



October: K-2

Is it a Fruit or a Vegetable?



South Carolina

Farm to School Lessons

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Overview

Welcome to the South Carolina Farm to School October Agriculture Education Lesson! This lesson contains information & hands on activities for teaching grades K-2 about the *Certified South Carolina Grown Program* & the *differences between fruits & vegetables*.

These lessons are designed to be delivered over a four week period, noting that introduction & activities will be supplemental to existing curriculum.

Estimated Total time: 70-85 minutes

Teacher Background

What is Certified South Carolina Grown Program?



The **Certified South Carolina Grown** program is a new, exciting cooperative effort among producers, processors, wholesalers, retailers & the South Carolina Department of Agriculture (SCDA) to brand & promote South Carolina products. South Carolina products include a wide variety of fruits & vegetables that will be promoted throughout the Farm to School educational lessons. In order to support the Certified South Carolina Grown program our primary goal is to educate children on identifying fruits & vegetables with the Certified South Carolina Grown logo. The Certified South Carolina Grown logo signifies first quality products, grown in South Carolina that meet the U.S. #1 Quality Grade Standards, or higher U.S. Grade Standards, whichever is the accepted USDA industry grade standard for the commodity. One of the main benefits of including this program in the Farm to School lessons is that children and their families will be able to easily identify, find & buy South Carolina fruits & vegetables. Now is the time to look for the Certified South Carolina Grown logo in the supermarket, roadside market, community or state farmers market. For more information about this program visit <http://agriculture.sc.gov>.

Vocabulary Used in Background Information Sheet (Appendix A)

botanic	having to do with a branch of biology dealing with plant life
cardiovascular	of, relating to, or involving the heart and blood vessels
commodity	a product of agriculture or mining
coronary heart disease	a condition and especially one caused by atherosclerosis that reduces blood flow through the coronary arteries to the heart and typically results in chest pain or heart damage
duty	a tax on imports
fruit	the usually edible reproductive body of a seed plant, especially one having a sweet pulp associated with the seed; a succulent plant part used chiefly in a dessert or sweet course
importer	one who brings (as merchandise) into a place or country from another country
government entity	a government organization that has an identity separate from those of its members
maintenance	support or provision for something
nutrition	the act or process of nourishing or being nourished

ovary	the enlarged rounded usually basal portion of the pistil or gynoecium of an angiospermous plant that bears the ovules and consists of one or more carpels
statistics	a branch of mathematics dealing with the collection, analysis, interpretation, and presentation of masses of numerical data
tariff	a schedule of duties imposed by a government on imported or in some countries exported goods
type 2 diabetes	a common form of diabetes mellitus that develops especially in adults and most often in obese individuals and that is characterized by hyperglycemia resulting from impaired insulin utilization coupled with the body's inability to compensate with increased insulin production
vegetable	a usually herbaceous plant (as the cabbage, bean, or potato) grown for an edible part that is usually eaten as part of a meal

Lesson Checklist



F2S Aim:

At the end of the lesson students will be able to:

- * Understand & recognize the difference between fruits & vegetables
- * Identify the "Certified South Carolina Grown" promotional program.
- * Describe outward appearance & smell of a peach & apple.



Materials:

- * Variety of Fruits & Vegetables or Powerpoint
- * South Carolina Commodities Map
- * Fruit/Vegetable Background information (Appendix A)
- * Certified South Carolina Grown logo (Appendix B)
- * South Carolina Map (Appendix C)
- * SC Peach & Apple, whole & washed
- * Container of Peach pieces (at least one per child)
- * Mystery (Brown) Bag, napkins, spoons, Tennis Ball



National Health Education Standards

1.2.1

2.2.2

4.2.2

SC State Standards

ELA 1-2.4	Create responses to informational texts through a variety of methods. Use functional text features (including table of contents)
ELA 1-3.1	Use pictures, context, and letter-sound relationships to read unfamiliar words.
ELA 1-3.3	Use vocabulary acquired from a variety of sources.
ELA 1-3.20	Use pictures and words to construct meaning.
ELA 1-3.21	Recognize environmental print (for example, signs in the school, road signs, restaurant and store signs, and logos).
ELA 1-6.1	Generate how and why questions about a topic of interest.
ELA 1-6.6	Follow one and two step oral directions.

