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Time Frame

2-3 class periods, time outside of class to track foods and beverage consumption

Overview

Students will investigate the components of a healthy diet; practice using measurement skills; and read and produce informational texts about the role of balance, variety, moderation and eating breakfast in a healthy diet.

Objectives

- Students will categorize, rank and analyze food choices.
- Students will identify how balance, variety, moderation and eating breakfast contribute to their health.
- Students will measure and/or weigh daily recommended servings of several foods.
- Students will identify the main idea of several texts and answer a series of text-based questions.
- Students will track their diet for one day.
- Students will write a newspaper article about the nutritional choices of their classmates.

Materials

- Measuring cups (one per small group)
- Measuring spoons (one set per small group)
- Small scales (one per small group)
- Two foods from each food group that would be easy for students to measure, such as bananas and apples (fruit); baby carrots and canned corn (vegetables); milk and yogurt (dairy); peanut butter and scrambled eggs (protein) and dried cereal and whole-grain pretzels (grain).
- Paper plates
- Access to the Internet
- "My Plate is Great" **Nutrition News** article (one per student)
- "Students Need Breakfast" Nutrition News article (one per student)
- Be a Cub Reporter for the *Nutrition News* student handout (one per student)





Lesson Background

Balance, variety, moderation and breakfast are four important concepts that can help kids lead a healthy lifestyle. This lesson focuses on all four concepts.

A **balanced** diet incorporates appropriate amounts of foods from all five food groups every day, providing needed calories and nutrients. Age, gender and physical activity level make a difference in the number of servings needed to maintain a well-balanced diet. The United States Department of Agriculture's (USDA) MyPlate food guidance system (www.choosemyplate.gov) illustrates the five food groups that are the building blocks for a healthy diet using a familiar image – a place setting for a meal. Before students eat, they should think about what goes on their plate or in their cup or bowl. To build a healthy plate, children need to eat a balanced diet from the following food groups:

Fruits - Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen or dried and may be whole, cut-up or pureed. Most fruits are naturally low in fat, sodium and calories. None have cholesterol. Fruits are sources of many essential nutrients that are underconsumed, including potassium, dietary fiber, vitamin C and folate. The USDA recommends that we make half of our plate fruits and vegetables. It is recommended that children, ages nine to thirteen, should have one and a half cups of fruit each day.

Vegetables - 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; and may be whole, cut-up or mashed. Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate, vitamin A and vitamin C. The USDA recommends that we make half of our plates fruits and vegetables. It is recommended that children, ages nine to thirteen, should have two (girls) to two and a half (boys) cups of vegetables each day.

Grains - Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas and grits are examples of grain products. The USDA recommends that we make half our grains whole grains. Grains are important sources of many nutrients, including dietary fiber, several B vitamins (thiamin, riboflavin, niacin and folate) and minerals (iron, magnesium and selenium). It is recommended that children, ages four to eight, should have five (girls) to six (boys) ounces of grains each day.

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Protein - All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts and seeds are considered part of the protein group. Meat, poultry, fish, dry beans and peas, eggs, nuts and seeds supply many nutrients. These include protein, B vitamins (niacin, thiamin, riboflavin and B6), vitamin E, iron, zinc and magnesium. It is recommended that children, ages nine to thirteen, should have five ounces of protein each day.

Dairy - All fluid milk products and many foods made from milk are considered part of this food group. Most Dairy Group choices should be fat-free or low-fat. Calcium is used for building bones and teeth and in maintaining bone mass. Dairy products are the primary source of calcium in American diets. Diets that provide three cups or the equivalent of dairy products per day can improve bone mass. It is recommended that children, ages nine to thirteen, should have three cups of dairy each day.

Variety: No single food supplies all the nutrients we need. A varied diet includes many different foods from the five major food groups: fruits, vegetables, grains, protein and dairy, which together meet nutritional recommendations.

