



Nutrients

7_A

Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

5 minutes

Share the title of the read-aloud with students, and ask them what they have already learned about nutrients. What are nutrients? (substances that provide nourishment; necessary for all life) How does the body get nutrients? (contained in food and drink) How do nutrients travel through the body? (through the blood)

Students may name specific foods as nutrients; tell them that the foods themselves are not nutrients, but that different nutrients are contained in different foods.

Vocabulary Preview

5 minutes

Carbohydrates



← Show image 7A-6: Carbohydrates

1. In today's read-aloud, you will hear about important nutrients called *carbohydrates*.
2. Say the word *carbohydrates* with me three times.
3. Carbohydrates are nutrients in food that supply the human body with energy.
4. Sugar and starch are carbohydrates found in many plant foods.
5. All of the food items shown in this image are sources of carbohydrates. Can you name some foods that have carbohydrates? Use a complete sentence and the word *carbohydrates* when you tell about them.



Proteins

← **Show image 7A-7: Protein**

1. In today's read-aloud, you will hear about another important nutrient called *proteins*.
2. Say the word *proteins* with me three times.
3. Proteins are nutrients, found in all body cells, that are necessary for growth and development.
4. Eating eggs and drinking milk for breakfast are good ways to give your body the proteins it needs.
5. All of the food items shown in this image are good sources of proteins. Can you name some foods that have proteins? Use a complete sentence and the word *proteins* when you tell about them.

Purpose for Listening

Tell students that most of the read-aloud will be about the four main nutrients their bodies need to grow. Tell them to listen carefully to learn about these four main nutrients. Tell students that they will also hear about two other important nutrients necessary for healthy bodies at the end of the read-aloud.

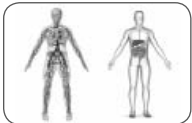


Nutrients

← Show image 7A-1: What do you eat?

Why do you eat? Is it because certain foods taste really good to you? That's surely one reason why I eat. I cannot imagine my world without the taste of a fresh bowl of vegetable soup or a peppermint stick ice cream cone on a summer's day. You also eat because you get hungry, right? But what is the main reason you eat?

Ah, at last—here is my chance to talk about my favorite topic: nutrients. You eat because you need the nutrients that food provides to stay healthy.



← Show image 7A-2: Circulatory and digestive systems

We have talked a lot about nutrients in the previous lessons. You know that your blood carries nutrients to all parts of the human body through your circulatory system. Your digestive and excretory systems filter waste from the body and send nutrients back into the blood.¹ Your cells need nutrients to stay alive. Your tissues need nutrients to function properly. Your organs stop working without the right nutrients, and if your organs stop working, your body's systems might stop working, too!²

You know that nutrients are good for you. But what exactly are nutrients? Nutrients are substances that provide nourishment necessary for the growth and health of living things. Providing the body with the nutrients it needs is an **essential**³ part of staying healthy.

So, how do you get nutrients? Yes, from the food you eat. Nutritionists, like me, think of the body as a factory.⁴ Everything you eat is made up of thousands of different substances. The substances that every healthy body needs to stay alive are called nutrients.

1 [Point to the circulatory and digestive systems.]

2 What are cells? (the smallest building block of life on Earth) What is tissue? (groups of cells that perform the same jobs in living things) What are organs? (groups of different types of tissue that do a particular job for the body) What is a body system? (a collection of organs that work together for the same purpose) They all need nutrients!

3 or necessary

4 What is a factory? (a place or building where things are made)



← **Show image 7A-3: Basic nutrients**

Everyone needs four basic nutrients—water, **carbohydrates**, **proteins**, and **fats**. These nutrients come from different food sources. It is up to you to choose the right foods to supply your bodies with the proper balance of water, carbohydrates, proteins, and fats. Today I am going to teach you how to make the best food choices for maintaining a healthy body.

