CHAPTER

1

Pages 2–23

CHAPTER SUMMARY

In this chapter children

- recognize that their bodies grow and change as they get older.
- identify major body systems.
- identify the major organs of the body and describe their primary functions.
- describe behaviors that protect the body's structure and organs.

Life Skills

Children practice *setting goals* to exercise and stay fit.

Building Good Character

Children show *caring* by being a good friend.

Literature Springboard

Use the poem "Being Me" to spark interest in the chapter topic. See the Read-Aloud Anthology on page RA-5 of this *Teacher Edition*.

Prereading Strategies

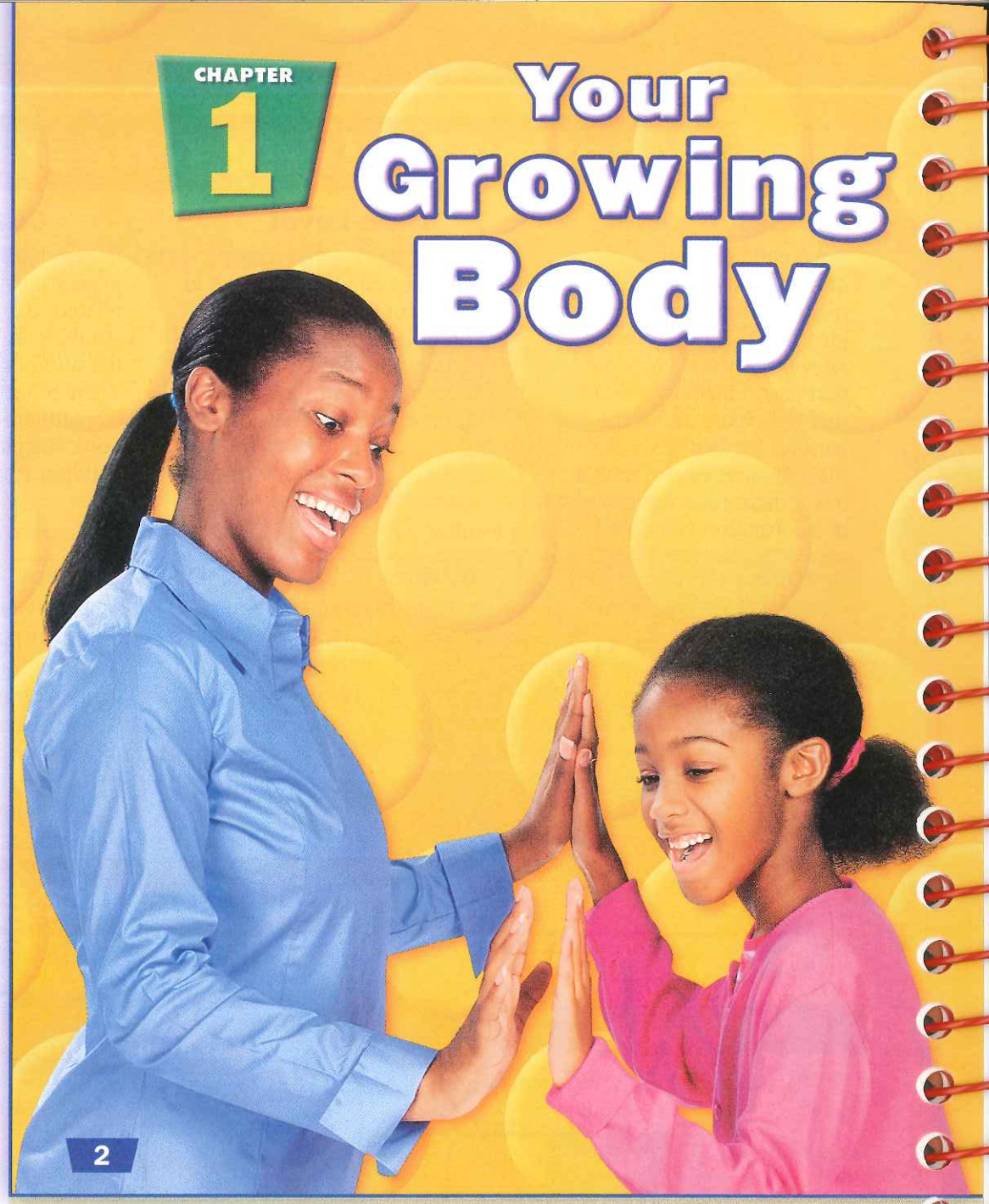
SCAN THE CHAPTER Have children preview the chapter content by scanning the titles, headings, pictures, graphs, and tables. Ask children to predict what they'll learn. Use their predictions to determine their prior knowledge.

PREVIEW VOCABULARY Have children preview the chapter vocabulary and sort the words into three groups. Have children look up unfamiliar words in the Glossary and record their definitions before they read the chapter.

Words I Know	Words I've Seen or Heard	New Words

CHAPTER 1

Your Growing Body



Focus Skill Reading Skill

SEQUENCE To introduce or review this skill, have children use the Reading in Health Handbook, pp. 248–253. Teaching strategies and additional activities are also provided.

Children will have opportunities to practice and apply this skill throughout this chapter.

- Focus Skill Reading Mini-Lesson, p. 4
- Reading Skill questions identified with the Focus Skill
- *Activity Book* p. 3 (shown on p. 7)
- Chapter Review, p. 22

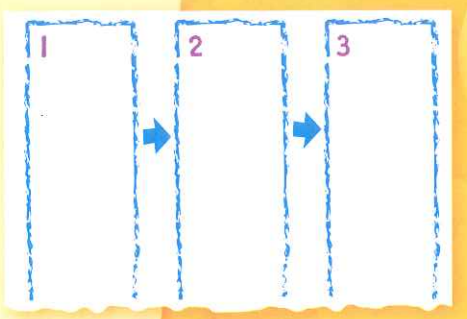
Adapting for Reading Proficiency

Read Aloud	Read Along	Read Alone
Model reading the page. Have children summarize the page orally.	Invite children to read with you. Encourage them to summarize the page.	Invite children to read the page independently.

Reading Skill

Sequence

When you sequence things, you put them in the order in which they happen.



Health Graph

Daily Physical Activity

You should exercise every day. It helps you take care of your growing body and its many parts.

Be Active!

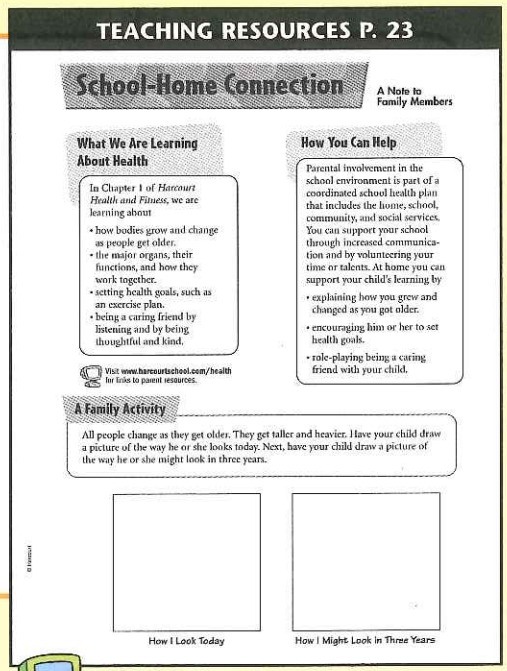
Use Saucy Salsa on Track 1.

School-Home Connection

Distribute copies of the School-Home Connection (in English or Spanish). Have children take the page home to share with their families as you begin this chapter.

Follow Up Have volunteers share the results of their activities.

Supports the Coordinated School Health Program


TEACHING RESOURCES P. 23

School-Home Connection

A Note to Family Members

What We Are Learning About Health

In Chapter 1 of *Harcourt Health and Fitness*, we are learning about

- how bodies grow and change as people get older.
- the major organs, their functions, and how they work together.
- setting health goals, such as an exercise plan.
- being a caring friend by listening and by being thoughtful and kind.

Visit www.harcourtschool.com/health for links to parent resources.

How You Can Help

Parental involvement in the school environment is part of a coordinated school health plan that includes the home, school, community, and social services. You can support your school through increased communication and by volunteering your time or talents. At home you can support your child's learning by

- explaining how you grew and changed as you got older.
- encouraging him or her to set health goals.
- role-playing being a caring friend with your child.

A Family Activity

All people change as they get older. They get taller and heavier. Have your child draw a picture of the way he or she looks today. Next, have your child draw a picture of the way he or she might look in three years.

How I Look Today

How I Might Look in Three Years

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Available online.
www.harcourtschool.com/health

INTRODUCE THE CHAPTER

Health Graph

Interpret Data

Refer children to the picture graph on this page. Read the heading and categories aloud. Explain that the graph shows the number of jumping jacks the children can do in 15 seconds. **How many jumping jacks can MiWon do?** 7 jumping jacks **Who can do the most jumping jacks?** Maria **Who can do the least jumping jacks?** Devon

Daily Physical Activity

Use *Be Active! Music for Daily Physical Activity* with the Instant Activity Cards to provide children with movement activities that can be done in limited space. Options for using these components are provided beginning on page TR2 in this *Teacher Edition*.