Moderation: Moderation is all about limiting rather than eliminating certain foods and paying attention to serving sizes. Children, in particular, should know that their diet can include all the foods that they like. Those that are not as nutrient-rich or higher in those nutrients that should be limited should simply be eaten less frequently or in a lower quantity. This is called moderation. Moderation also relates to portion control. Portion sizes for many foods have increased over the years and many Americans tend to eat the amount that is placed onto their plate or poured into their cups! The recommended amounts for each food group from the Dietary Guidelines and information about serving sizes on the Nutrition Facts Panel can help quide how much we should be eating each day.

[0] (30-40 minutes)

- 1. Distribute a paper plate to each student and ask them to write everything they ate and drank the day before on the plate. Next to each food, ask students to write an approximate amount of the food or drink they consumed. Ask students not to write their names on their plates.
- 2. Collect the plates. Divide students into groups of four and randomly distribute four plates to each group. Review the food groups and recommended servings of each food group from MyPlate (see background information). Ask each group to analyze the food and beverage choices on the plates they were given. Challenge them to rate each plate on a scale of 1-10, with 1 being the least aligned to MyPlate recommendations and 10 being the most aligned to MyPlate recommendations.





- 3. Then, direct each group to join with another group and present its rankings to that group, along with justifications for the rankings.
- 4. Direct the combined group to mathematically analyze their overall rankings by doing the following:
 - Finding the mean, median and mode of their rankings.
 - Determining the percentage of plates that scored the same as the mode.
 - Determining the percentage of plates with a ranking of 10 or 1.
 - Graphing their rankings.
- 5. Have each group present its findings to the rest of the class.
- 6. Then, ask students to answer the following questions, based on their findings:
 - What score(s) would you consider to represent a healthy diet? Ex: 8 or higher? Based on this answer, what percentage of students in your class made food choices that were most like MyPlate recommendations? What percentage made choices that were least like them?
 - Did most of the students in your class make appropriate diet choices from the five food groups yesterday?
 - What can someone's diet choices for one day tell us about their overall diet? What are the possible limitations of judging someone's diet based on one day?
 - What else could we do to thoroughly evaluate the dietary choices of classmates?

EXPO (45-60 minutes)

- 7. Distribute the *Nutrition News* article entitled, "MyPlate Is Great," and direct students to read the article independently.
- 8. Review what a main idea is and ask each group to identify the main idea of the article. List all answers and poll students to see which one they think best represents the main idea.

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- 9. Ask a student or combination of students to re-read the article aloud. Ask the following questions:
 - What is the title of the newspaper article?
 - What does the word, "familiar" mean in paragraph one? Why might a place setting be a familiar visual?
 - What are the marks around the words in the final sentence of paragraph two?
 Why does the author use those marks? Who is saying those words?
 - According to the author, what are three important concepts of making healthful food choices?
 - This text is a newspaper article. What can you learn about the style of a newspaper article by reading this text? Are the paragraphs short or long? Is the most important information given at the beginning or the end?
 - The lead (first paragraph of a newspaper article) typically answers W and H questions. What W and H questions are answered in the lead of this article?
- 10. Write the words, "balance," "variety" and "moderation" on the board and ask students to define them. Then, ask groups to identify how the foods you have brought could be connected to each word. Guide students to identify that there is a balance of every food group represented and some variety of foods/beverages within each food group.
- 11. Distribute a measuring cup, set of measuring spoons, food scale and a second paper plate to each original group.
- 12. Place the 10 foods (see materials list) in front of the room. Make sure that you cover the Nutrition Facts panel for each food that has one. Ask students to name each food and direct each group to come up with one way the foods could be categorized (meal, food group, etc). Have each group present its idea.
- 13. To investigate moderation, ask students to select one of the foods from each food group and pour/place what they believe to be one serving of those foods on their paper plates.
- 14. Uncover the Nutrition Facts panels and have students identify where the serving sizes can be found. Then, direct students to use the measuring tools to compare their predictions with the actual serving sizes for each food.
- 15. Have groups present and analyze their results. Were their predictions larger, smaller or exactly the same as the serving sizes on the Nutrition Facts panel? Ask students to select one food and calculate the percentage by which their prediction was different than the actual serving size. Which serving sizes surprised them? How could they use what they've learned to increase moderation in their own diets?





