



The Amazing Human Body

1_A

Note: Introducing the Read-Aloud may have activity options which 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.

Introducing the Read-Aloud

10 minutes

Domain Introduction

5 minutes

Note: Students who participated in the Core Knowledge Language Arts program in Kindergarten and Grade 1 may recall discussing the five senses from *The Five Senses* domain in Kindergarten, and the five major body systems (skeletal, muscular, digestive, circulatory, and nervous) from *The Human Body* domain in Grade 1.

Point to Poster 1 (Chart of the Human Body) and ask students what it depicts. (human body) Ask students to identify anything they recognize on the chart (from body parts to organs) and use one sentence to tell something about it. (for example, “The lungs help us breathe.”) If students have participated in the Core Knowledge Language Arts program in Kindergarten and Grade 1, remind them that they have already learned some things about how the body works, but that they are going to learn much more over the next several weeks.

Ask students to raise their hands if they like to eat. Tell them that what we eat makes a big difference to the health of our bodies. Explain that this domain will focus on the best foods to eat and how the body processes those foods to keep us healthy.

What Do We Know?

5 minutes

[Show Poster 2 (Human Body Systems).] Point to the poster and ask students to name any of the different body systems or parts they can. Allow for students to respond.

Have students repeat the name of each system after you. (skeletal system, muscular system, circulatory system, nervous system, digestive system and excretory system)

Ask students what the word *healthy* means. *Healthy* describes someone who shows good health. *Healthy* is also used to describe foods or items that help people have good health.

Tell students that you will name a way that each of the systems help a healthy body. Ask students to tell you which system you are describing.

- This system keeps blood flowing through our veins. (the circulatory system)
- This system allows us to move. (the muscular system)
- This system keeps nutrients and gets rid of waste. (the digestive system)
- This system gives us strong bones. (the skeletal system)
- This system gets rid of waste. (the excretory system)
- This system communicates with the brain. (the nervous system)

Vocabulary Preview

5 minutes

Nutrition/Nutrients



← Show image 8A-5: Other carbohydrates

1. In today's read-aloud, you will hear about *nutrition* and how our bodies get *nutrients* from food.
2. Say the word *nutrition* with me three times.
Say the word *nutrients* with me three times.
3. Nutrition is nourishment or something needed for life and growth.
Nutrients are the things in the food we eat that help us live

and grow. Protein, carbohydrates, fats, vitamins and minerals are all nutrients.

4. The girl in the picture practices good nutrition by eating healthy foods with nutrients.
5. Tell your partner one way that you practice good nutrition. Tell your partner what healthy foods you eat that have nutrients in them.



Nutritionist

← **Show image 1A-1: Nick Nutri presents**

1. Today's read-aloud is narrated by someone who is a *nutritionist*; his name is Nick Nutri.
2. Say the word *nutritionist* with me three times.
3. A nutritionist is a person who studies what foods our bodies need to be strong and healthy.
4. When I was a baby, a nutritionist helped my mother know what foods to feed me so that I would grow into a strong and healthy child.
5. I will name several things. If what I say is something that a nutritionist does, say, "A nutritionist does that." If what I say is not something that a nutritionist does, say, "A nutritionist does not do that."
 - helps people choose healthy foods to eat
 - studies what our bodies need to get proper nutrition
 - encourages children to eat a lot of candy
 - learns about what is in different foods and if it is good for our bodies
 - tells people to eat whatever they like

Purpose for Listening

Tell students they are going to review the functions of these body systems today and learn ways they can help to make sure that their body systems continue to run smoothly. Ask them to listen carefully to find out why the human body is sometimes called the human machine.



The Amazing Human Body

← Show image 1A-1: Nick Nutri presents

Hello, everybody. My name is Nick Nutri, and I am a **nutritionist**. Does anyone know what that means? Nutritionists study **nutrition**, or in other words, the ways in which our bodies get the food they need to grow and stay healthy. Nutritionists learn what is in our food and how our bodies use it. I work with doctors to help children understand what they need to do to take care of their bodies.

One of the first things a nutritionist studies is the human body. It's important to understand how the body works in order to know how to keep it healthy. Dr. Welbody tells me that you already know a lot about the human body.

Stand up and let's take a look at the body parts that we can see.



