



January: K-2

Smart Food Choices

COLLARDS



South Carolina

Farm to School Lessons

Compiled by:
Clemson University Education Coordinators

Lynn R. Adcox, BS
Karen Bunch Franklin, MS
Yenory Hernandez-Garbanzo, PhD

Lesson Support Staff:

Brittney Linton, BS
Ginger Loberger, BS

Advisory Committee:

Katherine Cason, PhD, RD, LD
Kattia Blanco, MS
Sarah Griffin, MPh, PhD
Patsy Smith, MEd
Kristen Welch, MS
Marlyne Walker, MS, RD



Overview

Welcome to the South Carolina Farm to School January Nutrition Education Lesson. This lesson contains information & hands on activities for teaching grades K-2 about the benefits of Smart Food Choices. Our goal for this lesson is to reinforce with children the benefits of eating fresh fruits & vegetables and also to educate on the importance of making smart food choices when eating processed foods.

In order to achieve this goal, students will review the benefits of whole foods and explore "Small Size-It" when eating processed foods. Students will learn about making smart food choices when choosing their snacks or meal items. This lesson will reinforce MyPlate, as well as choosing whole foods versus processed foods. We will celebrate South Carolina's State Vegetable, Collards, as our January Palmetto Pick of the Month. Students are encouraged to share what they have learned with their families & suggest their families buy & eat more whole foods while making smarter food choices.

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: 60-85 mins

Teacher Background

In this lesson, students learn about why it is important to limit overly processed foods that contain little or no nutrients and often have high amounts of added fat and sugar. The recommendation for empty calories is no more than 150 calories per day for this age group and students will learn to translate that to teaspoons of sugar and fat.

In today's world, telling kids what not to eat is a very necessary reality. The food industry aggressively markets unhealthful foods to kids yet rarely prompts children to eat whole, healthful meals. These marketing efforts are pervasive, and include: television advertising, advergames, web sites, cartoon characters on packages, and even toys included with nutritionally poor fast-food meals. They help kids cultivate a taste for white bread, French fries, fatty meat, fatty cheese, and sweetened drinks. Most of the foods marketed to kids are mediocre fast foods, sugary breakfast cereals, and candies. Many of them are based on white flour, sugar, fat, and salt, plus a sprinkling of artificial colorings and flavorings.

Additionally, ordinary sugar and high-fructose corn syrup make up one-sixth of the average American's calorie intake. Half of all added sugars come to us in the form of "liquid candy": soft drinks, fruit drinks, sports drinks, and iced teas. And it is those sugary drinks that pose the biggest risk of weight gain, because they don't seem to curb appetite as much as solid foods do.

See this lesson as a way to give your students the antidote to food industry marketing. They learn that our bodies cannot handle excessive sugar and fat on a regular basis and see first-hand how much fat and sugar are in common foods. We believe that the way to have students become people who want to make healthful choices for themselves, despite the obstacles, is for them to believe that it has personal benefits.¹

Nutrition Vocabulary:

Whole/Unprocessed Foods Completely unprocessed foods are eaten in their raw, natural state. An example of a completely unprocessed food would be a raw carrot. Minimal processing makes some foods more convenient to eat. Examples of minimally processed foods would be cleaned fish and butchered meat, carrots sliced for easy

consumption, or food that has been cooked. As the amount of processing increases, the food moves farther from its raw, natural state, often changing its taste, texture and nutritional value; however, not all raw foods are completely unprocessed.

Fresh Vegetables

Vegetables in their raw, natural state are unprocessed. Fresh whole vegetables are also healthy unprocessed foods you should include in your diet. Like fruits, eating more vegetables lowers your risk of heart disease, diabetes and some cancers, and also helps with weight management. Fresh vegetables contain high amounts of potassium, folate, vitamin C, vitamin E and fiber. Eating more natural sources of potassium helps to lower blood pressure, according to the American Heart Association. Aim for 2 and 1/2 cups of whole vegetables everyday. Healthy choices include spinach, broccoli, tomatoes, sweet potatoes, cauliflower, kale, sweet potatoes, carrots, corn, beets, artichokes and asparagus.

Eating more *Whole/unprocessed foods* can provide your body with the nutrients it needs to stay healthy. Unprocessed foods have not undergone any chemical changes and are in their most natural form.