(15-20 minutes)

16. Ask students to take out the original plates they ranked at the beginning of the lesson. Challenge them to review the plates and determine which one shows the greatest example of balance, which shows the greatest example of variety and which shows the greatest example of moderation. Have groups present their choices to the class, justifying their answers with evidence from the plates.

(30 minutes for the article reading and discussion, time outside of class for tracking, 45 minutes to one hour for the interview and article writing)

- 17. Ask students to share examples from the breakfast foods/beverages written on their group's plates from the day before.
- 18. Poll students to see how many of them think eating breakfast is important. Tally the results of the poll. Then, ask students to create a class list of reasons why eating breakfast is important.
- 19. Distribute the *Nutrition News* article entitled, "Students Need Breakfast." Ask students what they think the article will be about and why they think the author uses the word, "students" in the title. Then, ask students to read the article independently.
- 20. Ask students to once again determine the main idea of the article and present answers. List all answers and poll students to see which one best represents the main idea.
- 21. Re-read the article aloud or ask a student or group of students to read aloud. Then ask the following questions:
 - What W and H questions are answered in the lead paragraph?
 - After the lead paragraph, newspaper articles typically give additional details about the main topic in subsequent paragraphs. In paragraph three, what transition word leads readers from the details in paragraph two to the details in paragraph three? What is the main idea of paragraph three? How does the information in paragraph three help support the main topic?
 - What evidence is given in the article that "students need breakfast"?
 - A sidebar is a feature of newspaper articles where additional information is pulled out from the original article and presented in a box or different type of graphic. Identify the sidebar in this article. What information is given in the sidebar? Why do you think that the author chose to pull this information out of the longer article?







- 22. Write the following four concepts on the board: balance, variety, moderation and breakfast. Tell students that they will be challenged to integrate all four concepts into their food and beverage choices for one day.
- 23. Direct students to track what they eat and drink for one day by writing all food and beverage choices and approximate servings on a sheet of paper or using an online tracking tool. You can determine which day students track or give them a range of days from which to choose.
- 24. When they return to class, tell students that they will meet with three other classmates to present the results of their logs. They then will interview the three students with whom they meet and write a "Nutrition News" - style article about the nutrition choices of their classmates, based on those interviews and their investigations throughout the lesson.
- 25. Distribute the "Be a Cub Reporter for the Nutrition News" handout, which shares information about writing a newspaper article. Review the directions with students. Before meeting with their group, have students list questions they would like their interviewees to answer.
- 26. Then, ask students to meet with three other students (this can be done as a group of four who all interview each other or students can select three classmates randomly) and conduct their interviews. In addition to writing answers to their questions, students should write down quotes from their interviewees that can be used in the newspaper article.
- 27. After their interviews, direct students to use the graphic organizer on the handout to organize their notes. Give students ample time to write their rough drafts.
- 28. Once their rough draft is finished, direct students to meet with a peer review group to discuss their rough drafts. Have each student read his or her article aloud and ask the peer review group to provide specific, constructive feedback including:
 - Whether there is a creative headline.
 - If the lead paragraph answers W and H questions.
 - If details are provided in remaining paragraphs.
 - Whether the details and facts are presented in a logical order using transitional words.



Finally, ask students to share their news articles with the class and ask each student to share one way they can improve the balance, variety, moderation and breakfast eating in their diet.