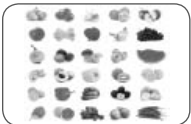


← **Show image 7A-4: A glass of water**

Let's start with the nutrient that is familiar to everybody: water. Water is perhaps the most important nutrient of all. It is necessary for all body functions.⁵ You cannot live for more than about a week without water. Did you know that two-thirds of your body is made up of water? Water is part of your blood. It travels in and out of your cells and helps to dissolve other nutrients, carrying them to all your tissues. Water is a necessary part of the excretory system, making up most of your urine. Water helps break down your food so that solid waste can pass from your body. Water even helps maintain the right body temperature.

5 What's another word for *functions*?
(jobs or purpose)

When given a choice of what to drink, water is always the healthiest choice you can make. It is up to you to constantly refill your body's supply of water. You need between three and six cups each day, but not all of your water needs to come from a cup.



← **Show image 7A-5: Sources of water in food**

Did you know that many foods contain lots of water, too? Grapefruit, watermelon, tomatoes, cucumber, and lettuce are all good choices. One way to tell whether you are getting enough water is to check the color of your urine. It should be almost colorless.



← **Show image 7A-6: Carbohydrates**

All nutrients supply your body with energy, but the body’s main source of energy comes from carbohydrates.

Carbohydrates are found almost entirely in plant foods—fruits, vegetables, whole grains, peas, and beans. Potatoes, rice, and pasta are good choices for carbohydrates. Milk and milk products, like ice cream and yogurt, provide the body with carbohydrates and protein. Cheese has only a few carbohydrates.



← **Show image 7A-7: Protein**

Protein is a body-builder, contained in all body cells. It is necessary for your body’s growth and development, building muscle and helping to repair cells. It’s easy to see how cells outside the body—like hair, skin, and nails—renew themselves, isn’t it? Each time we cut them, they grow right back! The body makes its own protein, but it needs help from foods. Good sources of protein include meat, fish, chicken, eggs, milk, and beans.



← **Show image 7A-8: Fats**

The fourth nutrient that your body needs is fat.⁶ Butter, margarine, and oils are good sources of fat. Today, many people are overweight, so it may seem strange to you that I am telling you to include fat in your diet, but your body does need a certain amount of fat. Does anyone know why?

Well, for one thing, fat is necessary for the development of your brain, especially in the first few years of your life. When you looked at skin cells under a microscope, do you remember seeing the layer of fat cells? A thin layer of fat underneath your skin acts like a blanket, providing you with insulation⁷ and warmth. Fat stores energy in your body and helps keep your skin healthy, too.

So, you see, fat is an important nutrient, but you only need very small amounts of it. Your body can make most of its building blocks from carbohydrates and proteins. After about age two, you need to be careful not to eat too much fat because that might cause you to gain too much weight.

6 What are the other three nutrients we just discussed? (water, carbohydrates, and protein)

7 or protection

8 [Pause for response. Show image 7A-3 to review nutrients.]



9 made from living organisms

10 which are nonliving substances found in nature

So far, you've learned that the body needs four basic nutrients to grow and stay healthy. What are they?⁸ Great—water, carbohydrates, proteins, and fats. These are not the only nutrients your body needs.

← **Show image 7A-9: Vitamins and food**

There are other important nutrients that are also essential—or necessary and important—to life. They are called vitamins⁹ and **minerals**.¹⁰ Your body needs less of them, but if you don't get enough vitamins and minerals, you can become sick.

Long ago, sailors lived on a diet of only biscuits and salty meat while they were out at sea. They began to suffer from bleeding gums, and their bones became weak. Once they added lemons and limes to their diet, the sailors became much better. Why do you think that is?

Citrus fruits, like lemons, limes, oranges, and grapefruits, gave the sailors the Vitamin C that they needed to keep their blood vessels, gums, and teeth healthy. Vitamin C also helps build tissue to fight germs. That's why your mom or dad might give you extra orange juice if you feel like you're catching a cold. If you aren't a fan of—or do not like—citrus fruits, broccoli and tomatoes are also good choices to make sure you are getting enough Vitamin C.