Fresh Fruits

Whole fruits are a healthy unprocessed food. As a nutrient-dense food, fruits are low in calories and high in vitamins A and C, potassium and fiber. Eating more fruits decreases your risk of heart disease, diabetes and some cancers, according to the U.S. Department of Agriculture. Including more whole fruits in your diet can also help you manage your weight because fruits' fiber content helps you feel full longer. Healthy whole fruits to add to your diet include strawberries, blueberries, cantaloupe, watermelon, apples, oranges, bananas, grapes, plums, peaches and cherries.

Processed Foods

Processed foods have been altered from their natural state for safety reasons and for convenience. The methods used for processing foods include canning, freezing, refrigeration, dehydration and aseptic processing.

We tend to think of processed foods as bad, but it turns out that some processed foods are not bad for your health at all. For example, milk would be considered a processed food because it's pasteurized to kill bacteria and homogenized to keep fats from separating. Some people prefer raw milk, but it can lead to food-borne illness, so we're happy to consume the healthy "processed" milk we find in our grocery stores.

Another example of good food processing is frozen vegetables. Freezing vegetables preserves vitamins and minerals and makes them convenient to cook and eat all year around. Fruit and vegetable juice is also an example of a healthy processed food. In fact, some orange juice is fortified with calcium to make it even more nutritious. Oatmeal, frozen fish, frozen berries and 100% whole-grain bread are also processed.

Processed foods that may be bad for your diet:

- canned foods with large amounts of sodium or fat
- breads and pastas made with refined white flour instead of whole grains
- packaged high-calorie snack foods such as chips and candies
- frozen fish sticks and frozen dinners that are high in sodium
- packaged cakes and cookies
- boxed meal mixes that are high in fat and sodium
- sugary breakfast cereals
- processed meats

¹ Adapted from Food Day Curriculum

Lesson Checklist



F2S Aim: Explore that healthful eating includes smart, tasty and delicious food choices.

F2S Objectives

Students will be able to:

- * Explain why is important to not eat excessive fat, sugar and salt.
- * Explore how much fat and sugar are in commonly consumed snacks and drinks.
- * Apply what they have learned to their own food choices.
- * Taste the Palmetto Pick of the Month.



Materials:

- * Snack Game (Appendix A)
- * Apple, Applesauce, Apple PopTart, Apple Juice Box
- * Play-Dough
- * Farm to School Flats Video (sent electronically)
- * PPM Activity: PPM Activity: Crock Pot, Collard Greens, carrot, garlic salt, balsamic vinegar, low-sodium, fat-free chicken broth, pepper
- * Gardening Activity: Seedling Trays or Flats, Seeds, Potting Soil, Water
- * Gardening journal.



National Health Education Standards

1.2.1	1.2.2	2.2.1	2.2.2	2.2.3
3.2.1	4.2.1	5.2.1	5.2.2	7.2.1
7.2.2	8.2.1	8.2.2		

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 activity with collard greens
Health Education Standards	5	★		
SC-Cross Curricular Standards	5	★		
SC-F2S Behavioral Goals	8-10	★		
Cooking Activities	8	★		
Tasting Activities	8	★		
Physical Activity	8-10	★		
Food Safety	9	★		
School Food Garden	9-10	★		
Student to Farmer Connections (i.e. field trips, talks)	8-10	★		
Student to Chef Connections			★	
Farm to Cafeteria			★	
Provision of scientific knowledge/rationale	8-10	★		
Risks and benefits of healthy behaviors	8-10	★		
Obstacles, Barriers & Solutions	8-10	★		
Family involvement and other supports		★		Family Activity Letter
Set goals and monitor progress	8	★		
Other hands on activities:	8-10	★		Team Activities, Presentations

Let's Learn

Whole Foods

Estimated Time: 5 mins

1. Discuss as a class that in previous lessons, the main focus has been about WHAT TO EAT: whole foods from plants and animals with a focus on having fresh South Carolina fruits and vegetables.
2. Ask if anyone knows what a *Whole Food* is.
3. Explain that whole is being in the form that nature created it. A whole food looks similar to how it would look in nature.
4. A *whole food* is usually a healthy food that doesn't have all the additives, fat and sugar added. Whole foods also do not have nutrients taken away from its original state.
5. We want to eat foods that are as close to *whole* as we can. Foods that are not *whole* are *processed*. Processed foods contain sugars and fats that are not healthy for us. It's ok to eat these foods in small sizes.