The Daily Physical Activity, provided on the second page of each chapter in this *Teacher Edition,* gives children the opportunity to demonstrate various exercises.

Chapter Project

What Am I? (*Assessment Guide* p. 56)

ASSESS PRIOR KNOWLEDGE Use children's initial ideas for the project as a baseline assessment of their understanding of chapter concepts. Have children complete the project as they work through the chapter.

PERFORMANCE ASSESSMENT The project can be used for performance assessment. Use the Project Evaluation Sheet, *Assessment Guide* p. 62.

LESSON 1

Pages 4–5

Objectives

- Recognize that people and animals grow and change.
- Identify stages and characteristics of human growth and development.

When Minutes Count . . .

Complete the Quick Study, Lesson 1, Activity Book pp. 1–2 (shown on p. 5).

Program Resources

- Activity Book pp. 1–3
- Transparency 5

Vocabulary

growing p. 4

Daily Fitness Tip

Tell children that when they learn a new physical skill or sport, they should make sure they learn how to do it safely. In physical education class, they should follow the teacher's directions. If they learn a sport that requires safety equipment, they should make sure they know what protective gear to wear.

For more information, see *Be Active! Resources for Physical Education* pp. 163–164.

1. MOTIVATE

Optional Activity Materials three pairs of shoes (baby size, child size, and adult size), drawing paper, crayons

Display the shoes. Ask children to point to the shoes that fit an adult. Then have them point to the shoes that fit them. Explain that when they were younger and smaller they wore baby-size shoes. Ask children to trace their feet and add baby-size footprints inside the drawings and adult-size footprints outside the drawings. **Why don't baby-size shoes fit you anymore?** My feet have grown too big to fit in them.

LESSON 1

You Are Growing

Lesson Focus
Animals and people grow and change.

Vocabulary
growing

Growing means getting bigger and older. Animals grow and change. A puppy grows into an adult dog. A kitten grows into a cat. A bird comes out of an egg. It grows into an adult bird.

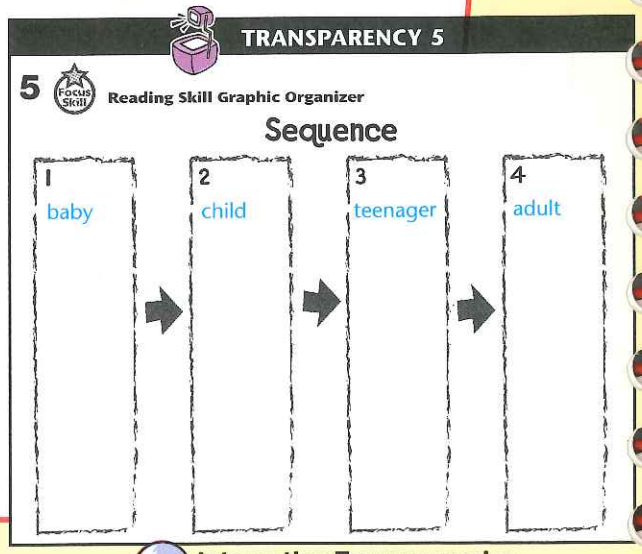
People also grow and change. You were a baby once. Now you are a child. You will grow to be a teenager. Then you will become an adult. You will keep getting older.

Focus Skill Reading Skill

Mini-Lesson

SEQUENCE Have children practice sequencing by discussing the stages of human growth in sequence—baby, child, teenager, and adult.

Complete *Transparency* 5 with children. More practice for this Reading Skill is provided on *Activity Book* p. 3 (shown on p. 7).



Your body changes as you grow. You get taller and heavier. Adults do not get taller, but their bodies still change. Their skin gets wrinkles. Their hair may change color.

Growing brings many changes. You will get bigger and older. But you will still be you.

Review

1. **Vocabulary** How do you know you are growing?
2. Draw pictures to show what you look like now and what you may look like as an adult.
3. Write these words in order from youngest to oldest—teenager, child, adult, baby.

QUICK STUDY, ACTIVITY BOOK PP. 1–2

CHAPTER 1 Your Growing Body

Name _____ Quick Study

Lesson 1 pp. 4–5

Draw a picture of yourself as a baby. Draw another picture to show how you have grown and changed.

Child draws picture of self as a baby.	Child draws picture of self at current age.

Lesson 2 pp. 6–9

Fill in the missing letters to name parts of your **skeletal system** and your **muscular system**.

sk_u_ll f_a_ce m_u_scles h_i_p bo_n_es

sp_i_ne l_e_g b_o_nes _a_rm m_u_scles

Lesson 3 pp. 10–11

Draw a line to match each word to the correct part of the **digestive system**.

teeth
stomach
tongue
mouth

Name _____ Quick Study (continued)

Lesson 4 pp. 12–15

Write the word from the box that best completes the sentence.

blood lungs heart mouth blood vessels

1. Air goes in and out of your body through your ___mouth___ and nose.
2. Your ___lungs___ take oxygen from the air.
3. Your ___heart___ pumps blood.
4. The tubes that carry blood from your heart to all parts of your body are called ___blood vessels___.
5. Your ___blood___ takes in oxygen from your lungs.

Lesson 5 pp. 16–17

Write about two things your **brain** does.

Possible responses: Your brain gets information from your five senses; sends out messages that tell your body what to do; controls all other parts of your body; lets you think, remember, and have feelings.

Available online.
www.harcourtschool.com/health

2. TEACH

Interpret Visuals—Pictures

What do the shoes on page 4 show? The shoes show that a person's feet get bigger as he or she grows. **What's happening in the picture on this page?** A father is measuring the heights of his children.

Discuss

Have children read these pages. Then talk about the stages of growth—baby, child, teenager, and adult. **What are some changes that happen as you grow?** People get taller and heavier. As adults, people's skin gets wrinkles and hair may change color. **What else grows besides people?** animals, plants Explain that, like people, animals and plants get bigger and taller as they grow.

Critical Thinking **What kinds of things do people learn as they get older?** Possible responses: to tie their shoes, to read, to ride a bike

Critical Thinking **How do people's needs change as they get older?** People may need help hearing or seeing things. They may need help walking and taking care of themselves.

Activity

Respect Have children discuss ways they can show respect to one another regarding differences among them in growth rate and other areas of development.

3. WRAP UP

Review

1. I know I'm growing because my body changes—it gets bigger, taller, and heavier.
2. Pictures should reflect the differences in appearance between a child and an adult.
3. baby, child, teenager, adult

LESSON 2

Pages 6–9

Objectives

- Identify the parts of the skeletal and muscular systems.
- Describe the functions of the skeletal and muscular systems.
- Explain the need to wear protective equipment when playing sports.

When Minutes Count . . .

Complete the Quick Study, Lesson 2, Activity Book pp. 1–2 (shown on p. 5).

Program Resources

- Activity Book pp. 1–3
- Transparencies 7–8

Vocabulary

skeletal system p. 6, **skull** p. 7, **spine** p. 7, **muscular system** p. 8, **muscles** p. 8

Daily Fitness Tip

Remind children to stretch their muscles before playing sports or exercising. Show children a few stretches, such as touching their toes, that they can easily do before playing sports.

CSHP For more information, see *Be Active! Resources for Physical Education* pp. 147–148.

1. MOTIVATE

Optional Activity Materials clay

Have children roll a piece of clay into the same size and shape as one of their fingers. Then have children pinch the clay fingers in the middle. **What happened when you pinched the clay?** It changed shape.

Then have children pinch their own fingers. Explain that their fingers don't change shape because there are hard bones inside. The bones help give bodies shape. Without bones, people's bodies would be floppy like a rag doll or a beanbag. Ask children to walk as if they had no bones.