Standards

CCSS ELA Standards

- CCSS.ELA-Literacy.CCRA.R.4-6.1 Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- CCSS.ELA-Literacy.CCRA.R.4-6.2 Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- CCSS.ELA-Literacy.CCRA.R.4-6.5 Analyze the structure of texts, including how specific sentences, paragraphs and larger portions of the text (e.g., a section, chapter, scene or stanza) relate to each other and the whole.
- CCSS.ELA-Literacy.CCRA.W.4-6.2 Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection organization and analysis of content.
- CCSS.ELA-Literacy.CCRA.W4-6.4 Produce clear and coherent writing in which the development organization and style are appropriate to task, purpose and audience.
- CCSS.ELA-Literacy.CCRA.W4-6.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.
- CCSS.ELA-Literacy.CCRA.W4-6.9 Draw evidence from literary or informational texts to support analysis, reflection and research.
- CCSS.ELA-Literacy.CCRA.SL4-6.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- CCSS.ELA-Literacy.CCRA.SL4-6.4 Present information, findings and supporting evidence such that listeners can follow the line of reasoning and the organization, development and style are appropriate to task, purpose and audience.

CCSS Math Standards

• CCSS.Math.Content.4.MD.A.1 - Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36).

National Science Education Standards

- **4FSPSPS.2** Individuals have some responsibility for their own health.
- 4FSPSPS.3 Nutrition is essential to health.





NUTRITION NEWS

MyPlate is Great!

By Denver S. Cramble
Nutrition News Reporter



So, what's on your plate? MyPlate helps people of all ages make healthful eating choices! The food guidance system was developed in 2011 as an effort to promote healthful eating in an easy-to-understand way! It illustrates the five food groups using a familiar mealtime visual, a place setting.

To keep it simple, the MyPlate icon includes the five food groups to help remind us to eat healthfully. Sweets or desserts can also be included in a healthful diet as long as food group recommendations are met and overall calorie needs are not exceeded. "We know that people like to eat all kinds of foods," said Chief Nutritionist I.M.

Healthy. "As long as they're eating proper portions and half their plate is fruits and vegetables, they're on the right track."

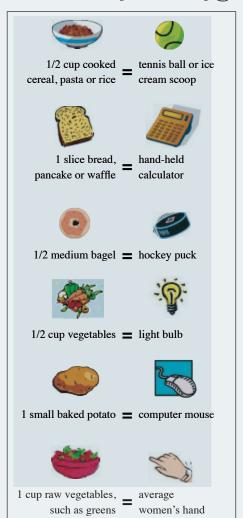
Balance, variety, moderation and eating breakfast are four important concepts that can also help us make healthful eating choices.

A balanced diet incorporates appropriate amounts of foods from all five food groups every day, providing needed calories and nutrients. Before you eat, think about what goes on your plate or in your cup or bowl. To build a healthful plate, kids need to eat a balanced diet from the following food groups: fruits, vegetables, grains, protein and dairy.

Variety is also important. No single food supplies all the nutrients we need. A varied diet includes many different foods from the five major food groups: fruits, vegetables, grains, protein and dairy, which together meet nutritional recommendations. For example, to get your daily dose of

(continued on next page)

What's the Scoop on Serving Sizes? Serving size can make a big difference. A too-small serving won't give us the nutrients we need. A too-big serving can add extra calories that will turn to fat in our bodies. Follow this list to remember the right size for a serving:



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My Plate is Great! (continued)

protein, you can eat eggs, low-fat turkey, or peanut butter. There are lots of choices!

Serving size can make a big difference, too. A too-small serving won't give us the nutrients we need. A too-big serving can add extra calories that will turn to fat in our bodies. Follow this list to remember the right size for a serving.

Nutritionist Healthy also tell us, "In addition to eating well, it's important to exercise. This keeps our bodies in shape and uses up excess calories that can turn to fat."







NUTRITION NEWS

"Students Need Breakfast"

By Cooke A. Lott
Nutrition News Reporter

Nothing gets your day on the right track like a good breakfast. Students who eat a good breakfast do better in class and better at physical activities than students who skip breakfast.