Lesson Essential Components

Lessons profile	Page(s)	Yes	No	Notes
Palmetto Pick of the Month	9	★		Tasting activities with apples
Health Education Standards	8-10	★		
SC-Cross Curricular Standards	8-10	★		
SC-F2S Behavioral Goals	8-10	★		
Cooking Activities	9	★		
Tasting Activities	9	★		
Physical Activity			★	
Food Safety	9	★		
School Food Garden			★	
Student to Farmer Connections (i.e. field trips, talks)	8-10	★		
Student to Chef Connections			★	
Farm to Cafeteria			★	
Provision of scientific knowledge/rationale			★	
Risks and benefits of healthy behaviors			★	
Obstacles, Barriers & Solutions			★	
Family involvement and other supports		★		Family Activity Letter
Set goals and monitor progress			★	
Other hands on activities	8-10	★		Class Activities

Let's Learn!

Let's buy SC Fresh Produce!

Estimated Time: 15 mins¹

1. Prior to this class, obtain fruits & vegetables from a local food store &/or local farmer (tomatoes, peaches, celery, apples, bananas, lettuce). Preferably, the store, farmers' market &/ or farm should be near your school & supported by the **Certified South Carolina Grown** promotional program. (If you prefer not to purchase SC fruits & vegetables you may use the powerpoint that will be sent electronically with this lesson).

2. Set out the fruits & vegetables so the students can see them clearly. Use the **Certified South Carolina Grown logo** (Appendix B) to indicate that the fruits & vegetables are grown in South Carolina. Ask students if they have ever seen this logo. (<http://agriculture.sc.gov>)

Note: Remember, that you can use the Farm to School grant funds to purchase the F&V required for this lesson; or if you prefer not to purchase F&V you may use the power point that will be sent electronically with this lesson. Additionally, if you need assistance identifying places to purchase SC fruits and vegetables, feel free to contact your regional coordinator.

Activity 1

Mystery Bag

Estimated Time: 15-20 mins

1. Using Fight Bac Handout from September lesson remind children the importance of washing hands when working with any type of food.
2. Introduce the Mystery Box/Bag, or reintroduce if you have used it before.
3. Place whole SC Apple & Peach in a brown bag, a SC vegetable, broccoli or collards in another brown bag. (Optional) Place a tennis ball in another brown bag.
4. One at a time, ask each child to feel inside each of the bags without looking. If a child seems afraid, feel inside the bag with the child.

5. Ask each child to describe quietly to you what he/she feels in each bag.
6. After everyone has guessed, reveal the items from each of the bags. Let each child hold & feel each fruit or vegetable, if desired.
7. Note the children's guesses that were close (round, cool, a plant, hard, food, fuzzy) or correct (an apple).
8. Talk about the apple. Ask the questions below & any other questions you like. (Depends on the Fruit/vegetable that you have for children to see.)
 - Is an apple a fruit or a vegetable? (Fruit)
 - What shape is it? (Round, like a ball)
 - What color is the outside? (Yellow, green, red)
 - How does the outside of it feel? (smooth, cool)
 - Does it have a smell? (May have no smell or smell sweet like a flower)
 - Is it light or heavy? (Small, round, & light)
 - Has anyone ever tasted this fruit or vegetable? (Yes or No)
 - Did you know there were many varieties of apples and peaches?

Activity Conclusion-TasteTasting

Let's Taste!

Estimated Time: 15-20 mins

1. Gather multiple varieties of apples from the grocery store or farmer's markets. For the sake of keeping their attention, limit the number of varieties to four or five. Collect enough so that each child can taste at least one slice of apple.
2. Try to include red, green &/or yellow varieties. Also, try to include at least one sweet apple & one tart apple. For example, choose a Red Delicious (sweet) & a Granny Smith (tart).
3. Before bringing out the apples, ask your students what color an apple is. You might get one answer or a few. Bring out the apples & talk about the different colors you see. Then explain that apples come in different varieties. Each tree produces it's own kind of apple.
4. Name each variety you have. Then talk about the size of the apples. Are some big & others small? Slice the apples & let the students taste the varieties one by one. How crunchy are they? Are they sweet? Tart? Juicy? Which one is a favorite?