LESSON 2

Your Skeletal and Muscular Systems

Lesson Focus

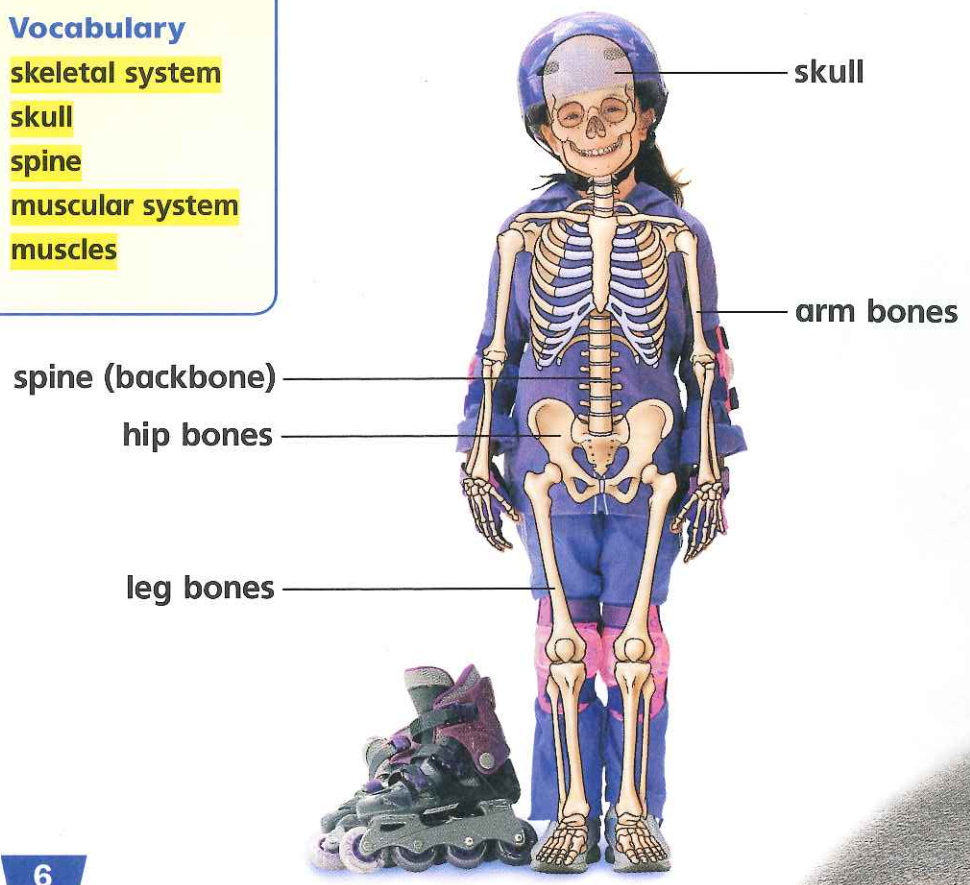
Your bones and muscles hold up your body and help it move.

Vocabulary

skeletal system
skull
spine
muscular system
muscles

Your bones make up your **skeletal system**, or skeleton. Your skeletal system holds up your body and gives it shape.

Some bones protect parts inside your body.



Meeting Individual Needs
Leveled Activities

BELOW-LEVEL **Name That Bone** Write on cards the names of the bones shown on this page. You could also add *hand bones* and *foot bones*. Hold up a card, and have a volunteer read the name of the bone or bones. Have children point to the bone or bones, first on this page and then on their own bodies.

ON-LEVEL **Using Diagrams** Ask children to use the diagram of the skeletal system to determine if there are more bones in the legs or in the feet. the feet Then ask them to determine if there are more bones in the arms or in the hands. the hands

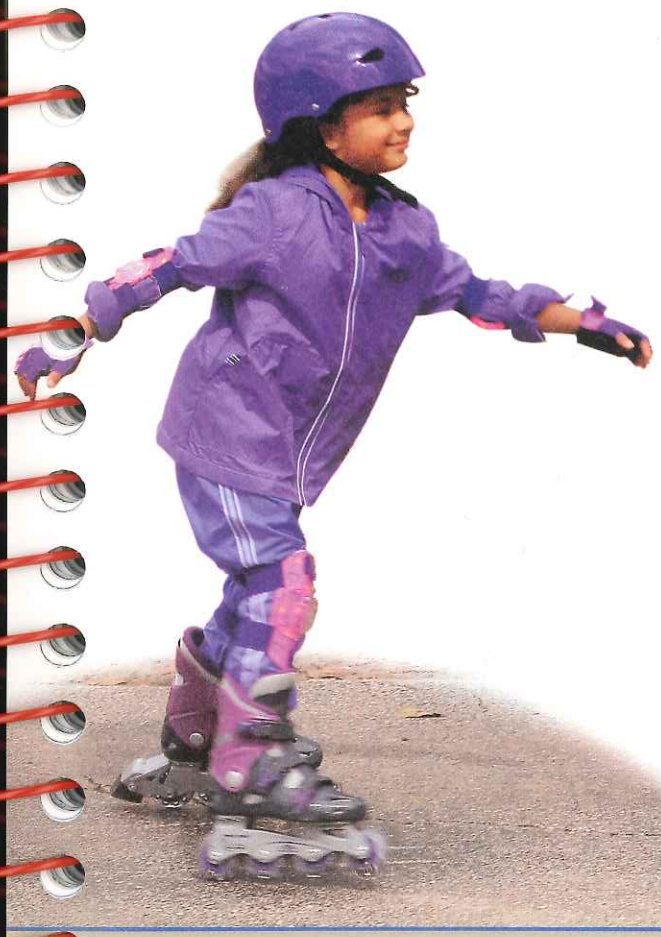
CHALLENGE **Name the Joints** Tell children that a joint is the place at which two or more bones are connected. Have children name as many joints as they can and point to each one in the diagram on this page or on their own bodies. Their responses may include *shoulder, elbow, wrist, hip, knee,* and *ankle.*

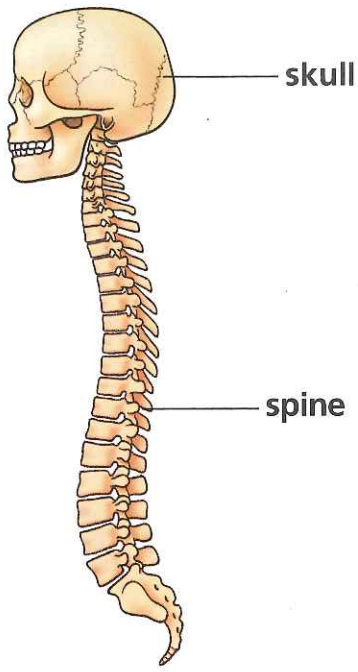
Skull

The bones in your head and face make up your **skull**. Your skull protects your brain.

Spine

Your **spine**, or backbone, is made up of many small bones. Your spine helps you sit, stand, and move.





Caring for Your Skeletal System

- Wear a helmet and other safety gear when you ride your bike or play sports.
- Eat foods that help keep bones hard and strong.
- Exercise to keep your bones healthy and strong.

Science

Animal Skeletons Display pictures or diagrams of various vertebrate skeletons (including fish and birds), and have children identify each animal based on the shape of its skeleton. Show children that a giraffe's long neck has the same number of bones in it as a human's neck—seven. Then tell children that some animals, such as snails, squid, and earthworms, don't have spines.

ACTIVITY BOOK P. 3

Name _____

Reading Skill

Sequence

Show the sequence. Write the sentences in order in the chart.

Your lungs fill with air and get larger.

Air goes into your body through your mouth or nose.

Air moves into your lungs.

Air goes into your body through your mouth or nose.	Air moves into your lungs.	Your lungs fill with air and get larger.

Available online.

2. TEACH

Interpret Visuals—Diagrams

Have children identify the skeletal system on page 6. Explain how to use a diagram. For example, the labels point to the things they name. **What large bones are connected to the hip bones?** the leg bones

Which bone is at the top of the spine? the skull

Discuss

Have children read these pages. Then tell children that a baby is born with about 300 bones. As a baby grows, some bones fuse, or join together, so that the person has 206 bones by the time he or she is about 25 years old. Point out that exercise has been shown to strengthen the skeletal system.

Critical Thinking **What could happen if you didn't protect your bones by wearing safety gear when playing certain sports?** I could break a bone.

When Minutes Count . . .

Transparency 7: The Skeletal System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Health Background

Bones Bones have several functions. Besides providing support for the body and enabling movement, bones protect the internal organs. Bones contain a substance called *bone marrow*. Bone marrow is a jellylike material that produces both red blood cells, which carry oxygen, and certain white blood cells, which help fight infections by destroying harmful bacteria.

Source: *KidsHealth*

GO ONLINE

For more background, visit the **Webliography** in Teacher Resources at **www.harcourtschool.com/health** **Keyword** Human Body

TEACH *continued*

Interpret Visuals—Diagrams

Tell children to look at the different muscles in the diagram on this page. Make sure they understand that they have muscles from their head to their toes. Have children point to the muscles in the diagram as you read the labels. Then have them read these pages.

Note that in the diagram on this page the stomach muscles are actually hidden and what are shown are the abdominal muscles. The abdominal muscles help support the body while the stomach muscles are used for digestion.

Discuss

Tell children that muscles are connected to bones by strong, flexible connecting tissues called *tendons*. Have children demonstrate moving their arms or legs to show bones and muscles moving together. Then direct children to sit very still for ten seconds. **Is it easy to sit still and not move a muscle?** Discuss with children how difficult it is not to move any muscles.

Critical Thinking **Even when you try not to move a muscle, is there a muscle that still moves?** My stomach muscles may still move. Some children may also mention that the heart is a muscle that's always beating.

