



August-September: 9-12

Introduction: MyPlate & Breakfast



South Carolina Farm to School Lessons

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Overview

Welcome to the South Carolina Farm to School September Nutrition Education Lesson. This lesson contains information & hands on activities for teaching grades 9-12 about the first meal of the day: *BREAKFAST*. Our goal for this lesson is to encourage children to start the day right with a healthy breakfast.

In order to achieve this goal, we recommend introducing information about MyPlate, the newest tool from the United States Department of Agriculture that builds knowledge of food groups in order to create a balanced diet (see details below). In addition, as part of the South Carolina Farm to School Program mission, this lesson includes content & activities to promote the consumption of South Carolina fruits & vegetables. Specifically the focus of this lesson will be promoting SC peaches & tomatoes, which are the *Palmetto Pick of the Month* for August & September, respectively. These lessons are designed to be delivered over a two week period, noting that introduction & activities will be supplemental to existing curriculum.

Estimated total time: 70-100 mins

Teacher Background: Information to Meet MyPlate Food Groups!

<p>Fruits</p>  <p>ChooseMyPlate.gov</p>	<p>What is it? Any fruit or 100% fruit juice counts as part of the Fruit Group. Fruits may be fresh, canned, frozen, or dried, & may be whole, cut-up, or pureed.</p> <p>Benefits: Fruits supply many essential vitamins and minerals that keep us healthy.</p>
<p>Vegetables</p>  <p>ChooseMyPlate.gov</p>	<p>What is it? Any vegetable or 100% vegetable juice counts as a member of the Vegetable Group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; & may be whole, cut-up, or mashed. Vegetables are organized into 5 subgroups, based on their nutrient content. The five subgroups are: dark green vegetables, red & orange vegetables, beans & peas, starchy vegetables, & other vegetables.</p> <p>Benefits: Vegetables supply many essential vitamins and minerals that keep us healthy.</p>
<p>Grains</p>  <p>ChooseMyPlate.gov</p>	<p>What is it? Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Grains are divided into 2 subgroups, whole grains and refined grains.</p> <p>Benefits: Grains are a great source of energy and provide important nutrients including dietary fiber.</p>
<p>Dairy</p>  <p>ChooseMyPlate.gov</p>	<p>What is it? All fluid milk products & many foods made from milk are considered part of this food group.</p> <p>Benefits: Dairy products are a great source of calcium, vitamin D, potassium and protein. These nutrients are all important to keep our bones, teeth and muscles healthy.</p>
<p>Protein</p>  <p>ChooseMyPlate.gov</p>	<p>What is it? All foods made from meat, poultry, seafood, beans & peas, eggs, processed soy products, nuts, & seeds are considered part of the Protein Foods Group.</p> <p>Benefits: Foods in these group are a great source of nutrients (protein, B vitamins, vitamin E, zinc, iron and magnesium), which keep our body healthy and strong.</p>

For more information visit the USDA ChooseMyPlate.gov website to learn more about food groups, portion control, healthy meal ideas & getting more physical activity. <http://www.choosemyplate.gov/>

Facts about Peaches & Tomatoes



South Carolina peaches are an important part of your daily 5 servings of colorful fruits and vegetables

Locally Grown: upper midlines and upstate

* SC grows 60,000 tons per year

Good Source of: Vitamins A, B and C

Calories: 37 (medium peach)

Peaches: Part of the rose family and will have a sweet fragrance when ripe.

Nectarines: are peaches with the fuzz.