← **Show image 7A-10: Vitamin alphabet**

Letters of the alphabet, like the letter 'C,' are used for many vitamins. There's Vitamin A, Vitamin B, Vitamins C, D, and E—and so many more! Vitamin A is important for healthy skin and helps you see more clearly at night. Dairy products, carrots, and dark, leafy greens contain lots of Vitamin A. There are many different B vitamins—Vitamin B1, Vitamin B2, Vitamin B3, and so on. The B vitamins, found mostly in meat, help the body perform lots of different functions. For example, B12 helps make red blood cells. Vitamin D, found in fish and egg yolks, helps build strong bones.

Most of the vitamins you need come from vegetables, fruits, and grains. All vitamins are essential in small doses, or amounts. If you have a healthy diet, you are probably getting all the vitamins you need.



← **Show image 7A-11: Fluoride**

Fluoride is a mineral that is often added to public drinking water. It is contained in some toothpaste and mouthwash as well. This is because fluoride helps prevent tooth decay. Your body needs small amounts of different minerals, such as fluoride, to help perform specific body functions.

Besides fluoride, other minerals include calcium, sodium, and iron.



← **Show image 7A-12: Sources of minerals**

You can help your teeth and bones stay strong by eating foods rich in calcium. Milk, broccoli, and almonds are good choices.

Sodium—found in table salt, bacon, and lots of soup broths—helps regulate the body’s fluids. But too much salt is not good for you. It causes your body to hold on to too much liquid. This causes your heart to pump harder and your circulatory system to become overworked. This can lead to a serious health problem called high blood pressure.

If you feel weak, look pale, and get tired easily, you may need more iron. Eat more red meat, whole grains, and beans. Iron helps the blood carry oxygen throughout the body and helps the body fight infections.

Each one of these minerals provides important nutrients for your body. As with vitamins, you can get most of the minerals you need by eating a healthy diet. That’s what we will talk about next time we meet—the best foods for you to eat!

Comprehension Questions

10 minutes

1. *Literal* What are the four basic nutrients the body needs to grow? (water, carbohydrates, proteins, fats) What are two other nutrients needed by the body in lesser amounts? (vitamins and minerals)
2. *Inferential* In the read-aloud you learned that your body is two-thirds water. How much of your body then is not made up of water? (one-third, since two-thirds of the body is made up of water)
3. *Literal* Which one of the four basic nutrients supplies most of the body's energy? (carbohydrates)
4. *Literal* At what stage of life do humans need the most fats in their diets? (before the age of two)
5. *Evaluation* If your hair and nails stop growing, which essential nutrient are you most likely missing? Why? (Protein; because it helps repair cells and is responsible for new growth.)
6. *Literal* Which vitamin, supplied by citrus fruits like oranges, lemons, and limes, helps build tissue to fight germs? (Vitamin C)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask you a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

9. *Evaluative Think Pair Share:* Vitamin D is sometimes called “the sunshine vitamin” because sun is a better source of Vitamin D than most foods. If you apply sunblock when you go outdoors, your skin will not make Vitamin D, but the sunblock will protect you from some of the sun’s harmful rays. How else do people get enough Vitamin D to build strong bones? (Answers may vary, but may include the fact that many people take vitamin supplements if they are not getting enough of one vitamin or another. Tell students that they should always discuss such matters with their family members or a doctor.)

10. After hearing today’s read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these questions.]

Word Work: Essential

5 minutes

1. In the read-aloud you heard, “Providing the body with the nutrients it needs is an *essential* part of staying healthy.”
2. Say the word *essential* with me.
3. *Essential* means absolutely necessary.
4. When riding the school bus to school, it is essential to be at the bus stop before the scheduled pick-up time, or you may miss the bus!
5. Think of some things that are essential to our classroom. What is absolutely necessary to making our day run smoothly? Use the word *essential* when you tell us about it. [Ask two or three students. If necessary, guide and/or rephrase students’ responses: “_____ is essential to our classroom.”]
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to name some common daily activities. If what I say is essential, or necessary, to staying healthy, say, “That’s essential.” If it is not essential to staying healthy, say, “That’s not essential.” Remember to answer in complete sentences.