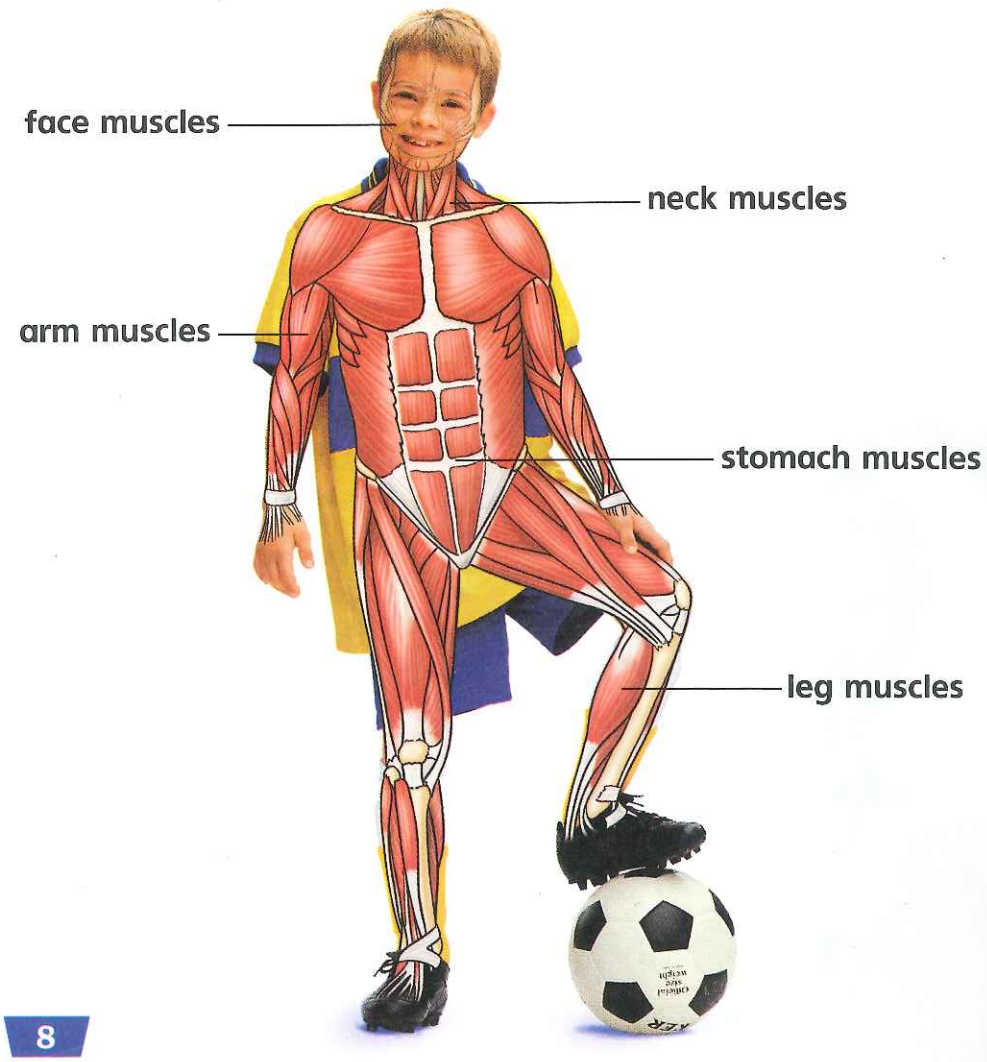
When Minutes Count . . .

Transparency 8: The Muscular System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Activity

Manage Stress Have children discuss how exercising can help them manage stress. Exercising helps relieve physical tension and can also help children stop thinking about what's bothering them.

Your **muscular system** is made up of the muscles in your body. **Muscles** are body parts that do different jobs. Some muscles help hold you up. Other muscles pull on your bones to move them.

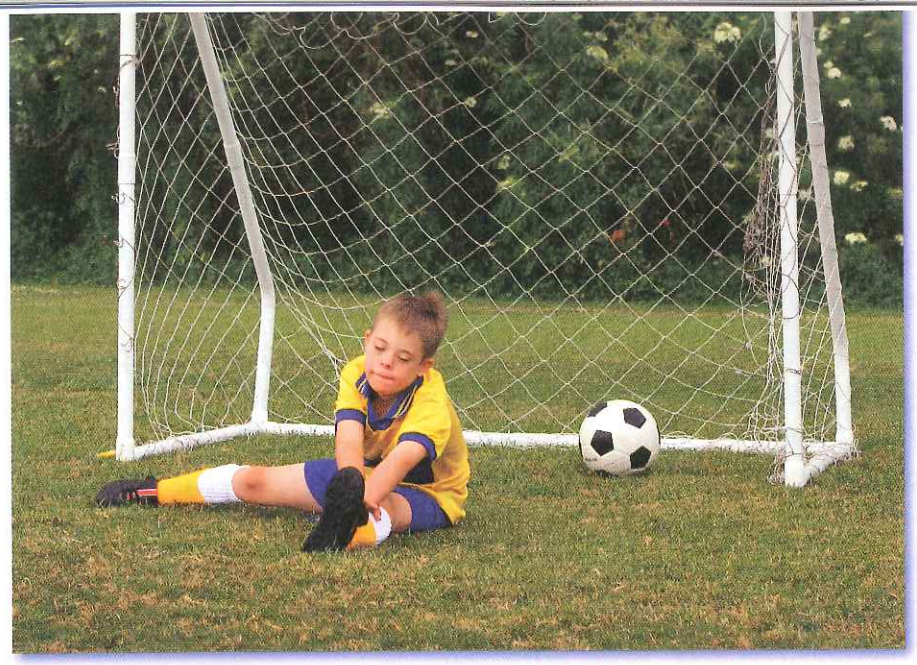


Teacher Tip

Children with Neuromuscular Disabilities Make sure that the children in your classroom are sensitive to the experiences of individuals with neuromuscular disabilities or limitations. Discuss how people with disabilities use aids such as walking frames, wheelchairs, or manual communication devices to help them cope with their disabilities. Help children find ways they can include children with disabilities in their group activities.

Math

Number of Bones As indicated on page 7, babies are born with about 300 bones. As babies grow, the bones fuse so that adults have 206 bones. Have children find out how many more bones babies have than adults by subtracting the number of adult bones from the number of bones that babies are born with. Babies have about 94 more bones than adults.



Caring for Your Muscular System

- Exercise to keep your muscles strong.
- Stretch your muscles before you exercise.

Review

1. **Vocabulary** What does your **skull** protect?
2. What do your muscles do?
3. Draw pictures to show ways you used your muscles today.

Social Studies

Knights in Shining Armor Explain that some animals don't have bones on the inside of their bodies but instead have hard coverings, called *exoskeletons*, on the outside of their bodies. Show children pictures of animals that have exoskeletons, such as insects and lobsters. Then show pictures of knights in armor. Explain that during the Middle Ages, knights wore armor to protect their bodies. Lead children to discover the similarity between armor and exoskeletons.

Language Arts

Verbs On separate slips of paper, write verbs that describe activities or movements, such as the following: *smiling, clapping, whistling, dancing, frowning, blinking, nodding, writing*. Put the paper slips in a bag. Have a volunteer choose a word and act it out. The volunteer can then call on other children to guess what the verb is and tell what muscles and bones are being used.

Interpret Visuals—Pictures

What's the child on this page doing? stretching

Tell children that stretching muscles before playing sports or exercising can help prevent pain and injuries.

Discuss

Ask children what activities and exercises they enjoy that help make their muscles healthy and strong.

Problem Solving **What should you do if your muscles feel very sore after exercising?** let my muscles rest for a day so that they can recover

Activity

Caring Have children discuss how they can care for others by suggesting that their friends and family members stretch their muscles before playing sports. Children can also help people protect their bodies from injury by reminding people to wear protective gear, such as helmets and knee pads, when they're playing sports.

3. WRAP UP

Review

1. Your skull protects your brain.
2. Possible responses: Muscles pull on your bones to move them. Some muscles help hold you up.
3. Pictures will vary but should illustrate activities that utilize muscles.

LESSON 3

Pages 10–11

Objectives

- Identify the parts of the digestive system.
- Describe the functions of the digestive system.

When Minutes Count . . .

Complete the Quick Study, Lesson 3, Activity Book pp. 1–2 (shown on p. 5).

Program Resources

- Activity Book pp. 1–2
- Transparency 9

Vocabulary

digestive system p. 10,
stomach p. 11

Daily Fitness Tip

Tell children never to put nonfood items such as small toys in their mouths. This will help prevent children from choking, injuring their mouths, or cracking a tooth.

1. MOTIVATE

Describe, or have volunteers describe, some favorite foods. **What happens in your mouth when you're hungry and you think about food?** My mouth produces a liquid.

Explain that this liquid is called *saliva*. The mouth produces saliva in response to the taste, sight, smell, or thought of food. Saliva makes food wet so that it's easier to swallow. It also begins to break down food before it gets to your stomach.

Activity

Responsibility Have children discuss how chewing food well before swallowing it demonstrates personal responsibility.