Activity

Is it Whole?

Estimated Time: 10 mins

1. Line up an apple, apple sauce and apple PopTart on the table. Hold each item up for the group to see.
2. Let's start by comparing three foods: an apple, applesauce, and an apple PopTart.
3. Which do you think is the healthiest? Why? (Whole apple)
Be sure to say that the whole apple has more nutrients, less additives, less added fat, sugar, and sodium.
4. Out of these three foods, which is the most whole? (Apple) Which is the least whole? (Apple Pop Tart) Why?
5. Play Green light game (similar to Simon Says). Apples are "Green Light", Applesauce is "Yellow Light", and Apple PopTarts are "Red Light".

Let's Learn

Smart Snack versus Small Snack

Estimated Time: 5-10 mins

Note: You can either prepare play-dough balls in advance of lesson or you can pair the students up and have them make a play-dough ball before you begin lesson. You will need 18 play-dough balls (about one teaspoon rounded in size).

1. Line up apple, applesauce, and apple juice box. Explain to the students that each play-dough ball represents one teaspoon of sugar. This activity will show students how sugars are increased the more a whole food is processed.
2. Ask students to stand up and clap one time for the amount of play-dough balls they think each product has. If they clap two times, that would indicate two teaspoons of sugar, etc.
 - Apple = 4.5 tsp
 - Applesauce = 6 tsp
 - Apple Juice = 7 tsp
3. Discuss briefly with the students why it is important to choose small size portions when eating processed foods. How close were the students to the correct amount of sugar? Were they surprised at the additional amount of sugar in the applesauce and apple juice box? Use the increased number of play-dough balls to help explain.

Activity

Smart Snack or Small Snack?

Estimated Time: 10-15 mins

1. Students will play a game to reinforce the smart snack versus small snack concept. Prior to playing the game, create a chart on the board choosing three to four foods from the SNACK GAME (Appendix A). Ask the students to predict which foods are smart snacks and which foods are small snacks.
2. Have students stand up to reinforce the smart snack versus small snack concept by playing the following game¹:

- You will call out a snack to the students (SNACK GAME - Appendix A). They should do one of the following:
 - If they think it is a SMART SNACK, they should dance the twist while singing the words “Smart Snack”.
 - If they think it should be a SMALL SNACK, they should lean over and touch their toes while slowly saying “Small Snack”.

**Remember to write down how many students chose SMART or SMALL when you call out the chosen foods from the beginning of the game. You can add a second column to your original chart and use tally marks to indicate how many chose each column.

3. After the game, have students create a bar graph showing the three to four foods chosen before the game. The bar graph should include:

- The number of students that predicted SMART and SMALL for the food.
- The number of students that chose SMART or SMALL during the game for the food.
- Additional ways to use the bar graph:
 - Have students look at the difference between the two graphs. Reinforce subtraction theories.
 - Have students line up to represent each line in the bar graph to form a human bar graph.
- This is another great way to emphasize how smart snacks give us more energy because they are healthy versus small snacks can slow us down because they are higher in sugars and fats.

★ Palmetto Pick Activity

Fresh Collard Greens

Estimated Time: 15 mins

1. Have students wash their hands (with soap & warm water for 20 seconds) & reinforce that it is important. Show the students that you have washed the collard greens before beginning.
2. Divide students in groups of three to four. Give each group a couple of collard leaves and ask them to

- tear it into smaller pieces. Either have them tear the leaves on a paper towel or in a small bowl.
3. Have one person from each group pour the collard greens into the crock pot. Add remaining ingredients. Cook on high for approximately two hours or on low for approximately four hours or until collard greens are tender.
 4. Serve a 1oz portion for each student to taste.

Ingredients:

Fresh bunch of collard greens (about 1-2 pounds)
 1 carrot, chopped
 1/4 tsp garlic powder
 2-3 tbs balsamic vinegar
 1.5 cups low-sodium, fat-free chicken broth
 1/4 tsp pepper

Note: Remember, that you can use the Farm to School grant funds to purchase the F&V required for this lesson. Remind your students to look for the Palmetto Pick of the Month in their school lunches to learn other ways of preparing & serving collard greens.