Apple Reference Guide

Braeburn – medium to large, pale red, crisp and juicy, tart

Fuji – origin Japan, medium sized, pale red, crisp and juicy, good texture

Gala – origin New Zealand, medium sized, yellow-red, juicy, sweet slightly tart

Golden Delicious – origin U.S., large sized, crisp, juicy, mild sweet

Granny Smith – origin Australia, green, crisp, tart

Gravenstein – origin Italy, large sized, orange-yellow, crisp, juicy, great for baking

Jonagold – large sized, yellow-red, juicy, slightly tart

Jonathan – origin U.S., medium sized, striped red, juice and crisp

McIntosh – origin Canada, deep red, very juicy, perfumed flavor

Red Delicious – red, sweet

Activity 2

Let's Learn about Fruits & Vegetables

Time: 10-15 mins

1. Ask children to name some of their favorite fruits & vegetables & write them on chart paper.
2. Ask children what they already know about fruits & vegetables. Write answers on chart.
3. Talk about the difference between fruits & vegetables. **Fruits have seeds.** Where/How do they grow? Where do we get them? (Have some real ones cut in half, ask children if it is a fruit or vegetable then show them the center to see if they can determine if it is a fruit or vegetable.
5. Have the students observe the fruits & vegetables. Encourage them to use all of their senses: sight, touch, smell, hear, & taste. Write descriptions on the chart.
6. Challenge students to discover something they did not know about fruits & vegetables.
7. Have students use the **South Carolina Map** (Appendix C) to help students indicate whether they know where their fruit or vegetables are grown.

★ Palmetto Pick Activity

Cooking activity & Taste Test

Time 15 mins

1. Make applesauce to demonstrate a healthy snack the students can make at home. This is also a great way to have a mini-taste test in class.

2. Have students wash their hands (with soap, with warm water for 20 seconds) & reinforce that it is important. Show the students that you have washed the apples before beginning.

3. Directions:

- Peel, core, & cut apples into chunks (the students could help cut the apples).
- Put water & a few chunks of apples in blender.
- Blend mixture & add remaining apple pieces.
- Add sugar & cinnamon to taste.

4. Discuss the taste, texture, & healthy ingredients used in the applesauce. Discuss how this is a simple, easy, & fast alternative snack or dessert. While preparing the applesauce, discuss briefly the Farm that provided your fresh SC apples. (Regional Coordinators can provide this information.)

Ingredients:

6 large apples

3/4 cups of water

Cinnamon to taste

Sugar to taste

Servings: 2 1/2 cups

1 oz serving per child= 20 servings

http://www.eartwiggles.com/Recipes/Apple_kids_recipes.html

Optional Activity

1. **Make a Class Book:**

"Our Favorite Fruits & Vegetables."

Read *Eating the Alphabet: Fruits & Vegetables from A to Z*, **Lois Ehlert**.

2. Ask children the following questions:

- What is the Alphabet?
- What does "Eating the Alphabet" mean?

Reinforce the importance of eating fruits & vegetables in regards to MyPlate (from September lesson).

3. Give each student a blank sheet of paper to illustrate their favorite fruit or vegetable & a one word description. Make sure the students name is on his/her page.

4. Collect each students page, make copies, laminate & make into a booklet for each child.

5. **Song:** (Appendix D)

Fruits & Vegetables Are Good for Me!

(see below for printout to color and take home)

(Tune: Twinkle, Twinkle Little Star)

Apples, pears, and oranges too,
fruits are sweet for me and you.

Carrots, peas, and broccoli,
Vegetables are good for me.

Fruits and vegetables

are good for you.

They keep you healthy

and are yummy too! *(Rub bellies)*

Evaluation

Formal Assessment:

1. Review **SC Fruits & Vegetables** worksheet & discuss the differences & similarities in classifying fruits & vegetables.

2. **Informal Assessment:** Observe participation in lesson activities. Complete survey at end of month (survey will be sent electronically).

¹ Adapted from South Carolina Ag in the Classroom Curriculum, SC Farm Bureau Federation.