The word "breakfast" means to end a fast — a period of time without food. After you sleep for many hours, your body and brain run out of nutrients. Eating a good breakfast full of nutrients restores your energy so you have strength and staying power to do physical tasks better. Students who eat breakfast also find it easier to pay attention, think and solve problems and they have better memories. "Our research shows students who eat a good breakfast get better grades on tests," claims Professor I.M. Right of Egghead University.

Another good thing about breakfast is that it helps you get a jumpstart on all the nutrients you need in a day. Eating breakfast also helps you keep your weight in line. Why? Because a good breakfast keeps you from feeling 'starved' at other meals. When you're overly hungry, you're more likely to fill yourself up with too much food, especially too many fatty and sweet foods.

Without enough nutrients to supply energy, breakfast skippers often feel tired, bad-tempered and restless. To keep your body going strong until lunchtime, any breakfast at all is better than none. But, Professor Right says that the best breakfasts include an assortment of nutrient-dense food from several food groups. With a good choice of breakfast foods, you'll get the protein, carbohydrates, vitamins and minerals you need without too much fat. Pick breakfast foods you like. Just be sure to have a good morning meal. You'll be glad you did.

Busy-Morning Breakfast Ideas

If you're usually in a hurry in the morning, you can have a quick breakfast by making it the night before to reheat the next morning. If your breakfast doesn't contain all of the food groups, be sure to have a serving of what you missed later on, but eating something is better than skipping. Here are some yummy and nutritious choices!

- Scrambled eggs, salsa or pizza sauce, toast or tortillas, orange juice.
- Peanut butter, whole-grain toast or toaster waffles, bananas
- Microwaved eggs served with lean ham slices, English muffin halves, shredded low-fat cheese
- Cold or instant hot whole-grain cereal, low-fat yogurt or skim milk and fresh or dried fruit
- Reheated leftover egg foo yung and rice or stir-fried rice
- Leftover pizza with tomato sauce, low-fat cheese and vegetable toppings

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Stydent Handout

Be a Cub Reporter for the Nutrition News!

Writing for a newspaper is different from the writing you usually do in class. Newspaper articles are usually made up of short, direct sentences and paragraphs. News articles contain the following features:

- Headline An attention-getting phrase at the top of the article.
- Byline The name of the writer of the article.
- **Lead paragraph** An interesting sentence to make the reader want to read more. This paragraph tells who did something interesting; what he, she or they did; where it happened, when it happened and why it happened.
- Explanation Details of the event or report.
- Background Brief paragraphs explaining what led to the event or how it came about.
- **Quotes** Newspaper interviews often quote the people or groups involved. Direct quotes are shown with quotation marks.
- **Conclusion** Information to bring the article to an end, such as what might be expected next, how readers can use the information or where they can find more information.

Now it's your chance to write a *Nutrition News* article of your own. For this task, you will interview three class members about their food choices from a recent day. Then, you will summarize the information from your interviews and from the investigations you did during the lesson to write a news article about the nutrition choices of students in your class.

Step One: Choose three classmates to interview. List five questions below that you would like to learn about each classmate's food choices. Then, record the answers, additional notes and any good quotes in the space below.

1.	
2.	
3.	
4.	
5	





Step Two: Highlight important information from your notes that you would like to include in your article.

Step Three: Organize your article. Use the organizer below to help you get started.

Headline (Be creative!):	
Byline:	
Lead paragraph:	
Who:	
NA (In 4.	
What:	
Where:	
When:	
Why:	
Evalenation (How)	
Explanation (How)	
Background/Additional Details:	
Quotes:	
Conclusion:	

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Step Four: Put it Together. Use the information from your organizer to write your rough draft. Remember to:

- Include a creative headline
- Answer W and H questions in the lead paragraph.
- Write important details in the rest of the story.
- Use newspaper-style writing.
- Use transition words.

Step Five: Meet with a peer review group to discuss your writing.





Step Six: Use feedback from your peer review group to write your final draft.