← Show image 1A-2: Skin is for feeling

Where's your skin? It's all over you, isn't it? Skin covers your head, your face, your neck, your chest, your tummy, your bottom, arms, legs, hands, and feet—everything! Your skin is a stretchy, waterproof covering that protects you from germs and helps control your body temperature. Just beneath your skin are tiny little receptors, part of your nervous system, that travel to your brain.¹ You can't see them, but they tell your brain what is touching your skin and your brain reacts to the touch. Some touches, like petting a dog, can be very positive, while others, like touching a hot stove, can be quite painful.

Touch is one of your five senses. Who can name the other four senses that help you get information about your surroundings?² Oh, Dr. Welbody was right. You do know a lot!

1 These receptors or nerve endings react to changes, like heat and cold in the body, and send messages to the brain.

2 [Pause for suggestions: taste, smell, sight, hearing]



← **Show image 1A-3: Nose and mouth are for smelling and tasting**

Touch, taste, smell, sight, and hearing are your five senses. Let's sit down and find out what you already know about your body. Where is your sense of taste located? Right—in your mouth! Your tongue is covered with taste buds that allow you to taste the differences between sweet, salty, bitter, and sour foods. They also warn you of danger from hot foods or other things that may harm your body.

Did you know that your sense of smell is connected to your sense of taste? That's why some things don't taste the same to you when you have a cold. What part of your body is affected the most when you have the sniffles? Yes, your nose! And look how close your nose is to your mouth. It makes sense that they are connected, doesn't it?



← **Show image 1A-4: Eyes are for seeing**

Just above your nose are your eyes. Which of your senses do they control? Sight, of course! Your eyes are responsible for what you see. Vision³ lets you know the size and shape of an object, how near or far it is, and how fast it is moving. That's a lot of information. Some people have problems seeing correctly, but fortunately they are able to have many of their problems corrected by wearing glasses or contact lenses.

3 or your ability to see



← **Show image 1A-5: Ears are for hearing**

Okay, we've named four of the five senses—touch, taste, smell, and sight. The last one is hearing. What do you use to hear? Your ears, of course! Your ears catch and change sound waves into nerve signals that travel to your brain. Your ears not only help you hear, but they also help you keep your balance. Some people are born deaf,⁴ and some others develop deafness later in life. Hearing aids often help them hear better.

4 or unable to hear



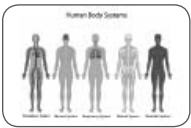
← **Show image 1A-6: We all have bodies**

Look around you. You all have skin. You all have eyes and noses and mouths and ears. But do you all look the same? Certainly not! You may look different on the outside—different colors of skin, hair, and eyes; different heights and weights—but what lies underneath your skin is all pretty much the same.

You have already learned that your body is a collection of many different **systems**,⁵ each with its own job to do. Does anyone remember the names of any body systems?⁶ What is your skin wrapped around? What gives your body its shape? Your skeleton!

5 or sets of connected parts that work together

6 [Pause for suggestions.]



← **Show image 1A-7: The circulatory, nervous, respiratory, skeletal, and muscular systems**

Your skeleton is a part of the skeletal system, including your bones and joints. It supports your body and protects your body's internal, or inside, **organs**.⁷ Can you find your ribs? Your tough rib bones cover your soft heart and lungs. Together with your muscular system, your skeletal system helps your body move. The respiratory system is in charge of how your body breathes air into your lungs to supply your body with oxygen. The circulatory system pumps blood from the heart and carries it to all parts of your body. The nervous system is the body's main control center, carrying messages to and from the brain.⁸ Do any of these **systems** sound familiar to you?⁹

7 Organs are body parts that do specific jobs for the body, such as the heart, lungs, brain, liver, and so on.

8 The word *nervous*—when it's used to talk about the body's systems—means having to do with nerves. It can also mean worried or anxious, but it does not mean that when we're talking about the nervous system.

9 [Have student volunteers point to the various systems under discussion.]



← **Show image 1A-8: The digestive system**

Although all of the body systems are important, the two that interest me the most are the digestive system and the excretory system. That's because they are the ones most responsible for the food that enters and leaves your body. You get **nutrients**¹⁰ from the food you eat, and I want to make sure that your body gets the nutrients it needs. The digestive system carries food to your stomach and small intestines, where it breaks down food into fuel to give the body the energy it needs to live. Food that your body can't

10 or substances that are necessary for your body to grow

digest moves into the large intestine and is released as solid waste. The excretory system removes liquid waste from the body. We are going to talk about these two systems a lot more another day.



