, or plot.

2RL 5.2 Employ a combination of words, phrases, rhythm, rhyme, repetitive language, similes, metaphor, onomatopoeia, and alliteration for impact.

Writing

K.MCC. 3.1 Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, to tell about the events in the order in which they occurred, and to provide a reaction to what happened.

1.MCC.3.1Explore multiple texts to write narratives that recount two or more sequenced events, include details, use temporal words to signal event order, and provide a sense of closure.

2.MCC. 3.1 Explore multiple texts to write narratives that recount a well-elaborated event or short sequence of events; include details to describe actions, thoughts, and feelings; use temporal words to signal event order; and provide a sense of closure.

4. MC.7.1 Compare and contrast how events, topics, concepts, and ideas are depicted in primary and secondary sources.

SCIENCE

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.

K.L.2A. Conceptual Understanding: The environment consists of many types of organisms including plants, animals, and fungi. Organisms depend on the land, water, and air to live and grow. Plants need water and light to make their own food. Fungi and animals cannot make their own food and get energy from other sources. Animals (including humans) use different body parts to obtain food and other resources needed to grow and survive. Organisms live in areas where their needs for air, water, nutrients, and shelter are met.

1.L.5A.1 Obtain and communicate information to construct explanations for how different plant structures (including roots, stems, leaves, flowers, fruits, and seeds) help plants survive, grow, and produce more plants.

1.L.5A.2 Construct explanations of the stages of development of a flowering plant as it grows from a seed using observations and measurements.

3-LS1-1 Develop and use models to describe how organisms change in predictable patterns during their unique and diverse life cycles.

Resources for Enriching Activities



Farmer's Market

Make a list of things you can purchase at the farmer's market

Benefits of Purchasing Goods Locally

In 3-5 sentences describe the benefits of purchasing locally (farmer's market) https://arrowquip.com/blog/animal-science/top-benefits-buying-locally-grown-food ttps://extension.unh.edu/blog/2012/06/5-benefits-visiting-your-local-farmers-market https://www.uda.gou/media/blog/2012/07/02/10/10-reasons-shoo-farmers-market