



A Healthy Human Body

9_A

Introducing the Read-Aloud

10 minutes



What Have We Already Learned?

5 minutes

← **Show Image 9A-1: Diagram of the human body**

What does it mean to be healthy? (not infected with disease; doing things that promote or indicate good health; strong; able) Point to Poster 2 (Human Body Systems) and ask students what it depicts. (human body systems) Ask students to identify the human body systems, and use one sentence to tell something about what each system does. (Answers may vary; skeletal—gives the body shape and helps the body move; muscular—allows the body to move and gives the body strength; circulatory—keeps blood flowing through our veins; nervous—sends messages between the brain and the body; digestive—keeps nutrients and gets rid of solid waste; excretory—gets rid of liquid waste)

Vocabulary Preview

5 minutes

Calories

1. In today's read-aloud, you will hear how the energy in food is counted in *calories*.
2. Say the word *calories* with me three times.
3. Calories are the units we use to measure how much energy food provides our bodies with. Each time we eat, the food we eat gives our bodies energy. The number of calories tells us how much energy our body gets from a particular food.
4. You should take in enough calories each day to have enough energy to do your daily activities.
5. I will name two activities. Which activity do you think uses up more calories? Answer with a complete sentence using the word *calories*: " _____ uses up more calories."

- riding a bike or sitting on a bench (Riding a bike uses up more calories.)
- sleeping or doing homework (Doing homework uses up more calories.)
- watching a movie or playing soccer (Playing soccer uses up more calories.)
- swimming or reading a book (Swimming uses up more calories.)



Network

◀ **Show image 9A-1: Nick Nutri pointing at a diagram of a human body**

1. In today’s read-aloud, you will hear that the body systems working together can be called a *network*.
2. Say the word *network* with me three times.
3. A network is a group of things that are connected to each other.
4. When one body system in our body breaks down or does not work the way it should work, it causes the other body systems to not work as well.
5. [Have students come up to the image and identify the different body systems shown. (circulatory system, respiratory system, nervous system, digestive system, excretory system)]
Why do you think the body systems can be called a network? (They are all connected to each other; they overlap or cross each other.)
Do the body systems work together or separately from one another? (They work together.)

Purpose for Listening

Tell students they are going to review the functions of these body systems today and learn ways that they can help to make sure that their body systems continue to run smoothly and stay healthy. Ask students to listen carefully to find out the four main things they can do to help take care of their bodies and stay healthy. Distribute a copy of Instructional Master 9A-1 (Response Card 6: A Healthy Human Body) to each student. Students may refer to the Response Card as you present and discuss the read-aloud.



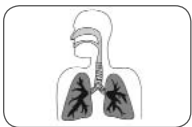
A Healthy Human Body

← Show image 9A-1: Nick Nutri pointing at a diagram of a human body

Take a look at this, boys and girls. What are you looking at? Yes, you're looking inside a human body with all of its many complicated parts. Can you find the stomach and the intestines? Who sees the kidneys and the bladder? ¹

1 [Ask for volunteers to identify the various organs in the image.]

Today, we are going to review some of the things that you've learned about the human body and its **network**, or arrangement, of important systems. Let's start with the system you learned about last. Which system helps you sweat and urinate? Yes, the excretory system. And, who remembers another **term**, or word, for sweat? Yes, perspiration. Have you tried using this term with your family and friends?



← Show image 9A-2: Lung and windpipe

Which system is responsible for processing your food into nutrients that your body can use and getting rid of waste that it doesn't need? Yes, the digestive system. Raise your hand if you can tell me the name of the tube that carries food from the mouth to the stomach.

2 [Explain to students that the esophagus is not shown in this image. Explain that air travels down the windpipe through the nose or through the mouth.]

Great job—the esophagus is your food tube. We didn't talk about it, but there is another tube right beside it called the **windpipe**. It leads to your lungs. Can anyone guess what travels through your windpipe from your mouth to your lungs? It's something else that the body needs to live. Right—air! ²

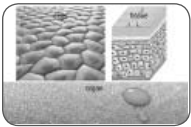


← Show image 9A-3: Muscular, skeletal, and circulatory systems

Look at the picture of the human body in this image. Look at all the bones that make up the skeleton. What's that system called? Oh, that was an easy one, wasn't it? The skeleton is part of the skeletal system. Here's another easy one. What system do muscles belong to? Yes, the muscular system. The skeletal and muscular systems work together to help you move.

Nerves are part of your nervous system. Look at Poster 2 (The Body Systems). Which one is the nervous system? Do you see the nerves running like highways across every part of the body, traveling up the spinal column, all the way to the brain?

Find the circulatory system on Poster 2. Don't confuse the nerves with veins and arteries, the tubes that carry blood through the body. The nervous system and the circulatory system look similar in the pictures. That's because blood covers a lot of territory, too. We've talked about nutrients and the way they travel through your blood to support your body systems. Without blood, these important substances would have no way to nourish your body. The circulatory system circulates, or moves, your blood.



← **Show image 9A-4: Cells, tissue, and organ**

3 [Point to the skin, then the tissue, and finally the cells as you read the following. Review Poster 3 (Cells, Tissues, Organs, and Systems) with students.]

