

What's the Pattern?

Grade Band: 3-5

Student Objectives:

- Describe a healthy eating pattern
- Draw conclusions about the benefits of consuming a variety of nutrient-dense foods across and within food groups in recommended amounts
- Measure recommended daily serving sizes of different food groups for their age
- Create a visual representation of one or more elements of healthy eating patterns
- Analyze their own eating patterns

Materials:

- Sticky notes
- Student Activity Sheet: Let's Get Balanced! (one per student)
- Student Activity Sheet: My Eating Pattern (one per student)
- Student Activity Sheet: How Much Should We Eat? (one per student)
- Measuring cups and a food scale
- One sample food from each food group (alternatives are given if it is not possible to bring in food)
- Various art materials

Suggested Time Frame: 2-3 class periods (based on 45-minute intervals)

Instant Expert:

According to the Centers for Disease Control and Prevention (CDC), **health literacy** is defined as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make healthy choices, to think about and practice health-enhancing skills, to say kind words, and to learn about feelings and how to express them.”

An important foundation of helping children become health-literate is teaching them about **wellness**. Wellness is more than just being healthy. It is the active process of becoming aware of and making choices toward a healthy and fulfilling life.

In the first set of lessons, students learned about different types of wellness. One of those was **physical wellness**. Physical wellness is wellness related to our bodies. This includes taking care

of our bodies, being physically active, having good personal hygiene, having healthy eating patterns and nutrient intake, and being safe.

In this lesson, we will focus on the physical wellness subcomponent of nutrition. Students will be introduced to the concept of developing healthy eating patterns.

Healthy eating patterns help people meet their nutritional needs without exceeding calorie requirements and while limiting certain dietary components. Following a healthy eating pattern can help us get the nutrients we need to reduce the risk of chronic disease and maintain a healthy body weight. We know that nutrition and health are closely related, and evidence shows that healthy eating patterns are associated with positive health outcomes. Luckily, there are many choices we can make that support healthy eating patterns.

The Dietary Guidelines 2015-2020 offer guidance about various healthy eating patterns, including U.S., Mediterranean, and vegetarian. The healthy U.S.-style eating pattern is based on the foods Americans typically consume, but in nutrient-dense forms and appropriate amounts. All serving ranges given in this lesson are based on the healthy U.S.-style eating pattern from the *Dietary Guidelines*. Because calorie needs vary based on age, sex, height, weight, and level of physical activity, the USDA actually provides patterns for 12 different calorie levels across the lifespan. For more information about key recommendations of the Dietary Guidelines 2015-2020, go to <http://health.gov/dietaryguidelines>.

In this lesson, students learn that healthy eating patterns are like a puzzle, with many different pieces that fit together. They are introduced to the “puzzle pieces” of balance, variety, and appropriate amount (recommended serving sizes). They are also briefly introduced to calories, since recommended serving sizes are based on calorie intake/requirements as well as gender, activity level, and age. More information about calories will be presented in lesson 2.

In addition to the *Dietary Guidelines 2015-2020*, the United States Department of Agriculture (USDA’s) MyPlate is another tool that can help students learn about and follow a healthy eating pattern. MyPlate is a pie chart that illustrates a place setting with a plate and glass divided into five food groups. For more information on MyPlate, go to www.choosemyplate.gov.

As students learn about balance and variety, they will be introduced to or reminded about the five food groups, as well as the recommendation of including some oil. Students likely will be aware of what foods are part of which food groups, but they may not be familiar with recommended serving sizes related to those food groups. That is covered in this lesson. As a reminder:

Grains – Consists of foods made from wheat, rice, oats, cornmeal, barley, or another cereal grain. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples. It is recommended that 8- to 11-year-olds have 5-6 ounces of grains every day. At least half of these grains should be whole.

Vegetables – Consists of any vegetable or 100% vegetable juice. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed. The Guidelines recommend a variety of vegetables from all of the subgroups. Recommended servings for 8- to 11-year-olds is 2-2 ½ cups every day.

Fruits – Consists of any fruit or 100% fruit juice. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed. Recommended servings for 8- to 11-year-olds is 1 ½-2 cups every day.