South Carolina tomatoes are an important part of your daily 5 servings of colorful fruits and vegetables

Locally Grown: low country

Good Source of: Vitamins A and C

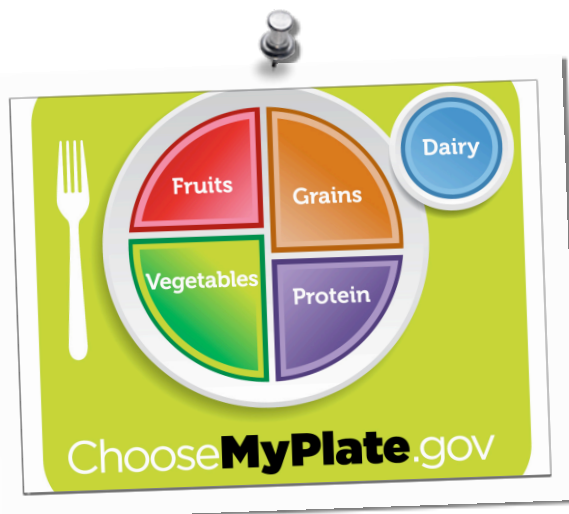
Calories: 22 (medium tomato)

Varieties: Cherry tomatoes (used on salads), plum tomatoes (used for tomato paste), grape tomatoes (also used on salads), beefsteak tomatoes (used for sandwiches), and Campari tomatoes (are sweet and noted for their juiciness)

Peach info: <http://www.sciway.net/shop/peaches.html> South Carolina Information Highway. pic from http://www.free-extras.com/images/fruits_peaches-5531.htm

Tomatoes: <http://en.wikipedia.org/wiki/Tomato> and <http://caloriecount.about.com/calories-tomatoes-red-ripe-i11529> to determine the kcal content. pic from: <http://foodspeople.com/wp-content/uploads/2011/05/tomato2.jpg>

Lesson Checklist



F2S Aim: To eat a healthy breakfast with MyPlate.

F2S Objectives

Students will be able to:

- * Set, implement & track a personal goal to eat a healthy breakfast.
- * Analyze data of personal breakfast.
- * Write a persuasive, research based paper using recorded & analyzed data.
- * Use MyPlate information to identify examples of healthy breakfast foods.
- * Discuss the benefits of eating a healthy breakfast everyday.



Materials:

- *MyPlate Poster
- *MyPlate Handout (Appendix A)
- * Farm to School Video Sheet(Appendix B)
- *Farm to School Breakfast Assessment (Appendix C)
- * Farm to School Goal Sheet (Appendix D)
- * Fight Bac poster (Page 7)
- *Graph Paper



National Health Education Standards

1.12.1	1.12.7	2.12.8	3.12.1
3.12.2	3.12.3	4.12.1	5.12.1
5.12.2	5.12.3	5.12.4	5.12.6
5.12.7	6.12.1	6.12.2	6.12.3
7.12.1	7.12.2		

SC State Standards

E2-4.1	Organize written works using prewriting techniques, discussions, graphic organizers , models, and outlines.
E2-4.2	Use complete sentences in a variety of types (including simple, compound, complex, and compound-complex).
E2-4.3	Create multiple-paragraph compositions that have an introduction and a conclusion, include a coherent thesis , and use support (for example, definitions and descriptions).
E2-4.4	Use grammatical conventions of written Standard American English , including <ul style="list-style-type: none"> • subject-verb agreement, • pronoun-antecedent agreement, • agreement of nouns and their modifiers, • verb formation, • pronoun case, • formation of comparative and superlative adjectives and adverbs, and • idiomatic usage.
E2-4.5	Revise writing to improve clarity, tone , voice , content, and the development of ideas.
E2-4.6	Edit written pieces for the correct use of Standard American English , including the reinforcement of conventions previously taught.
E2-5.4	Create persuasive pieces (for example, editorials, essays, speeches, or reports) that develop clearly stated thesis and use support (for example, facts, statistics, and first-hand accounts).
E2-6.1	Clarify and refine a research topic.
E2-6.2	Use direct quotations, paraphrasing, or summaries to incorporate into written, oral, auditory, or visual works the information gathered from a variety of research sources.
E2-6.3	Use a standardized system of documentation (including a list of sources with full publication information and the use of in-text citations) to properly credit the work of others.
E2-6.4	Use vocabulary (including Standard American English) that is appropriate for the particular audience or purpose.
E2-6.5	Create written works, oral and auditory presentations, and visual presentations that are designed for a specific audience and purpose.
E2-6.6	Select appropriate graphics, in print or electronic form, to support written works, oral presentations, and visual presentations.
E2-6.7	Use a variety of print and electronic reference materials.
E2-6.8	Design and carry out research projects by selecting a topic, constructing inquiry questions, accessing resources, evaluating credibility, and organizing information.