- drinking water (That’s essential.)
- eating foods that provide nutrients (That’s essential.)
- watching lots of television (That’s not essential.)
- eating candy (That’s not essential.)
- getting a good night’s sleep (That’s essential.)



Complete Remainder of the Lesson Later in the Day



Nutrients

7
B

Note: Extensions may have activity options that exceed the time allocated for this part of the lesson. To remain within the time periods allocated for this portion of the lesson, you will need to make conscious choices about which activities to include based on the needs of your students.

Extensions

20 minutes

Multiple Meaning Word Activity

5 minutes

Definition Detective: Check

Note: You may choose to have students hold up one, two, or three fingers to indicate which image shows the meaning being described, or have a student walk up to the poster and point to the image being described.

1. In the read-aloud you heard the word *check* as in, “One way to tell whether you are getting enough water is to *check* the color of your urine.”
2. With your partner, think of as many meanings for *check* as you can or discuss ways you can, use the word *check*.
3. [Show Poster 3M (Check).] In the read-aloud, *check* means to look carefully at. Which picture shows this meaning of *check*?
4. *Check* also means other things. *Check* can mean a pattern of squares in different colors. Which picture shows this meaning of *check*?
5. *Check* also means a mark that is used to show that something (such as an item on a list) has been done. Which picture shows this meaning of *check*?
6. Did you or your partner think of any of these definitions?
7. Now quiz your partner on the different meanings of *check*. For example you could say, “I have a blanket with a blue and

gold check design on it. Which *check* am I?” And your partner should point to the pattern of black and white squares to show that you mean that kind of *check*.

What Did You Eat for Breakfast?

20 minutes

- Focus students’ attention on the four nutrients posters: Poster 4 (Carbohydrates), Poster 5 (Proteins), Poster 6 (Fats), and Poster 7 (Water). Review the four basic nutrients that everybody needs (water, carbohydrates, proteins, and fats).
- Tell students that they are going to draw the foods that they ate for breakfast and attach the drawings to the most appropriate chart. Tell them that some foods may contain more than one nutrient and that they must make a decision about which one is more abundant, or is the main one. Tell them to draw only one item on each square piece of paper or sticky note. For example, if they had orange juice, cereal, and milk, they would use three separate sheets of paper or sticky notes to draw their breakfasts.
- Once everyone has completed the task, pair students to talk about which nutrients they consumed at breakfast (including vitamins and minerals), whether they think they made good breakfast choices, and what they need to include in their other meals today in order to get the daily nutrients they need.

My Human Body Journal (Instructional Master 7B-1)

20 minutes

- Have students draw foods that provide each of the four main nutrients in the appropriate boxes. Then have them write three or four sentences about nutrients and how they help our bodies. The first sentence should be an introductory sentence.

Domain-Related Trade Book

20 minutes

- Refer to the list of recommended trade books in the Introduction at the front of this *Supplemental Guide*, and choose one trade book about nutrition to read aloud to the class. [Suggested trade books are Items 10, 12, 19, and 22.]
- Explain to students that the person who wrote the book is called the author. Tell students the name of the author. Explain to

students that the person who makes the pictures for the book is called an illustrator. Tell students the name of the illustrator. Show students where they can find this information on the cover of the book or on the title page.

- As you read, use the same strategies that you have been using when reading the read-aloud selections—pause and ask occasional questions; rapidly clarify critical vocabulary within the context of the read-aloud; etc.
- After you finish reading the trade book aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds in this domain.
- Provide students with drawing paper, drawing tools, and writing tools. Have students draw one detail or idea from the trade book that is new or different from the read-aloud they heard. Then have students write two or three sentences to go along with their drawings. Have students share their drawings and writing with their partners or home-language peers.