LESSON 3

Your Digestive System

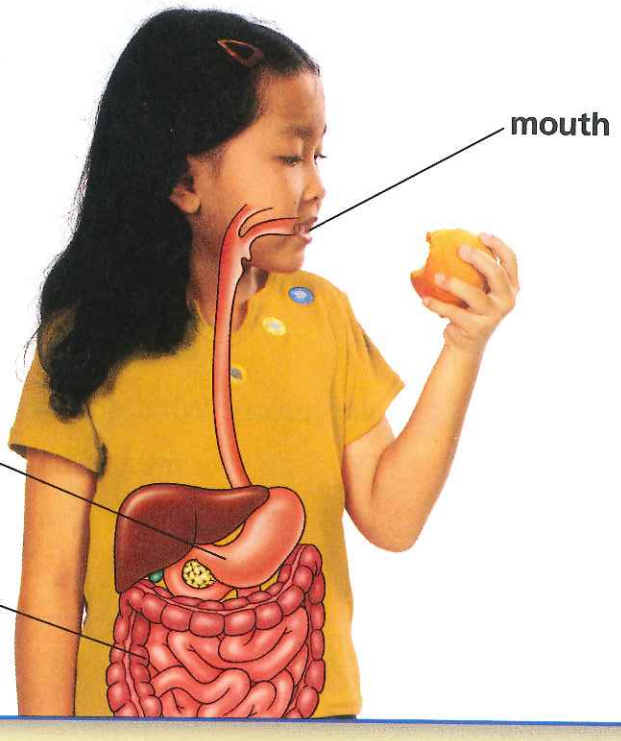
Lesson Focus
Your digestive system helps your body get energy from food.

Vocabulary
digestive system
stomach

The **digestive system** is made up of the mouth, the stomach, and other body parts. Your digestive system helps your body use food to get energy.

Caring for Your Digestive System

- Eat vegetables and fruits. They help other foods move through your digestive system.
- Eat slowly. Chew your food well.



Cultural Connection

Foods Around the World Write this rhyme on the board:

When my stomach growls and I need to eat,
____ just can't be beat.

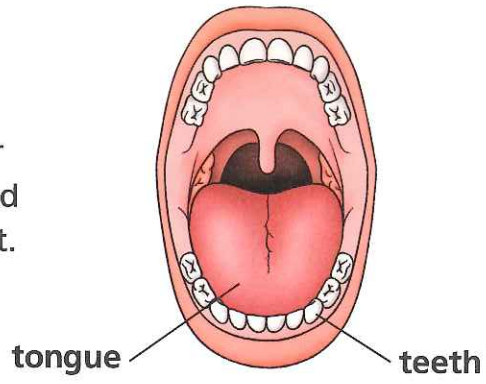
Ask children to fill in the blank with names of foods from different cultures, such as rice and beans, pita bread, tacos with beef, and spaghetti and meatballs. Use a map to show the countries each food comes from.

Teacher Tip

Simulate the Stomach
Demonstrate for children how the stomach works to digest food. Fill a zip-top bag with soda crackers and water, and seal the bag. Slowly mash the bag. Tell children that this is how the muscles in the wall of the stomach mash the food people eat. Point out that the stomach juices break food down even more quickly and completely than the plain water in the bag does.

Mouth

You use different parts of your mouth to eat. Your teeth bite and chew your food. Your tongue pushes the food around your mouth so you can chew it. Then your tongue pushes the food into your throat.



Stomach

The food moves from your throat to your stomach. Muscles in your **stomach** mix special juices with the food. The food becomes a thick liquid. Then the liquid moves from your stomach to other parts of your body.

Review

1. **Vocabulary** What does your **digestive system** do?
2. How do your teeth help you eat?
3. Write about what your tongue does.

Teacher Tip

The Digestive System Tell children that the long tube from the mouth to the stomach is called the *esophagus*. After food leaves the stomach, it goes into the *small intestine*, where nutrients pass through the walls of the small intestine into blood vessels. Any food that isn't absorbed passes through the *large intestine* and out of the body.

Science

How the Body Takes In Food To help children visualize how food is absorbed, or taken in, by the body, do the following activity. Cut off a small piece from the bottom of a celery stalk. Then put the stalk into a clear glass of water. Add a few drops of blue or red food coloring to the water. Wait a few days for the celery to absorb the food coloring. Then draw the comparison between the way the celery absorbs food coloring and the way the body absorbs food.

2. TEACH

Interpret Visuals—Diagrams

Direct attention to the diagram of the digestive system on page 10. Explain that this system includes body parts, located in various places, that work together to break down food into substances the body needs.

Discuss

Explain that digestion begins in the mouth. Talk about the functions of the teeth and tongue. Discuss the importance of chewing food well to make it easier to swallow and to prevent choking. Then have children read these pages. **What does your stomach do when you eat?** Muscles in my stomach mix special juices with the food so that the food becomes a thick liquid.

Critical Thinking **Why do you need energy?** Energy gives my body the power I need to do everything—walk, breathe, play, learn, study, and so on.

When Minutes Count . . .

Transparency 9: The Digestive System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Focus Skill Sequence

On page 10, have children use their fingers to trace the path that food travels from the mouth to the stomach. Ask children to describe what happens to food in the mouth and in the stomach.

3. WRAP UP

Review

1. My digestive system helps my body use food to get energy.
2. My teeth bite and chew food.
3. My tongue pushes the food around my mouth so I can chew it. My tongue also pushes the food into my throat.

LESSON 4

Pages 12–15

Objectives

- Identify the parts of the respiratory and circulatory systems.
- Describe the functions of the respiratory and circulatory systems.

When Minutes Count . . .

Complete the Quick Study, Lesson 4, Activity Book pp. 1–2 (shown on p. 5).

Program Resources

- Activity Book pp. 1–2
- Transparencies 10–11

Vocabulary

respiratory system p. 12, **lungs** p. 13, **circulatory system** p. 14, **heart** p. 14, **blood vessels** p. 14

Daily Fitness Tip

Tell children that they should never touch someone else's blood. Make sure they understand that blood can carry germs that can cause illness. Explain that health-care workers, such as doctors and nurses, wear latex gloves to protect themselves when they're helping people who are bleeding.

CSHP For more information, see *Be Active! Resources for Physical Education* pp. 175–176.

1. MOTIVATE

Have children place their hands on their chests. Then have them do jumping jacks. When they have begun to breathe more quickly, direct them to stop and again place their hands on their chests. **What has happened to your breathing and your heartbeat?** They have both become faster.

Tell children that they'll learn about two body systems that are connected to breathing and the heart—the respiratory and circulatory systems.

LESSON 4

Respiratory and Circulatory Systems

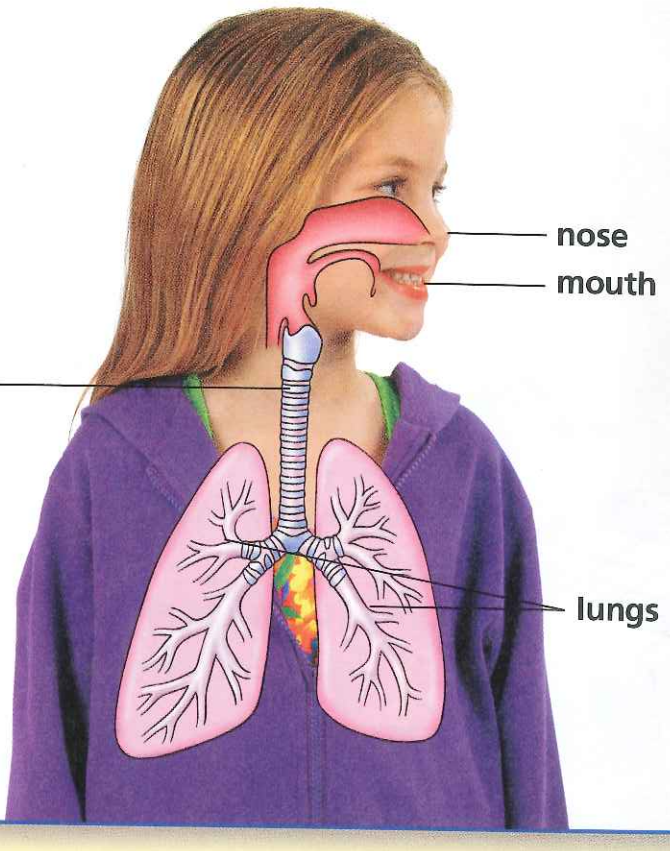
Lesson Focus

Your lungs help you breathe. Your heart pumps blood through your body.

Vocabulary

respiratory system
lungs
circulatory system
heart
blood vessels

The **respiratory system** is made up of the mouth, the nose, the lungs, and other parts of the body. Your respiratory system lets you breathe. Air goes in and out of your body through your mouth and nose.



ESL/ELL Support

LANGUAGE AND VOCABULARY Write the words *diaphragm* and *trachea* on the board. Pronounce each word, explain its meaning, and point out *ph* and silent *g* in *diaphragm* and *ch* in *trachea*.

Beginning Write each word on a card. Say each word, and have children repeat it. Then hold up a card. Tell children to raise their hands when they hear the word on the card, and then say a sentence containing the word.