Lesson Essential Components

Lessons profile	Page(s)	Yes	No	Notes
Palmetto Pick of the Month	4 & 11	★		Tasting activities with peaches
Health Education Standards	8-11	★		
SC-Cross Curricular Standards	8-11	★		
SC-F2S Behavioral Goals	8-11	★		
Cooking Activities	11	★		
Tasting Activities	11	★		
Physical Activity	8-11	★		
Food Safety	11	★		
School Food Garden			★	
Student to Farmer Connections (i.e. field trips, talks)	8-11	★		
Student to Chef Connections			★	
Farm to Cafeteria			★	
Provision of scientific knowledge/rationale	8-11	★		
Risk and benefits about healthy behaviors	8-11	★		
Obstacles, Barriers & Solution	8-11	★		
Family involvement and other supports		★		Family Activity Sheet
Set goals and monitoring progress	8-11	★		
Other hands on activities:	8-11	★		Team Activities, Presentations

Let's Learn!

Getting a Healthy Breakfast with MyPlate

Estimated Time: 15 mins

One week prior to lesson, have students complete the **Farm to School Breakfast Assessment (Appendix C). Have parent or guardian sign goal sheet.

Use the MyPlate hand-out (Appendix A) to discuss the five groups in MyPlate.¹

Fruit & Vegetables

Eating a variety of Fruits & vegetables, you are reducing your risk of many diseases. The Dietary Guidelines recommends eating more fruits and vegetables than any other food group.

- **Calcium:** Calcium is essential for **healthy bones and teeth**. It is also needed for normal functioning of muscles, nerves and some glands.
- **Fiber:** Diets rich in dietary fiber have been shown to have a number of beneficial effects, including **decreased risk of coronary heart disease**.
- **Folate:** Healthful diets with adequate folate may reduce a woman's risk of having a child with a **brain or spinal cord defect**.
- **Iron:** Needed for **healthy blood and normal functioning of all cells**.
- **Magnesium:** Magnesium is necessary for **healthy bones** and is involved with more than **300 enzymes** in your body! Inadequate levels may result in muscle cramps and high blood pressure.
- **Potassium:** Diets rich in potassium may help to maintain a **healthy blood pressure**.
- **Sodium:** Needed for **normal cell function** throughout the body. Most diets contain too much sodium which is associated with high blood pressure.
- **Vitamin A:** Keeps **eyes and skin healthy** and helps **protect against infections**.
- **Vitamin C:** Helps **heal cuts and wounds** and keeps **teeth and gums healthy**.

Adapted from Fruits & Vegetable: More Matters

Proteins	<p>All foods made from meat, poultry, seafood, beans & peas, eggs, processed soy products, nuts, & seeds are considered part of the Protein Foods Group.</p> <p>There are 20 chemicals called amino acids, which join together in different ways to make thousands of different proteins.</p> <p>It is a very important nutrient because it builds up your muscles, organs and glands. It helps repair and replace them, so that your body can keep on working. Protein from animal foods has all the essential amino acids you need.</p> <p>Some of the things it makes:</p> <ul style="list-style-type: none"> • Hemoglobin (say 'heem-o-glow-bin') - which carries oxygen around the body in your blood. • Antibodies - to fight diseases
Grains	<p>Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Grains are divided into 2 subgroups, whole grains and refined grains.</p>

Dairy	<p>All fluid milk products & many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content are part of the group. Foods made from milk that have little to no calcium are not. Getting enough calcium from childhood through adulthood helps build bones and helps slow the loss of bone as we age. While calcium and dairy can lower the risk of osteoporosis and colon cancer, high intake can increase the risk of prostate cancer and possibly ovarian cancer.</p>
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Note: For additional information on Food Groups, please visit www.MyPlate.gov.

Drink water!

Your body needs water to work well. The water in blood carries food to all parts of your body. Dietary Guidelines recommend 6 to 8 glasses of water daily.