Dairy – Consists of all fluid milk products and many foods made from milk. Foods made from milk that retain their calcium content are part of the group (such as cheese or yogurt), while foods made from milk that have little to no calcium are not. Dairy choices that are low-fat or fat-free are encouraged. Recommended servings for 8- to 11-year-olds is 3 cups every day.

Protein – Consists of meat, chicken, turkey, fish, nuts, seeds, peas and beans (including soy), and any products made from these. Lean meats are encouraged. Recommended servings for 8- to 11-year-olds is 5 ounces every day.

Oil – Not an official food group, but it is important to consume some vegetable oils as part of a balanced diet.

As students will learn throughout the lesson, many foods are considered combination foods made up of more than one food group. Other foods may not easily fit into one of the food groups above. If students need additional help identifying food groups during the lesson, you may want to encourage them to research the recipes, read the ingredients on nutrition food labels or refer them to information at www.choosemyplate.gov/myplate.

Note: As always, you will want to be sensitive to individual students' unique situations and follow your school's or district's policy when it comes to the collection of personal information related to minors. At this age, students' food choices are often most influenced by their parents and by what is available in their homes and schools. The "family connection" activity at the end of this lesson offers an opportunity to extend what is learned at home.

Additional Resources

- Center for Disease Control and Prevention Youth Risk Behavior Survey (YRBS) <http://www.cdc.gov/healthyyouth/data/yrbs/data.htm>
- USDA Super Tracker <https://www.supertracker.usda.gov/foodtracker.aspx>
- USDA Dietary Guidelines for Americans 2015-2020 <http://health.gov/dietaryguidelines/2015/guidelines/executive-summary/>
- USDA ChooseMyPlate <http://www.choosemyplate.gov>

Procedure:

Session 1: Make a pattern

1. Write a pattern on the board like this one: A, A, B, A, A, B, A, A B.
2. Ask a volunteer to read what they see on the board and explain what the letters represent. Guide students to recognize that the letters form a pattern. Ask students what a pattern is. A pattern is often described as “something that happens in a regular and repeated way.” Ask:
 - What is repeated about the pattern you see on the board?
 - Does one letter make up the pattern, or is it more than one letter?
 - To continue the pattern, what would come next?
 - Could the pattern go on and on, or does it need to end?
 - What is the purpose of a pattern? (Shows a repeated theme, process, or idea)
 - Is there another way to make a pattern? (in music, arts, sewing, etc.)
3. Write the term, “eating pattern” on the board and ask students to share what they think the term means. Guide students to understand that eating patterns are the combination of foods and beverages that make up all of the things we eat and drink over time. One food or one choice does not make up a pattern; rather, a pattern is made up of a series of foods and choices over time.
4. Now, write the term “healthy eating pattern” on the board. Distribute sticky notes to students and ask them to write what they think the term “healthy eating pattern” means. Invite students to post all notes on a wall or board.
5. Read all notes aloud. Explain to students that a healthy eating pattern is like a completed puzzle of the things we should eat and drink over time to contribute to our overall good health. Today, we are going to explore some of the pieces that make up that puzzle.

6. Distribute the “Let’s Get Balanced!” activity sheet. Explain that one of the puzzle pieces that is part of a healthy eating pattern is getting a balance of foods from different food groups every day. The left side of the table shows those food groups. Invite students, individually or in groups, to complete the right side of the table by listing examples of each food group. As students investigate various food groups, share an example of a commonly-eaten food that contains multiple groups and how they might describe its parts. For example, spaghetti and meatballs is made from pasta (grain), uses tomato sauce (vegetable), has meatballs (protein), and sometimes includes parmesan cheese on top (dairy). These are called combination foods or meals, and they help to create balance in our diet. You can compare this to a meal that could have rice, green beans, chicken and an apple -- all separate food groups and were not cooked together. Then, invite them to report the examples they have listed and create combined class lists for each group.
7. Ask students why they think it’s important to eat foods from all of these food groups as part of a healthy eating pattern. Guide students to understand that different foods within these groups have different nutrients, such as vitamins and minerals, that contribute to their health. All of these foods and the nutrients they contain fit together like a puzzle to meet their nutritional needs. There are also certain nutrients that we should eat in moderation. Moderation means eating a small amount or eating less often. For more information about nutrients to encourage and nutrients to limit, refer to the Dietary Guidelines for Americans 2015-2020.
8. Now, distribute the “My Eating Pattern” activity sheet with students. Remind them that healthy eating patterns are formed over time. This activity sheet gives them a chance to record what they have eaten over the previous three days. It is a somewhat limited snapshot of their eating patterns. However, it can be a helpful way for them to see a pattern. Invite students to record the foods they have eaten during the previous three days. If they can’t remember, they can also list foods they commonly eat. Students can check with their parents, caregivers, or restaurants about what ingredients went to each dish or item for all meals and snacks.
9. Once they have completed the table, invite them to create tally marks that represent the food groups for the foods they have listed. For example, if they ate a banana for breakfast, they would create one tally mark next to “fruits.” If they ate a banana and a glass of orange juice, they would create two tally marks.