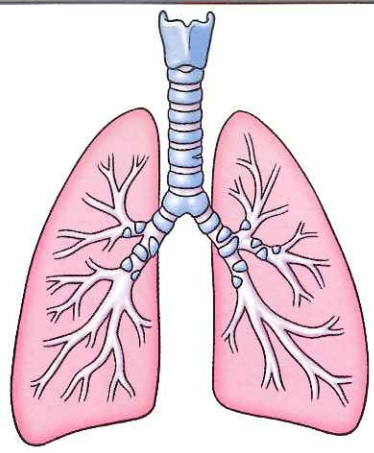
Intermediate Write each word on a card. Have children choose a card, pronounce the word, and find the word in their textbooks.

Advanced Write sentences that contain the words *diaphragm* and *trachea*, leaving blanks where the words should appear. Read the sentences aloud with children. Then have volunteers write the missing words in the blanks and read the complete sentences.

Lungs

When you breathe in, air moves into your **lungs**. They fill with air and get larger. When you breathe out, air leaves your lungs and they get smaller.

Your lungs take oxygen from the air. This oxygen helps your body work.



Caring for Your Respiratory System

- Exercise enough to make you breathe harder. Breathing harder makes your lungs stronger.
- Never put anything into your nose. Air goes into and out of your body through your nose.

13

Music

Musical Instruments Some musical instruments are played by blowing air into them to produce sounds. Ask children if they can name any such instruments. Show pictures of clarinets, flutes, oboes, trumpets, tubas, and other instruments that require a person to blow air into them. If possible, have children from your class or from other classes demonstrate how to play the instruments and how they control their breathing to make the correct sounds.

Teacher Tip

Mysterious Yawns Some people yawn when they're bored or tired. Studies have shown that people yawn whether the oxygen level in their blood is normal or low, refuting the speculation that yawning is triggered by a need for oxygen. Yawning and stretching both increase the heart rate and flex muscles and joints. This could make a person feel more awake. But there's no scientific explanation for the fact that yawning seems to be contagious.

2. TEACH

Interpret Visuals—Diagrams

Have children identify the diagram of the respiratory system on page 12. Have children point to each part of the respiratory system as you read its name. Tell children that the *diaphragm* is a muscle that enables people to breathe.

Discuss

What are two ways air can enter your body? through the nose or mouth

Tell each child to put a hand on his or her chest and breathe normally. **What do you feel?** my chest going up and down **When air enters your lungs, what are you doing?** breathing in **When air is leaving your body, what are you doing?** breathing out

Ask children to describe the function of the lungs. The lungs take in oxygen that the body needs.

Interpret Visuals—Pictures

Why are there bubbles in the picture at the bottom of this page? The bubbles contain air that is coming out of the child's lungs.

When Minutes Count . . .

Transparency 10: The Respiratory System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Focus Skill: Sequence

Describe the sequence of air entering and leaving your body when you breathe in and out. When I breathe in, air enters my nose or mouth and moves into my lungs. They fill with air and get larger. When I breathe out, air leaves my lungs, which get smaller. The air leaves my body through my nose or mouth.

TEACH *continued*

Discuss

Ask a volunteer to circulate around the room. If necessary, explain that *circulate* means "to move around." **What do you think the circulatory system of the body does?** Guide children to understand that this system causes blood to circulate throughout the body.

Show children how to find their pulses in their wrists. (Tell them not to use their thumbs when they're feeling their pulses.) Explain that the pulses they feel are from blood being pumped through their bodies. Have children read these pages.

Interpret Visuals—Diagrams

Explain that the blood vessels shown in red in the diagram are called *arteries*. Most arteries carry blood filled with oxygen from the heart to other parts of the body. After the body takes the oxygen, the blood returns to the heart through blood vessels called *veins*, shown in blue. The presence of oxygen makes blood red; blood without oxygen gives veins their bluish color.

Critical Thinking **When you look at your wrists, why does the blood in your blood vessels look blue?** This blood is no longer filled with oxygen and is going back to the heart.

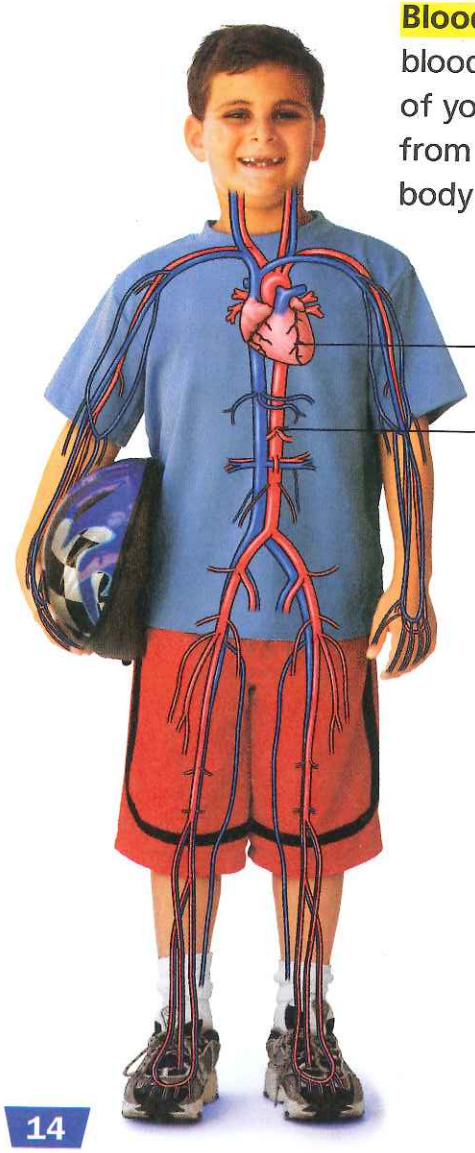
Health Background

Blood Blood is made up of plasma, red blood cells, white blood cells, and platelets. *Plasma* is the liquid part of blood, which carries chemicals such as vitamins and minerals. *Red blood cells* carry oxygen throughout the body and transport carbon dioxide, a waste gas, to the heart and lungs. *White blood cells* are part of the immune system. They fight infection by destroying harmful bacteria. *Platelets* help clot blood.

Source: *Encyclopædia Britannica*

GO ONLINE For more background, visit the **Webliography** in Teacher Resources at **www.harcourtschool.com/health** **Keyword** Human Body

The **circulatory system** is made up of the heart and blood vessels. Your **heart** is a muscle. It pumps, or pushes, blood through your blood vessels. **Blood vessels** are tubes that carry blood from your heart to every part of your body. The blood holds oxygen from your lungs. In this way, your whole body gets the oxygen it needs.



Meeting Individual Needs
Leveled Activities

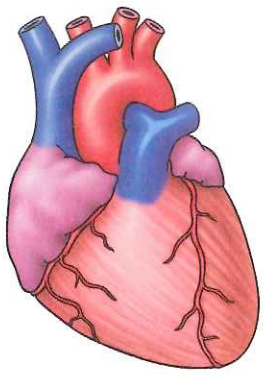
BELOW-LEVEL **Count the Beats** Tell children to take their pulses and count how many times their hearts beat in one minute. Have each child record his or her count.

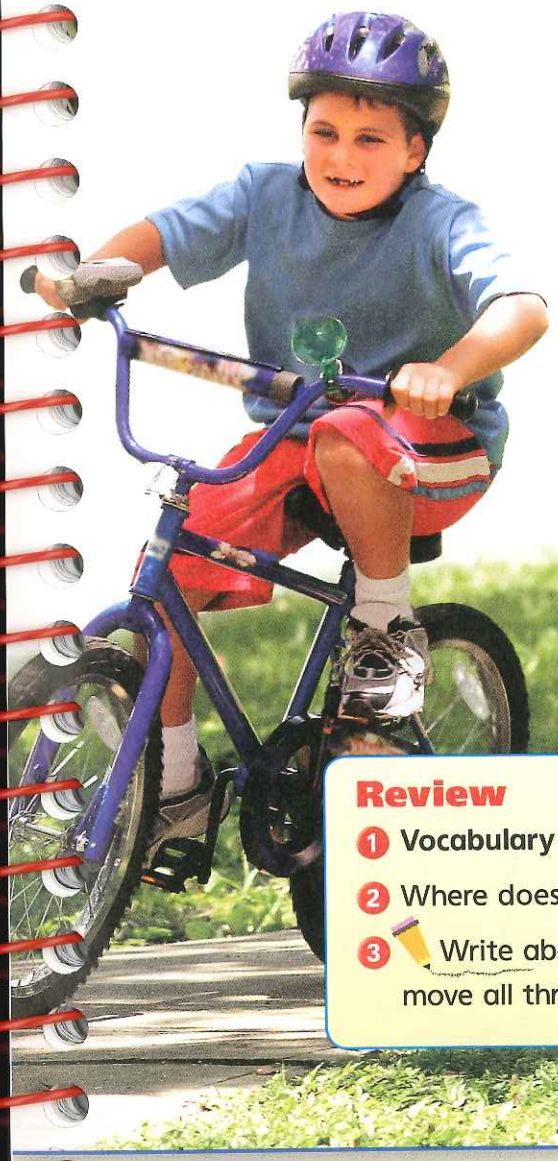
ON-LEVEL **Changing the Beat** Tell children to take their pulses for one minute while they're calm and rested and record the count. Then have them run in place for 15 seconds and take their pulses again. Have them compare their heart rates before and after running. Talk about why their heart rates increased after they exercised.