Activity

Good Stuff is to choose “Whole and Healthy”

Estimated Time: 15 mins

1. Introduce MyPlate to the students. Hand out **Farm to School Video Sheet** (Appendix B). Students should review the questions & then watch the Nourish Video² (1:53 minutes) answering the questions during & for a few minutes after the video. Review questions as a class & discuss various answers. (Video was sent electronically & can also be played via internet at <http://www.nourishlife.org/videos/whole-healthy/>)

Let's Learn!

Stand up for Breakfast ⁵

Estimated Time: 5 mins

After video, take a few minutes to discuss the importance of eating a healthy breakfast.

To review the benefits of breakfast with a little bit of physical activity, have the students stand if they believe the statement is true or sit down if they believe the statement is false.

Eating a healthy breakfast will help me:

Be alert and ready to learn	Get a good grade on my test
Get important nutrients like calcium, vitamin C and fiber	Do better in sports
Have energy	Not feel hungry and achy in the morning

Use this analogy to emphasize the concept above:

Does your family have a car? Do you go to the gas station sometimes when your parents are filling the car with fuel? Have you noticed that there are different kinds of fuel? Eg. petrol, diesel, LPG (liquid petroleum gas).

The kind of fuel you buy depends on the kind of fuel the engine runs on. Your body runs on the fuel it gets from what you eat.

If it doesn't get the right kind of fuel then it doesn't work very well or, like your car, it could break down.

You can begin to Aim for balance nutrition to start your day with a Healthy Breakfast. Keep your body healthy. Lots of water and exercise will help keep the sparkle in your eyes.

Activity

Action Plan for Eating Breakfast

Estimated Time: 20-50 mins (over a two week period)

1. Have students review the **Farm to School Breakfast Assessment**. (Appendix C) Following the video, have students complete Part I of the **Farm to School Goal Sheet** (Appendix D), noting the foods they eat by the following groups (foods can be in one or more groups): whole food, processed food, & the five food groups. Have students track their food for a week.

2. After a week, have students complete Part II of the **Farm to School Goal Sheet** & analyze whether they met their breakfast goals or not.

- *Barriers & Solutions:* As a class, answer the following question & write the answers on the board:
 - What are some reasons we might not eat breakfast in the morning?
 - Create four groups & have each group choose a response.
 - Have students create a web of possible solutions & then present their solutions to the class.
- Variations to this activity (Ask the following questions):
 - Were processed foods the easier choice for breakfast? Why?
 - How can I incorporate more whole foods into my breakfast?
 - Are whole foods easy to access? If not, why?

3. *SC Whole Foods:* Using the Palmetto Picks of the Month (August: Peaches & September: Tomatoes), have students complete a research-based paper & presentation.

*Note: This activity is designed to be completed over a two week period (or more if additional time is needed).

- Separate the class into four groups. (If needed, this activity can be divided into more groups or pairs.) Each group will be assigned a research topic. Each group should research their topic, writing a fact-based presentation.
 - Presentation should be 10-15 minutes in length. It should be written as a research-based paper, including references (minimum of three references). Paper should be 3-4 pages in length. For presentation,

highlighted points from the research should be outlined in a power point (or presentation format of choice) format. Time provided, each member of the group should present a portion of the presentation.

- Research topics include:
 - The different types of peaches in the US, including the different types grown in SC.
 - The life of a peach: from seed to harvest.
 - The difference between a peach as a whole food & as a processed food (i.e., what is added when it is processed), including the nutritional value of a peach.
 - The economic impact of peach farming in SC. Compare to other top grossing peach states: CA & GA.
 - The impact of weather on peach farming in SC. (Be specific as to SC weather patterns / history & its impact on the peach farmer.)
 - The scientific research in peach farming (i.e., what is the latest trend in increasing productivity & taste of the SC Peach) & the impact of this research in profitability in the SC Peach Industry.

*Note: For more than four groups or pairs or for variation in research papers, use tomatoes as well as peaches.

See Appendix E for resources to help students get started on their research.