10. Once students have completed their tally marks, ask them to note any patterns they see. This might include food groups from which they eat a lot, food groups from which they don't eat enough, food groups they always eat from at certain meals, etc.
11. Then, invite them to list one thing they could do better to contribute to a healthy eating pattern. This might include a food group they could eat more from or an idea about including various food groups throughout the day. Invite student volunteers to share their pattern observations and ideas for better choices they could make. Be considerate of students who may not want to share or are sensitive about their food choices. Also be sensitive to cultural diversity and possible food access issues.

Session 2: How Much Should We Eat?

1. Challenge students to list one thing they learned about healthy eating patterns in the first session. Remind them that healthy eating patterns fit together like a puzzle. In addition to eating a variety of foods from different groups, it's important to consider other pieces of the puzzle. Another piece of the puzzle relates to *how much* of each food group we eat as part of our eating pattern.
2. Distribute the "How Much Should We Eat?" activity sheet. Explain that there are recommended amounts of each food group that we should eat each day as part of a healthy eating pattern. These recommended amounts are based on many things, including age, gender, and activity level. They are also based on how many calories we consume in a day. Introduce the term "calorie" to students. Ask students what they know about calories. Explain that a calorie is a way to measure energy in foods and drinks. Moderately active kids their age should consume between 1,600–2,200 calories each day. More information about food groups and serving sizes can be found at www.choosemyplate.gov. (Note: Students will learn more about calories in Lessons 2 and 3).
3. On the activity sheet, challenge students to match each food group to the recommended amount from that food group that kids their age should eat each day. Correct answers are provided in the Instant Expert section. Ask students why it's important to know how much from each food group they should eat each day.
4. Show students the measuring cups and the scale. Make sure students are familiar with the measurement levels on each. Have students think about comparing measuring cup size with common items to help them remember cups and scale. For example, 1 cup of fruits, vegetables, or dairy the size of a fist or tennis ball. Then, show the foods from each food group. If time allows, invite students to guess how much of each food they

would eat to meet the recommended amounts before measuring them out. Depending on food supply and the number of measuring tools, invite student groups or the class to measure out the recommended amount from each food group for kids their age. Ask: Which amounts, if any, surprise students as being more or less than they thought they would be?

Session 3: Variety and Goal-Setting

1. Tell students that variety is another piece of the healthy eating pattern puzzle. The foods they measured in Session 2 are just a sampling of foods they could choose from each group. In fact, no one single food supplies all of the nutrients needed to contribute to good health. So part of a healthy eating pattern is making sure we are eating a variety of foods.
2. To illustrate how much variety there is within each food group, divide students into teams and challenge them to create a list of as many foods as they can in each food group in just five minutes!
3. Then, invite each group to compete in the Food Group Variety Challenge! To take on the challenge, start with one food group. Go around the room and ask each group to name a food from their list for that group. They cannot, however, name a food that has already been chosen. If their list is empty or if they repeat a food that has been named, they are out. They can only name foods that were on their lists. This will continue until only one student group is left. Repeat this game for each food group. The student group with the most individual Food Group wins will be named the Food Group Variety Challenge champions.
4. Finally, go around the room and ask each student to name one thing they have learned about healthy eating patterns. Be sure to review information from throughout the lesson.
5. Finally, invite students to create a visual reflection of what a healthy eating pattern means to them. This can be a drawing, photograph, painting, collage, sculpture, or digital image. Distribute art materials if they are available.
6. Give students ample time to complete their visual representations. If time allows, invite each student to present.