4 [Encourage students to touch the skin of their arms and face.] The skin is an interesting organ because it covers the entire body, and it is the largest organ in the human



← **Show image 9A-5: Baked potatoes and French fries**

You know that each body system performs a separate function, and that each system is made up of organs.³ Organs are made up of tissues, and tissues are made up of cells. From largest to smallest, the order is organs, tissues, then cells, which are the smallest. Let's think about skin as an example. Moving from the smallest part to the largest, skin cells combine to form skin tissues, and those tissues combine to form the skin as we see it. That's the way the human body works.⁴

It is important to keep your cells, tissues, organs, and body systems all running smoothly. You can do that in many different ways.

We've talked about the importance of making healthy food choices. Food gives you energy to grow, breathe, move, fight germs, and heal. Some foods have more nutrients in them than others. At the cafeteria, choose a variety of foods, especially those high in nutrients. Pick the fruit instead of the cookie; pick the baked potato chips instead of the french fries; or pick the low-fat milk instead of the milkshake.

Balance your daily diet with several servings of grains, fruits, and vegetables, and smaller portions of dairy, meat, and eggs.



← **Show image 9A-6: Produce**

Remember to eat only a few sweets and fats. And don't forget to eat a rainbow of vegetables and fruit. Eating a variety of vegetables and fruits will give your body the vitamins and minerals it needs. The next time you are at the grocery store, ask your parents about the different vegetables you see, such as brussels sprouts, kale, or frozen asparagus. See if you can spot fruits that make up the colors of the rainbow.⁵

5 Look at all the healthy fruits and vegetables in Nick Nutri's basket. Which is your favorite?

6 [Pause for suggestions.]

Besides eating a well-balanced diet, what other ways can you keep your body healthy?⁶ Great suggestions!



← **Show image 9A-7: Exercise**

Exercise, or staying active, can help you maintain a healthy body weight. When you exercise, your body uses energy from the food you eat. The amount of energy that food provides to the human body is measured by **calories**. Food labels list the number of calories, or the amount of energy, in packaged foods, telling you how much energy is stored in them. You should eat enough food each day to provide your body with about the same amount of energy that it uses up during the day. If you eat too much and don't exercise, your body will store the extra food energy as fat. If you don't eat enough to satisfy your body's needs, your body will use its stored energy and you may lose weight.

You are burning energy all the time, even when you are sleeping, but your body uses much more energy to exercise than it does to sleep. If you weighed a hundred pounds, you would burn about forty calories just by standing still for thirty minutes, but if you walked for thirty minutes, you would burn about 120 calories. You would use up three times more energy by walking as you would by standing still for the same amount of time.

Here's a puzzle for you to solve. There are about 160 calories in a snack-size bag of potato chips. If you burn 120 calories by walking for thirty minutes, about how much longer would you need to walk to burn up all the calories in that bag of chips?⁷ What type of exercise do you think might burn the calories even faster than walking?

7 [You may want to record the numbers on chart paper and have students try to figure out the problem. (You would have to walk another ten minutes—forty minutes in all—to burn the additional forty calories in the bag of chips. $120/30=4$ calories per minute)]



← **Show image 9A-8: More exercise**

Exercise keeps your heart and lungs working well, fights off illness and disease, and builds strong bones. Make exercise a daily part of your life. Walk and cycle instead of getting in a car. Climb stairs instead of taking an elevator. Swim, play soccer, take karate, or gymnastics lessons, or shoot hoops with your buddies. All of these are good forms of exercise. Choose what you enjoy and have fun!⁸

8 What kinds of exercise do you enjoy?



← **Show image 9A-9: Good hygiene**

Keeping clean is another important part of staying healthy. There are many types of germs that can make you sick. Bacteria, the tiny, one-celled creatures that Anton van Leeuwenhoek studied, are one of the most common types of germs. Bacteria are everywhere. They are an important part of nature, and most bacteria are not your enemies. In fact, many bacteria live in your gut and help you digest your food.

But, millions more live on your skin, and some of them may be harmful. That's why it is important to wash your hands often and well. Wash them throughout the day, especially before eating. Besides hand washing, make sure that you clean every other part of your body, too. Take frequent showers and baths, shampoo often, and keep your fingernails short and clean. Brush your teeth regularly to get rid of old food and germs that feed on it. Use floss to keep your gums healthy and get rid of food stuck between your teeth.



← **Show image 9A-10: Regular habits**

Regular toilet habits are signs of good health. Most of the time you don't have to think too hard about using the bathroom, but sometimes your body reacts and lets you know that you need to take extra care. If it hurts when you urinate, or if something seems out of the ordinary when you use the bathroom, let your teacher and parents know. Make sure to listen to your body and the nerve signals that it sends to your brain. Don't put off using the bathroom when you need to go.



← **Show image 9A-11: Sleep**

How many of you wake up feeling tired in the morning? Has anyone ever asked you, “Did you get up on the wrong side of the bed?” If you’re tired or grouchy when you wake up, that may mean that you are not getting all of the rest that your body needs. Most seven- or eight-year-olds need about ten or eleven hours of sleep each night. As you sleep, damaged body cells and tissues are repaired and replaced. If you are sick, sleep will help speed your **recovery**, or return to health.