11 Do you think the human body is like a machine? If so, how is it like a machine, and how is it different?

← **Show image 1A-9: The human machine**

People often compare the human body to a machine with lots of movable parts working together.¹¹



← **Show image 1A-10: The human machine breaks down**

Most of the time your body **systems** work well together but, just like machines, sometimes things break down. Germs may get inside your body and cause illnesses. The body fights off germs within the body, but sometimes the body's defenses are not enough. As a baby, you may have received **vaccinations** to help prevent diseases that were once common among children.¹² Vaccines, or the medicine in a vaccination, are inactive or weakened germs, harmless to people, that are often injected¹³ into your body. These dead or weakened germs trick the body into thinking that it is becoming infected, or getting sick, so the body figures out how to fight off that infection. The body then knows how to fight off any infections of that kind in the future. If you were vaccinated against diseases like measles or mumps, you will likely not get those diseases.

12 Vaccinations are often called shots.

13 or pumped



← **Show image 1A-11: Taking care of your body**

The human body is truly an amazing machine. You carry your body with you wherever you go. Whether you are reading, eating, playing ball, or sleeping, your body continues to work to keep you healthy. It is important for you to do your part, too. What are some of the things that you can do to take care of your body?¹⁴

14 [Pause for suggestions.]

Germs are everywhere. How can you help your body fight off germs? Washing your hands with soap and water is one of the most important things that you can do. Make sure that you wash often, throughout every day and especially before you eat. Clean

15 or keeping a clean body

the rest of your body with regular baths and shampoos, too. Cleanliness¹⁵ is very important to your body's health.

16 What is nutrition again? (providing the body with the food it needs to grow and stay healthy)

How often have you heard an adult say, "Eat your fruits and veggies?" I told you that I am a nutritionist. That means that good nutrition is very important to me.¹⁶ Eating the right foods is important for good health and that means eating lots of fruits and veggies. It is so important that your body gets the proper **nutrients** to keep its marvelous machine running smoothly.



← **Show image 1A-12: The importance of exercise**

Exercise goes hand-in-hand with healthy eating. The food you eat supplies your body with the energy it needs to exercise its muscles. By walking, running, and playing ball, you help your body stay lean and fit.

17 like doctors and nurses

Getting enough rest and having regular checkups with health care professionals¹⁷ are both important, as well. In the following lessons, we will talk about all of these things. Taking care of your body is more than just keeping your fingers crossed and hoping you will be healthy. By the time you finish these lessons, you will know a lot of ways you can help your body stay strong and healthy.



← **Show image 1A-13: Anton van Leeuwenhoek**

Next time we're together I'm going to tell you about one of my heroes—a man named Anton van Leeuwenhoek [*LAY-van-huke*]. Anton van Leeuwenhoek [*LAY-van-huke*] is from a country called Holland, and he was Dutch, which is what you call someone from Holland, which today is part of the country known as the Netherlands.¹⁸ Anton was named for where he lived in Holland. The name of his street was Lion's Gate and his house stood on the corner. The word for *lion* in Dutch is *leeuw* [*LAY*] and the word for *corner* is *hoek* [*huke*]; thus, his name is Anton who lives on the corner of Lion's Gate. Naming people in such a way was not uncommon when Anton was born, nearly four hundred years ago. I can't wait to tell you why he is my hero, but I'll save that for next time.

18 [Point to the Netherlands on a world map.]

Comprehension Questions

10 minutes

If students have difficulty responding to questions, reread pertinent passages of the read-aloud and/or refer to specific images. If students give one-word answers and/or fail to use read-aloud or domain vocabulary in their responses, acknowledge correct responses by expanding students' responses using richer and more complex language. Ask students to answer in complete sentences by having them restate the question in their responses.