You Decide: *This feature helps to reinforce decision-making with students and can be integrated into the lesson or serve as an extension.*

Ask students who currently makes the decisions about what they eat. They may be made by a combination of the students, their parents or caregivers, their school cafeteria workers, and their friends. As they get older, they will make more and more decisions themselves about what they eat and drink.

Invite students to look back at the three-day tracker they created. Then, invite them to write down one decision they made about their eating pattern that they think contributed to a healthy eating pattern and one decision they made that did not. For the latter, invite students to share how they might make a different decision if given the chance.

Family Connection:

The daily recommended amounts of each food group vary by gender, age, and physical activity level. Research and compare each family member's daily recommended amounts for each food group by going to <http://health.gov/dietaryguidelines/2015/guidelines/appendix-3/>.

For other tools to extend learning outside of the classroom, refer to the School-to-Home activities on TogetherCounts.com. Begin these activities together at school and then encourage students to continue them with their families

Community Connection:

Many children don't get to make choices about the foods they eat because they don't have the money, resources, or support to choose a diet that supports a healthy eating pattern. Invite students to organize a school food drive with a variety of foods from different food groups, or have them prepare a balanced meal for a local shelter.

Standards Correlations:

National Health Education Standards

- Students will comprehend concepts related to health promotion and disease prevention to enhance health.
- Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Students will demonstrate the ability to access valid information, products, and services to enhance health.
- Students will demonstrate the ability to use goal-setting skills to enhance health.

- Students will demonstrate the ability to advocate for personal, family, and community health.

SHAPE America, National Physical Education Standards

- Analyzes the impact of food choices relative to physical activity, youth sports, and personal health.

Common Core State Standards for English Language Arts

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners building on others' ideas and expressing their own clearly.
- Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Conduct short research projects that build knowledge about a topic.
- Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.

Next Generation Science Standards

- Use evidence to support the explanation that traits can be influenced by the environment.

** Source: <http://www.choosemyplate.gov/snapshot-2015-2020-dietary-guidelines-americans>

Student Activity Sheet: Let's Get Balanced!

It's important to get a balance of foods from different food groups each day. In the spaces on the right column, list examples of foods and beverages from the food groups in the left column. Some foods may contain more than one food group, if so put them in all the food groups they contain. For example, a turkey sandwich contains grains, dairy, and vegetables.

Food Groups	Examples
Vegetables	
Fruits	
Grains (at least half of our grains should be whole) whole grains	
Dairy (fat-free or low-fat is encouraged)	
Protein foods (Lean means are encouraged)	
Oils	

Student Activity Sheet: My Eating Pattern

Record what you eat and drink for three days. Think about foods that contain more than one food group in your description (breakfast cereal with milk is two food categories- grains and dairy). Then, tally up the food groups and consider how much balance and variety was part of your diet. Note any patterns you see.

Day 1

Breakfast	Lunch	Dinner	Snacks

Day 2:

Breakfast	Lunch	Dinner	Snacks

Day 3:

Breakfast	Lunch	Dinner	Snacks

Food group choices: Check all the food groups selected from your brown bag

	Fruit	Vegetables	Grain	Protein	Dairy
Breakfast					
Lunch					
Snack					
Dinner					
What patterns do you see over the three days?					

I am unsure about which group these foods fit into: (Hints: You can research the recipe, read the ingredients list on the Nutrition Facts panel, or go to www.choosemyplate.gov/myplate for additional information).

Student Activity Sheet: How Much Should We Eat?

Can you match the food group with the amount that an 8-11-year-old should eat each day? Hint: Fruits, vegetables, and dairy are measured in cups. Grains and proteins are measured in ounces.

Dairy Cups	2 – 2 ½ Cups
Fruits	5 Ounces
Grains	1 – 1 ½ Cups
Protein	5 – 6 Ounces
Vegetables	3 Cups

** 1 cup of fruits, vegetables, or dairy the size of a fist or tennis ball

** 3 ounces of beef, poultry or fish the size of a mini pack of tissues or box of 8 crayons

** 1 ounces of grain the size of 1 slice of bread