★ Gardening Activity

How to Start Growing

Estimated Time: 15 mins

Materials Needed:

Seedling Tray or Flat
 Seeds
 Potting Soil
 Water

Note: Decide as a class, school, grade level, etc what you want to plant in your seedling trays for your Spring Garden. Keep in mind how Farm to School is implemented at your school so that each class/grade level does not plant the same type of seeds. If you need suggestions for items to plant in your garden, please contact your Regional Coordinators.

1. In preparation for planting your Spring Garden, this month’s gardening activity will teach students how to prepare seedling trays or flats.

2. View the **Farm to School Flats** video (1:39). (sent electronically)
3. After viewing the video, have the class plant seedling trays.
4. Have them record the experience in their garden journals. They should note the types of seeds planted. They can also:
 - Make predictions on how long the seeds will take to sprout.
 - Record a timeline for the seed (seedling tray to ground, ground to harvest, etc.) and write notes/progress about the plant status throughout the timeline.

Evaluation

Formal Assessment:

1. Review smart versus small food choices.
2. Review Gardening Journal.

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

¹ Adapted from Fuel Up to Play 60

Resources



Books:

The Monster Health Book, by Edward Miller. ISBN13: 978-0823421398

Appendix A

SNACK GAME

SNACK	SMART	SMALL
Yogurt	✓	
Potato Chips		✓
Carrots and Celery	✓	
Peanut Butter and Crackers	✓	
Candy		✓
Milk and Grapes	✓	
Taco Chips		✓
Doughnut		✓
Watermelon	✓	
Soda		✓
Slice of Cheese on Toast	✓	
Apple or Banana	✓	

South Carolina State Vegetable

Collard greens became the official vegetable of South Carolina when Governor Nikki Haley signed Senate Bill No. 823 (S823) into Law on June 2, 2011.

The proposal to name collard greens the official state vegetable was prompted by a letter from Mary Grace Wingard, a 9-year-old Rocky Creek Elementary School student. Mary Grace said that she was inspired by a talk given by Governor Haley during a field trip her class made to the Statehouse.

"The governor told us to get excited and get involved in government, so I decided I would."

She wrote to Senator Jake Knotts (District 23 - Lexington County), who took on the task of writing and ushering S823 through the South Carolina General Assembly.

According to The State, "Mary Grace's family knows a thing or two about collards. Her great-grandfather is the namesake of Walter P. Rawl and Sons Inc., a family-owned farm in Lexington County and the state's largest producer of collards." [1]

The effort to make collard greens the official state vegetable was not the first time Mary Grace involved herself in politics. Even before entering the first grade, she persuaded her father, Charles, to lobby the United States Department of Agriculture (USDA) for salad bars in schools when he offered testimony at a USDA "Child Nutrition Listening Session" in Atlanta.

Mary Grace loved the salad bar in her elementary school cafeteria and thought every school should have a salad bar.

"On a mission for both his daughter and the produce industry, Charles urged USDA officials to establish a national policy that encourages salad bars in all schools and to make funding available so schools can buy needed refrigeration and salad bar equipment so they can serve students more fresh fruits and vegetables." [2]

Sources

State of South Carolina. *Senate Bill No. 823*. Columbia: State of South Carolina, 2011. Web. 16 Jun 2011. <http://www.scstatehouse.gov/sess119_2011-2012/prever/823_20110414.htm>.

[1] Smith, Gina. "Haley, Knotts bless collards." *The State* 27 May 2011: Web. 18 Jun 2011.

<<http://www.thestate.com/2011/05/27/1835935/haley-knotts-bless-collards.html>>.

[2] "Daughter Tells Her Dad to Fight for Salad Bars in Schools." *United Fresh Produce Association* 27 Aug 2008: Web. 18 Jun 2011. <<http://iuf.unitedfresh.org/newsletters/2008/08/27.php>>.

Shearer, Benjamin F. and Barbara S. *State Names, Seals, Flags and Symbols: A Historical Guide Third Edition, Revised and Expanded*. Westport, Conn: Greenwood Press, 3 Sub edition, 2001.