Resources



Books:

Oliver's Fruit Salad by Vivian French. Oliver enjoys helping his grandfather grow and pick fruit from the garden, but even though he sings the praises of the bountiful produce, he won't eat any of it. That is until Grandpa comes to visit and enlists Oliver's aid in making a big, colorful fruit salad. It is so irresistible that the boy consumes three bowls full.

Oliver's Vegetables by Vivian French. French fries fan Oliver is spending a week with his grandparents. After declaring, "I don't eat vegetables," he strikes a bargain with Grandpa. If he finds the potatoes in Grandpa's vegetable garden, he can have fries. But if he finds something else, he must eat it with no complaints. The streamlined text has an appealing rhythm.

Growing Vegetable Soup by Lois Ehlert. Vivid colors and large, bold print are key to this simple picture book that takes children through the steps of growing, harvesting, and preparing vegetables for soup.

Websites:

South Carolina Peach Council
<http://www.scpeach.com/default.asp>

Appendix A

Background Information

Fruit or Vegetable?¹

Confusion over what is a fruit and what is a vegetable is not new. In scientific terms the fruit is the part of the plant that develops from the ovary in the base of the flower and contains the seed of the plant. By that definition, many of the foods we commonly call vegetables are actually fruits, including squash and cucumber. The problem is that vegetable is not a botanical category like fruit. The dictionary definition of vegetable is “a usually herbaceous plant grown for an edible part.” By that definition, all the fruits we eat are also vegetables.

In the late 19th Century, US tariff laws imposed a duty on vegetables but not on fruits. Importers of tomatoes argued that since tomatoes are actually a fruit, they should not be subject to the tax. In 1893 the US Supreme Court settled the matter by declaring the tomato a vegetable, using the popular definition which classifies vegetable by use. Since tomatoes are generally served with dinner and not dessert, the court reasoned, it should be classified as a vegetable. The case is known as *Nix v. Hedden* (149 U.S. 304). While the tomato can be classified botanically as a fruit, it is officially categorized as a vegetable in the United States.

For purposes of counting, the US Department of Agriculture (USDA) classifies certain foods differently. In the national agricultural census, conducted by the USDA's National Agricultural Statistics Service (NASS), watermelons are counted as vegetables. NASS also counts strawberries as vegetables. Apples, pears, cherries, peaches, plums and grapes are counted as fruits. Strawberries are counted as fruits only if they are used in production.

For nutrition purposes, the USDA lists fruits and vegetables the way most people think of them. The USDA's Center for Nutrition Policy and Promotion (CNPP) lists watermelon and strawberries as fruits. Squash, cucumbers and tomatoes are listed as vegetables.

No matter how you categorize them, nutrition experts agree that fruits and vegetables provide nutrients that are vital for health and maintenance of your body. People who eat fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of diseases such as cardiovascular disease, type 2 diabetes, certain cancers, and coronary heart disease. Vegetables and fruits are also low in calories and high in fiber. Eating them instead of higher calorie food can be helpful in lowering calorie intake and maintaining a healthy weight. Fiber is beneficial in keeping the muscles of the digestive tract strong and removing waste from the body.

To nutrition experts a more important way to categorize fruits and vegetables is by their color. Some possible benefits, by color, are listed below:

Red—May help fight some cancers; helps fight colds; helps keep the heart healthy and helps us see at night.

Orange—May help fight colds; aids in developing a healthy heart; may help prevent cataracts.

Yellow—May help prevent hypertension.

Green—May help fight some cancers; helps us see at night.

Purple and Blue—May help fight some cancers; may help with memory and maintain urinary tract health.

White, Tan and Brown—Promote heart health and reduce cancer risk.

¹ Adapted from Oklahoma Ag in the Class

Appendix B

Certified South Carolina Grown Logo

The **Certified South Carolina Grown** program is a new, exciting cooperative effort among producers, processors, wholesalers, retailers & the South Carolina Department of Agriculture (SCDA) to brand & promote South Carolina products. Our goal is for consumers to be able to easily identify, find & buy South Carolina products.



Appendix C

Do you know your Fruit or Vegetable?

Directions: Below is a list of fruits or vegetables that you may find in the produce department of the grocery store nearest you home and/or school. Decide whether each one is fruit or a vegetable. Write “F” in from of each fruit and “V” in from of each vegetable. Discuss your answers.