CHALLENGE **Graph the Beats** Have children take their pulses for one minute and record the count each time they do a different activity, such as sitting, walking, skipping, and doing jumping jacks. Children should do each activity for about 15 seconds before taking their pulses and should rest between activities to return their heart rates to normal. Then have them make a graph to show their heart rates after the different activities.

Heart

Your heart is always pumping. Your heartbeat is the sound of your heart pumping.





Caring for Your Circulatory System

- Exercise. Your heart muscle gets stronger when it works harder.
- Eat foods that help your blood carry oxygen. Meat and green leafy vegetables do this.

Review

1. **Vocabulary** What does your heart do?
2. Where does air enter your body?
3. Write about why it is important for blood to move all through your body.

Language Arts

Idioms An *idiom* is an expression whose meaning can't be understood from the literal meanings of the words. Without using the term *idiom*, discuss the following expressions that contain the word *heart*. Then challenge children to use the idioms.

cry your heart out: cry a lot; *break your heart:* cause one to feel sad; *have a heart:* be kind; *have a change of heart:* change one's mind

Math

How Much Blood Is in the Human Body? The average adult human body contains about six quarts of blood. To show children how much this is, supply small groups with quart bottles or measuring cups and have them measure six quarts of water into a large bowl or bucket. Explain that children have less blood than adults. Tell children to calculate and measure how much blood a child has if the child has half the amount of blood that an average adult has.

Discuss

Have children make a fist. Tell them that this is about the size of the heart. Next, direct children to put their other hand on their chests to feel their heartbeats.

Have children identify the heart and explain its function. The heart pumps blood. **What is the function of the blood vessels?** The blood vessels carry the blood throughout the body.

Critical Thinking **Why does this lesson have a picture of a boy riding a bike?** It shows one kind of exercise that's good for the heart. **What other activities are good for the heart?** Responses should include activities that make the heart beat faster, such as swimming, running, and jumping rope.

When Minutes Count . . .

Transparency 11: The Circulatory System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Activity

Responsibility Iron helps carry oxygen in the blood. Have children discuss how they can eat responsibly by choosing foods, such as lean beef, lean pork, and spinach, that have a lot of iron in them.

Activity

Refuse Have children discuss the steps they can use to refuse cigarettes: say *no* and give a reason, such as "It's bad for my health;" say *no* again; and get help from a trusted adult.

3. WRAP UP

Review

1. Your heart pumps blood.
2. Air enters your body through your mouth and nose.
3. Blood carries oxygen that your body needs.

LESSON 5

Pages 16–17

Objectives

- Identify the parts of the nervous system.
- Describe the functions of the nervous system.
- Explain the need to wear protective equipment when playing sports.

When Minutes Count . . .

Complete the Quick Study, Lesson 5, Activity Book pp. 1–2 (shown on p. 5).

Program Resources

- Activity Book pp. 1–2, 5
- Transparency 12

Vocabulary

nervous system p. 16, **brain** p. 16

Daily Fitness Tip

Tell children that one of the best ways to prepare for a test is to get a good night's sleep the night before. Explain that when the brain is rested, it's easier to think clearly and answer questions quickly.

For more information, see *Be Active! Resources for Physical Education* pp. 141–142.

1. MOTIVATE

Play a game of "Simon Says." Use simple directions such as the following: *Simon says, "Raise your arms." Simon says, "Hop." Touch your head with your left hand. Simon says, "Smile."* Ask children to guess which body part is making their muscles move. Help children identify the brain and explain that it sends a message to the muscles that tells them to move.

Activity

Responsibility Have children discuss how they can demonstrate personal responsibility by going to bed at the proper time so that they get the necessary amount of sleep.

LESSON 5

Your Nervous System

Lesson Focus
Your nervous system controls the way your body works.

Vocabulary
nervous system
brain

Your nerves and brain are parts of your **nervous system**. Your **brain** gets information from your five senses—sight, hearing, touch, smell, and taste. Then your brain sends out messages through your nerves to tell your body what to do.

ESL/ELL Support

COMPREHENSIBLE INPUT Children may have difficulty with this lesson because the concepts are abstract. Give children additional opportunities to work with the concepts, using simplified language.

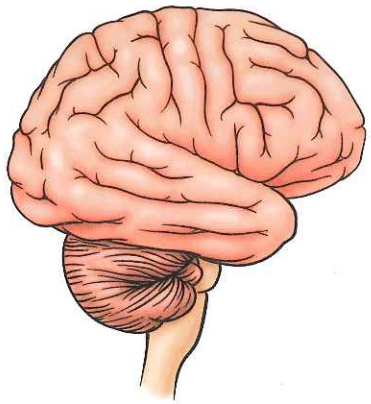
Beginning Ask children simple questions that require only *yes* or *no* answers. For example, *Is your brain in your arm?*

Intermediate Ask children questions about the text that require short answers. For example, *Which part of your body gets information from your five senses?* your brain Then have children repeat a complete sentence after you, such as *Your brain gets information from your five senses.*

Advanced Write on the board some simple sentences about the lesson content. Leave out an important word in each sentence. Example: *Your _____ sends out messages through your nerves.* Have children copy the sentences and insert the missing words.

Brain

Your brain controls all the other parts of your body. Your brain also lets you think, remember, and have feelings.



Caring for Your Nervous System

- Wear a helmet to protect your head and brain when you ride a bike or play sports.
- Get plenty of sleep. Sleep lets your brain rest.

Review

1. **Vocabulary** What parts of your body make up your **nervous system**?
2. What are the five senses?
3. Write about three things your brain does.

Art

Safety Posters Have children make safety posters that promote wearing helmets to protect the brain from injury. Identify activities for which people should wear helmets, such as biking, skateboarding, football, hockey, and horseback riding. Then have each child make a poster of people wearing helmets as they participate in one of the activities or sports. Tell children to write a slogan or phrase on the poster, such as "Be smart! Wear a helmet."

ACTIVITY BOOK P. 5

Name _____

AB Vocabulary Reinforcement

Body Systems

Write the words from the word box.

muscles	heart	brain	lungs
blood vessels	skull	spine	stomach

skeletal system	
skull	protects the brain
spine	holds up the body
muscular system	
muscles	work to move the bones and hold up the body
digestive system	
stomach	changes food into a thick liquid
circulatory system	
heart	pumps blood
blood vessels	carry blood through the body
nervous system	
brain	controls all other parts of the body
respiratory system	
lungs	fill with air when you breathe in

Available online.

2. TEACH

Discuss

Explain that the adult brain weighs about three pounds and fills the space in the skull. Have children read these pages.

Tell children that the spinal cord is a cylinder, or tube, of nerve tissue that runs from the base of the brain down the spine. Nerves branch out from the spinal cord to other parts of the body. Explain that messages travel to and from the brain through the spinal cord. Different parts of the brain control different parts of the body.

Interpret Visuals—Pictures

Why is the girl wearing a helmet while she plays baseball? to protect her brain from injury **When else should you wear a helmet?** Possible responses: when biking, skating, or playing football

When Minutes Count . . .

Transparency 12: The Nervous System can be used to present material in this lesson. *Interactive Transparencies available on CD-ROM.*

Focus Skill Sequence

Have children perform a multistep task in sequence, such as finding a pencil, sharpening it, returning to their desks if necessary, and writing their names. Discuss how the nervous system helped them perform the task.

3. WRAP UP

Review

1. The nerves, spinal cord, and brain make up the nervous system.
2. The five senses are sight, hearing, touch, smell, and taste.
3. Possible responses: gets information from your five senses; controls all the other parts of your body; lets you think, remember, and have feelings

Life Skills

Communicate
Make Good Decisions
Manage Stress
Refuse
Resolve Conflicts
Set Goals

Objectives

- List the steps and describe the importance of setting goals.
- Use the steps to set goals.

Program Resources

- Activity Book p. 4
- Poster 12

Vocabulary

goal p. 18

1. MOTIVATE

Write each of the following on a separate card: *swimming, biking, running, jumping rope, walking, basketball, soccer.* Tell children that exercising regularly is an important goal to set. Then explain that each card has the name of a good activity for keeping their bodies fit. Ask volunteers to choose a card and act out the activity while the other children guess what it is.

2. TEACH

Discuss

Ask children whether they have set goals for themselves and what the goals were. Encourage them to discuss all types of goals, not just exercise goals—for example, reading a book each week. Have children talk about whether they met their goals.

Interpret Visuals—Pictures

Point out the picture story. Have children predict what goal the girl is setting for herself. Then have them read these pages to see if they were right.