Eating well, exercising, keeping clean, and getting enough rest are all good ways to keep your millions and billions and trillions of tiny cells working properly. You should also make sure to have regular checkups with a doctor or other health care professional.

I have loved sharing my knowledge of health and nutrition with you. Your body is yours alone, and you alone have the power to take care of it your whole life. Now that you know what to do to keep it in good condition, I hope you will treat it as well as you would any one of your favorite machines.



← **Show image 9A-12: The amazing human body**

I’m sure you’ll agree that you’ll never find another machine quite as amazing as the human body!

Comprehension Questions

10 minutes

1. *Literal* What are calories? (ways of measuring energy in foods) What does it mean to burn calories? (use up energy) How do you know how many calories are in the foods you eat? (Calories are often listed on food packages.)
2. *Inferential* If you eat about 2,500 calories a day every day for a month and only burn about 2,000 calories per day, will you be more likely to lose weight or gain weight? Why? (You will probably gain weight because your body is consuming far more energy than it is burning.)
3. *Literal* What are some ways that you can prevent germs from infecting your body? (wash hands often; good hygiene habits—bathing, brushing teeth)
4. *Inferential* If the cells of one of your organs are unhealthy, can you still have healthy tissues and a healthy organ? (No, if cells are unhealthy, tissues will also be unhealthy because they are made up of cells, and the organ will be unhealthy because it is made up of tissues.)
5. *Inferential* Sometimes people laugh and talk while eating, and they begin to choke on their food. They cough it up and say, “It went down the wrong way.” What do they mean? (The food slipped into the windpipe instead of the esophagus.)

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

6. *Evaluative Think Pair Share:* Pretend that you are sitting outside on a hot day reading a book. What body systems are at work as you read? (Answers may vary, but students should be aware that all body systems are working. Systems work together in a network, depending upon one another to keep the body healthy.)
7. 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: Recovery

5 minutes

1. In the read-aloud you heard, “If you are sick, sleep will help speed your *recovery*.”
2. Say the word *recovery* with me.
3. *Recovery* means to return to health from an illness or injury.
4. Will made a complete recovery after breaking his leg.
5. Think of a time you made a recovery. What did you recover from? Use the word *recovery* when you tell us about it. [Ask two or three students. If necessary, guide and/or rephrase students’ responses: “I made a recovery from . . . ”]
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to give some examples. If it is an example describing a recovery, say, “That is a recovery.” If it is not an example of recovery, say, “That is not a recovery.” Remember to answer in complete sentences.

- Keisha missed several days of school, but she still had a fever when she woke up this morning so she missed another day. (That is not a recovery.)
- Felicity caught the flu, was home for a week, and returned to school after she was completely healed. (That is a recovery.)
- Even after seeing the doctor many times, Pierre’s elbow still hurt. (That is not a recovery.)
- After a few weeks of rest, eating healthy food, and doctor visits, Marsha’s mother felt much better after her surgery. (That is a recovery.)



Complete Remainder of the Lesson Later in the Day



A Healthy Human Body

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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

Sayings and Phrases: Get Up on the Wrong Side of the Bed 5 minutes

Proverbs are short, traditional sayings that have been passed along orally from generation to generation. These sayings usually express general truths based on experiences and observations of everyday life. While some proverbs do have literal meanings—that is, they mean exactly what they say—many proverbs have a richer meaning beyond the literal level. It is important to help your students understand the difference between the literal meanings of the words and their implied or figurative meanings.

- Ask students if they have ever heard anyone say “She got up on the wrong side of the bed,” or “Did he get up on the wrong side of the bed?” Have students repeat the proverb “get up on the wrong side of the bed.” Explain that this proverb is another way of saying that someone woke up in a bad mood and is acting grouchy or mean.
- Ask students if they have ever woken up in a bad mood and stayed grouchy for a while. Tell students that instead of saying “I’m in a really bad mood,” they could say “I got up on the wrong side of the bed.” Give students the opportunity to share their experiences, and encourage them to use the saying.
- Remind students that in today’s read-aloud, one possible reason was given for why someone might get up on the wrong side of the bed. What might that reason be? (not getting enough sleep) Look for more opportunities to use this saying in the classroom.

Healthy Habits Checklist (Instructional Master 9B-1) 20 minutes

- Have students complete their own Healthy Habits Checklist. Students should first place a checkmark next to each healthy habit they practice. Then they should write a sentence describing how they practice that habit.
- For healthy habits that have not been checked off, encourage students to consider how they could practice those healthy habits.

My Human Body Journal (Instructional Master 9B-2) 15 minutes

- Have students write a paragraph describing a day in which they practice many healthy habits. Prompt students with the following questions:
How would you begin the day?
What would you do to keep your body healthy during the day?
How would you end the day?
- Students may use their Healthy Habits Checklist to guide their writing. Encourage students to include sentences they have written on the checklist in their paragraphs.