_____apples

_____peas

_____tomatoes

_____corn

_____lettuce

_____apricots

_____radishes

_____strawberries

_____watermelon

_____grapes

_____onions

_____plums

_____potatoes

_____okra

_____oranges

_____pineapple

_____celery

_____broccoli

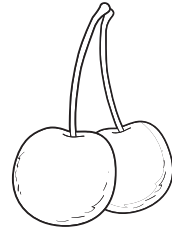
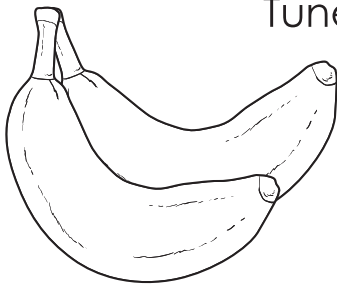
_____peaches

_____blueberries

_____turnips

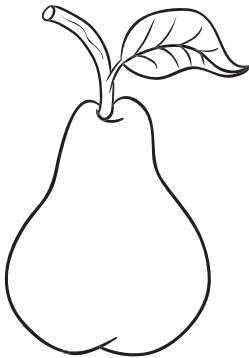
Fruits and Vegetables Are Good For You

Tune: Twinkle, Twinkle Little Star

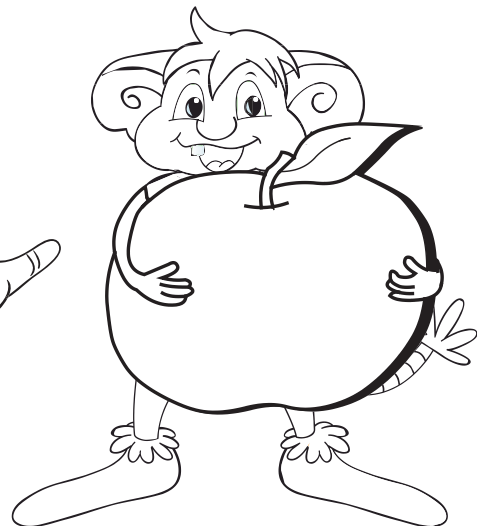


**Apples, pears, and oranges too,
fruits are sweet for me and you.**

**Carrots, peas, and broccoli,
vegetables are good for me.**



**Fruits and vegetables
are good for you.
They keep you healthy
and are yummy too!**



Appendix E

Teacher Information on Fruits/Vegetables

USDA - CNPP¹

Vegetables

Dark green vegetables	Red & orange vegetables	Beans and peas*	Starchy vegetables	Other vegetables
bok choy	acorn squash	black beans	cassava	artichokes
broccoli	butternut squash	black-eyed peas	corn	asparagus
collard greens	carrots	(mature, dry)	fresh cowpeas, field	avocado
dark green leafy lettuce	hubbard squash	garbanzo beans	peas, or black-eyed	bean sprouts
kale	pumpkin	(chickpeas)	peas (not dry)	beets
mesclun	red peppers	kidney beans	green bananas	Brussels sprouts
mustard greens	sweet potatoes	lentils	green peas	cabbage
romaine lettuce	tomatoes	navy beans	green lima beans	cauliflower
spinach	tomato juice	pinto beans	plantains	celery
turnip greens		soy beans	potatoes	cucumbers
watercress		split peas	taro	eggplant
		white beans	water chestnuts	green beans
				green peppers
				iceberg (head) lettuce
				mushrooms
				okra
				onions
				parsnips
				turnips
				wax beans
				zucchini

Fruits

Apples	Cherries	Nectarines	<i>100% Fruit juice:</i>
Apricots	Grapefruit	Oranges	orange
Bananas	Grapes	Peaches	apple
<i>Berries:</i>	Kiwi fruit	Pears	grape
strawberries	Lemons	Papaya	grapefruit
blueberries	Limes	Pineapple	
raspberries	Mangoes	Plums	<i>Mixed fruits:</i>
		Prunes	fruit cocktail
		Raisins	
		Tangerines	
<i>Melons:</i>			
cantaloupe			
honeydew			
watermelon			

¹ From ChooseMyPlate.gov