Evaluation

Formal Assessment:

1. Review Farm to School Breakfast Assessment & Farm to School Goal Sheet & discuss if goals were met. Discuss the meaning of reaching the goals & importance of increasing fresh fruit & vegetable consumption as well as the importance of eating a healthy breakfast each day.

Informal Assessment:

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

★ Palmetto Pick Activity

Cooking activity & Taste Test

Estimated Time: 15 mins

1. Make a smoothie to reinforce a healthy breakfast. This is also a great way to have a mini-taste test in class.

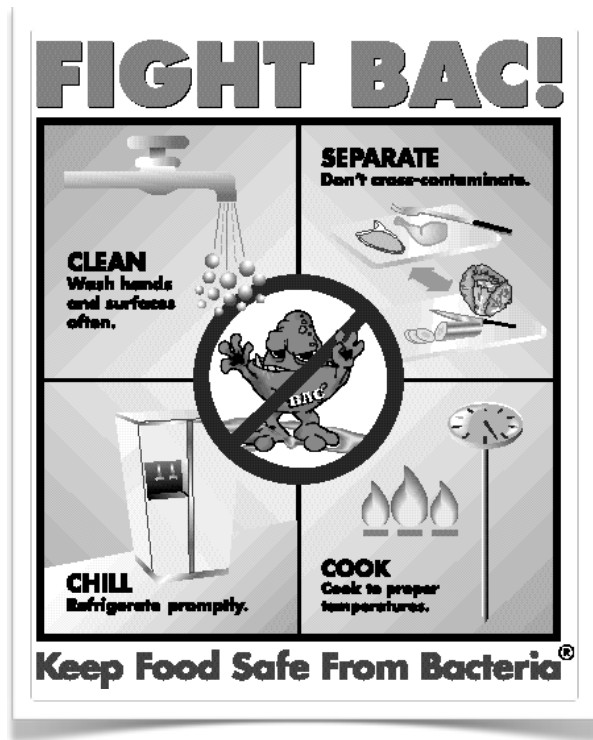
- Have students wash their hands and reinforce that it is important. Show the students that you have washed the peaches before beginning.
- Blend all ingredients & serve!
- Discuss the taste, texture, & healthy ingredients used in the smoothie. Discuss how this is a simple, easy, & fast alternative to start the morning. While preparing the smoothie, discuss briefly the Farm that provided your fresh SC peaches. (Regional Coordinators can provide this information.)
- Remind students that this is a great recipe to do at home with their parents.

Ingredients needed:

2 cups Low-fat milk	4-6 Ice Cubes	Drizzle of Honey
2 cups Low-fat plain or vanilla yogurt	2-3 Cups of SC Fresh Sliced Peaches	
Dash of Vanilla Extract	Dash of Cinnamon	

Serving Size: 30 - 1 oz. servings

Remember to practice safe food handling! For more information, visit www.fightbac.org.



¹ USDA MyPlate.gov

² Video by Nourish (www.nourishlife.org)

³ Adapted from Jump into the Food and Fitness Curriculum, Michigan State University Extension.