1. *Inferential* [Point to Poster 2 (The Human Body Systems) to assist students with this question.] What is the name of the body system that processes the food that you eat? (digestive) What is the name of the system that removes liquid waste from your body? (excretory) What are the other body systems? (skeletal, muscular, circulatory, and nervous systems)
2. *Inferential* Why does a nutritionist need to understand the human body? (Answers may vary. Students should understand that the body is a complex machine that needs certain foods for the maintenance of its parts; a nutritionist needs to understand the relationship between the two.)
3. *Inferential* When you eat a sandwich, which body senses do you use, and what are the body parts associated with each sense? (Sight: eyes see the sandwich; smell: nose smells the sandwich; taste: mouth or tongue tastes the sandwich; hearing: ears hear the sandwich being eaten; touch: hands feel the sandwich.)
4. *Inferential* Sometimes when you have a cold, you lose your appetite. What other sense, working together with your sense of taste, could affect your appetite? (sense of smell)
5. *Literal* Many people have their eyes examined by an eye doctor if they have trouble seeing correctly. What might the eye doctor suggest to help them? (He/she might prescribe corrective glasses or contact lenses.)

6. *Literal* Washing your hands is an important way to fight germs, but sometimes doctors inject weakened germs into your body on purpose. Why do they do this and what is it called? (These weakened germs, or vaccines, are not harmful and will protect the body from disease. These injections are called vaccinations.)

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

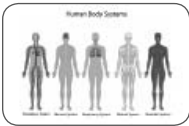
I am going to ask a question. I will give you a minute to think about the question, and then I will ask you to turn to your neighbor and discuss the question. Finally, I will call on several of you to share what you discussed with your partner.

7. *Evaluative Think Pair Share:* Nick Nutri is a nutritionist. He helps people learn about nutrition, making the right food choices to keep their bodies working well. Do you think this is an important job? Why or why not? (Answers may vary.)
8. 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: Systems

5 minutes

1. In the read-aloud you heard, "You have already learned that your body is a collection of many different *systems*, each with its own job to do."
2. Say the word *systems* with me.
3. Systems are sets of interconnecting parts working together.
4. The muscular and skeletal systems work together to help your body move.



← **Show image 1A-7: The circulatory, nervous, respiratory, skeletal, and muscular systems**

5. [Have students say the name of each body system as you point to it in the image.] Which one of the human body systems do you think is the most important? Use the word *system* when you tell us why you chose that particular system. [Ask two or three students. If necessary, guide and/or rephrase students' responses: "I think the _____ system is the most important because . . ."]
6. What's the word we've been talking about?

Use a *Fill-in-the-Blank* activity for follow-up. Directions: I am going to read five sentences, each one describing a different body system. You will have to listen closely for clues and then complete each sentence by filling in the blank with the name of the correct body system.

- Hundreds of bones make up the _____. (skeletal system)
- Blood circulates, or travels, through the body as part of the _____. (circulatory system)
- Food is digested, or broken down, in the _____. (digestive system)
- The system that works together with the skeletal system to help you move is the _____. (muscular system)
- Nerves that travel through your body to the brain are part of the _____. (nervous system)



Complete Remainder of the Lesson Later in the Day



The Amazing Human Body

1_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

Sayings and Phrases: Keep Your Fingers Crossed

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 about an event to “keep your fingers crossed” or “I’m keeping my fingers crossed”?
- Have students repeat the proverb “keep your fingers crossed.” Explain that this proverb is another way of saying you hope for a good result from some future event.
- Ask students if they have ever hoped for good weather for a special event, like field day or some outdoor activity. Tell students that instead of saying, “I hope it doesn’t rain on field day,” they could say, “I’m keeping my fingers crossed that it doesn’t rain on field day.” Give students the opportunity to share their hopes, and encourage them to use the saying.

- Remind students that in today’s read-aloud, Nick Nutri says, “Taking care of your body is more than just keeping your fingers crossed . . .” Ask: “What does Nick Nutri mean when he says this?” (Nick Nutri means that it takes more than luck to keep your body healthy.) Look for more opportunities to use this saying in the classroom.

My Human Body Journal (Instructional Master 1B-1) 20 minutes

- Tell students that they are going to create their own *My Human Body Journal*. Tell them that they will use the journal pages to record what they know and what they learn about the human body.
- Distribute a copy of Instructional Master 1B-1 (Journal Page 1) to each student. Have students write a sentence about each of their five senses. You may wish to write some sentence starters on the board for students to use. (*I use my eyes to . . .* , or *My sense of sight helps me . . .*) Remind students to try to include details in their sentences.
- Save the journal pages to assemble them into individual student journals at the end of the domain.

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 the human body in general to read aloud to the class. [Suggested trade books are Items 16 and 17.]
- 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.

Take-Home Material

Family Letter

Send home Instructional Masters 1B-2-4.