Resources

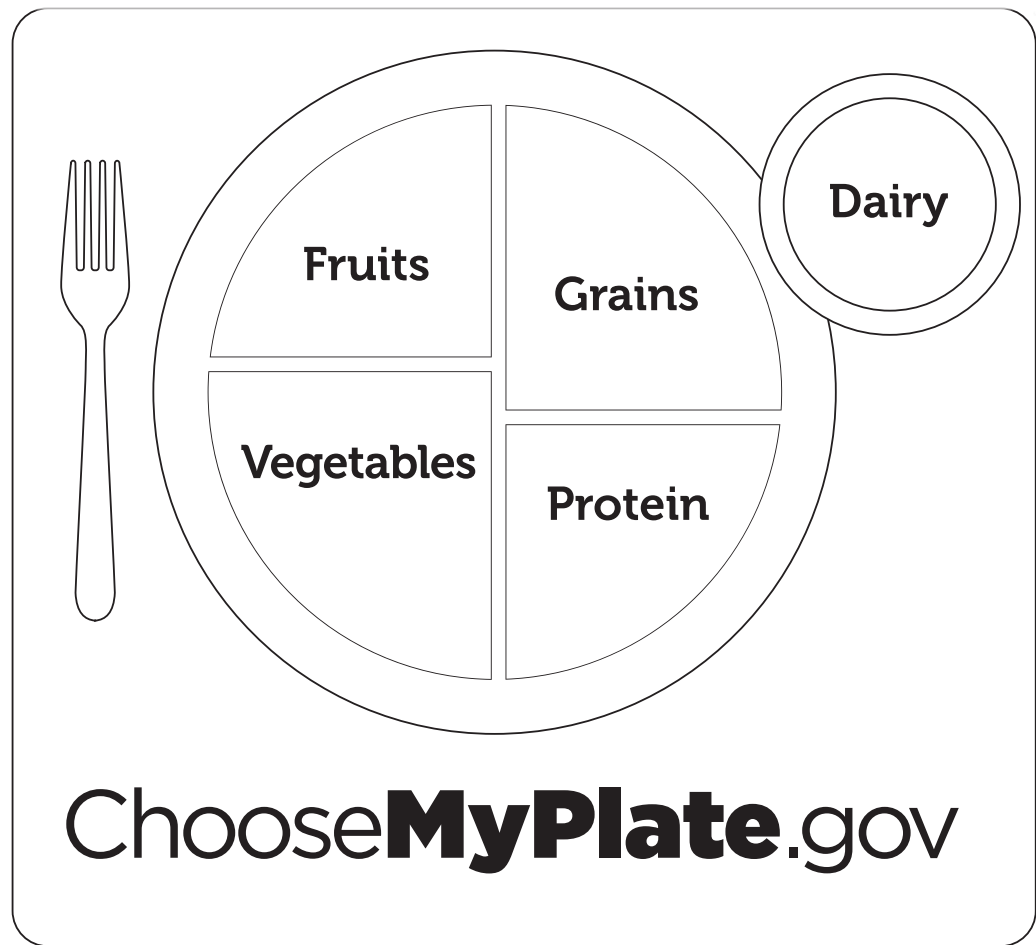


Websites:

USDA MyPlate: <http://www.choosemyplate.gov/>

Fuel Up to Play 60 (National Dairy Council): <http://school.fueluptoplay60.com/tools/nutrition-education/school-nutrition.php>

Appendix A



USDA Center for Nutrition
Policy and Promotion

Appendix B



Farm to School Video Sheet
September 2011 Grades 6-8
Video: Whole and Healthy

Student's Name:

Date:

How would you define Whole Foods?

What do processed foods lack?

Why do whole foods make us feel better?

How can you find whole foods in the grocery store?

Appendix C

Farm to School Breakfast Assessment



First Name _____ Last Name _____ Grade _____
Parent/Guardian Signature _____

Directions: Answer the following questions related to breakfast. Select a representative from your group to share the group's answers. You will use this information in the development of a personal nutrition plan for breakfast.

Self - Assessment of Breakfast

1. Did you eat breakfast today?	
2. If yes, what did you have?	
3. How often do you eat breakfast?	
4. What are some of the reasons you do not eat breakfast every day?	
5. How do you feel when you do not eat breakfast?	

Appendix D



Farm to School Goal Worksheet

Part 1:

Write down three goals for eating a healthy, balanced breakfast for the next week (Monday-Friday).

1. Goal:
2. Goal:
3. Goal:

Part 2: Track your consumption of breakfast for a week, noting if you met your goals each day:

Day of Week	Goal 1		Goal 2		Goal 3		Notes
	Met	Not Met	Met	Not Met	Met	Not Met	
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							

Appendix E

Listed below are websites to help your students begin their research on peaches:

1. <http://www.clemson.edu/extension/peach/>
2. <http://www.sciway.net/shop/peaches.html>
3. <http://www.scpeach.com/>
4. http://www.clemson.edu/extension/hgic/plants/vegetables/tree_fruits_nuts/hgic1354.html