LIFE SKILLS

Set Goals

A **goal** is something you want to work toward, or reach. You can set goals for yourself. You can reach your goals. What health goal do you want to reach?

1 **Set a goal.**

Lea's goal is to keep her body healthy. Lea knows that exercise will help her reach her goal.

2 **Make a plan to meet the goal.**

Lea and her mom talk about Lea's exercise plan. Each day, Lea will swim or do chores.

Teacher Tip

Setting Achievable Goals
When children talk about setting health goals in the Problem Solving section, make sure the goals are reasonable and can be achieved. If a child has an unreasonable goal, such as running 20 miles a day or playing soccer for 4 hours a day, explain that such goals can't be met because they're too difficult and time-consuming. Guide children in making time recommendations and choosing appropriate levels of difficulty.

ACTIVITY BOOK P. 4

Name _____ Problem Solving

Set Goals
Steps for Setting Goals

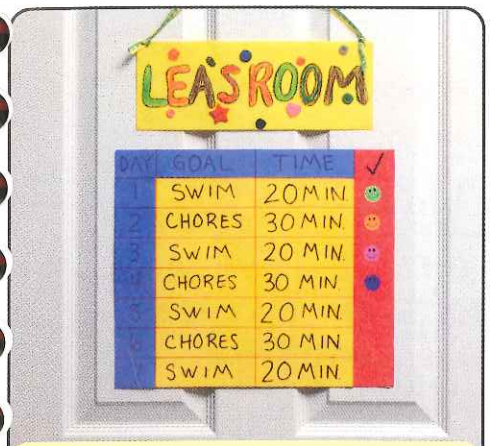
1. Set a goal.
2. Make a plan to meet the goal.
3. Work toward the goal.
4. Ask yourself how you are doing.

Use the steps to help you solve this problem.
You want to keep your body healthy. You know you should exercise. What can you do to meet your goal?

Possible response: I will set a goal to walk for 30 minutes every day. I will use a calendar to keep track of when I walk. This will show me how I am doing.

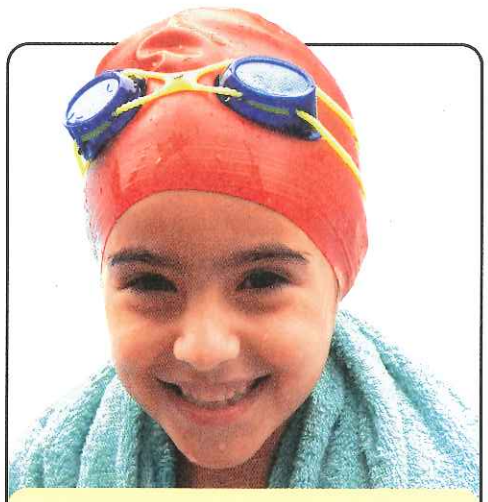
Available online.
www.harcourtschool.com/health

3 **Work toward the goal.**



Lea makes a chart. Each day she swims or does chores. Then Lea marks the chart.

4 **Ask yourself how you are doing.**



Lea follows her exercise plan. She thinks she is doing well. Lea knows she can reach her goal.

Problem Solving

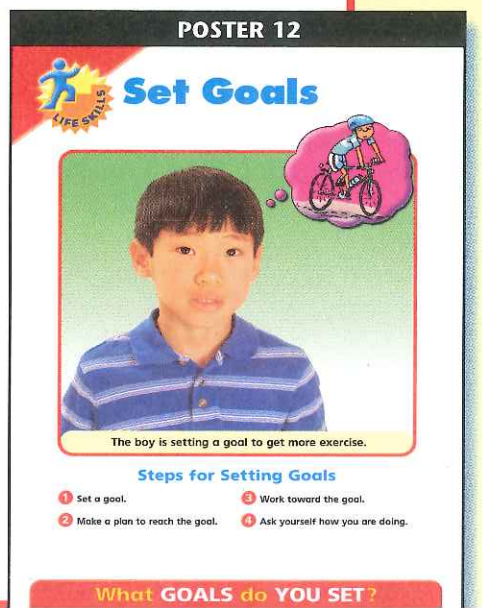
Use the steps to solve this problem.

You want to keep your body healthy. What can you do to meet this goal? How can you keep track of what you do and how you are doing?

Using the Poster

Activity Have children work in pairs to discuss goals they would like to set and the steps they would follow for setting those goals.

Display Poster 12 to remind children of the steps for setting goals. Have children list the steps of goal setting. Have them explain the importance of setting and working toward goals.



TEACH *continued*

Step 1

What's the first thing Lea needs to do? set a goal **What goal does Lea decide on?** to keep her body healthy **What will Lea do to reach her goal?** exercise

Step 2

What's the second thing Lea needs to do? make a plan to meet her goal

Critical Thinking Have children explain why getting help from parents and other trusted adults can be helpful when making decisions about setting health goals. Possible responses: They can help me set reasonable goals and decide how to reach them. They might have good tips and ideas.

Step 3

What does Lea use to keep track of how she's doing? a chart

Step 4

What will Lea do? work toward her goal by following her plan

Building Good Character

Honesty Have children discuss why they need to be honest with themselves and others regarding how well they're meeting their goals. If they pretend that they're reaching their goals when they're not, they won't be able to get the help they need to meet their goals.

3. WRAP UP

Problem Solving

Responses should reflect the steps for setting goals. Children may suggest exercising or eating healthful foods to keep their bodies healthy. Children can use a diary, journal, chart, or calendar to keep track of how they're doing.

Activities

Math
Activity Tally Table

Objectives

- Interpret data on a tally table.
- Make a tally table.

Suggested Time 20 minutes

Hints

- Point out that each mark on the tally table represents one child.
- Suggest that children interview classmates to find out some activities they do to stay fit. Then have children record their information in a tally table.

Learn More Have children ask their parents what activities they like to do to stay fit. Volunteers can share their parents' responses with the class.

Writing
Ways You Are Changing

Objectives

- Demonstrate an understanding of the aging process.
- Identify ways people change as they get older.

Suggested Time 30 minutes

Hints

- Help children brainstorm changes they're going through, such as growing taller or becoming able to help more at home.
- Encourage children to think about ways their needs have changed. For example, they may no longer need help choosing clothes in the morning.

Learn More Have children ask older relatives or adults at school how they have changed since they were children.

For **writing models** with examples, see *Teaching Resources* pp. 47–58. Rubrics are also provided.

ACTIVITIES

Math

Activity Tally Table

How many children chose running?

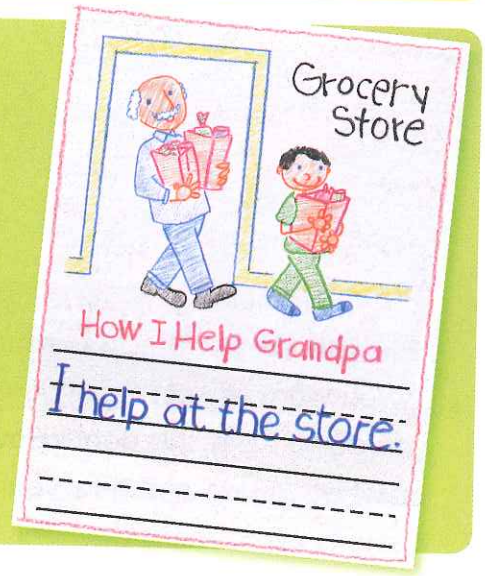
Which exercise was chosen by the most children?

Make a tally table of some ways your classmates stay active.

Writing

Ways You Are Changing

Think about ways you are changing as you grow. Write about some of these changes. You may want to draw pictures to go with your sentences.



GO ONLINE For more activities, visit The Learning Site. www.harcourtschool.com/health

Math

Sets of Exercises Tell children that sometimes it's a good idea to do sets of exercises to keep from getting too tired. Explain that a set is a certain number of one kind of exercise. Then help children solve the following word problem:

Matt does 2 sets of 10 jumping jacks. How many jumping jacks does he do altogether? 20

Language Arts

Read a Story Ask a librarian to choose a few books that tell stories about children and grandparents or other older people. Read the stories to the class. Discuss each story, focusing on how the different generations relate to each other. Point out any health needs of older people that are mentioned in the story.

Caring

Building Good Character

Being a Good Friend

As you grow, you will make new friends. You are a good friend when you are caring toward someone. A **caring** friend is thoughtful and kind. There are many ways to be a caring friend. Help your friends. Think about their feelings. Share with them. Listen carefully when they speak. Care about others who are different from you. Include them in your activities. They can be your friends, too.

How are these friends showing they care about each other?

Activity

Work with a partner. Act out some ways you can be a good friend.

Building Good Character

Caring
Citizenship
Fairness
Respect
Responsibility
Honesty (Trustworthiness)

Objective

► Recognize the importance of caring by being a good friend.

Program Resources

► Poster 1

Vocabulary

caring p. 21

BEFORE READING

Discuss ways children can show that they care for family members, such as taking tissues to someone who's sick or being quiet when someone's sleeping.

DISCUSS

Explain to children that when they're thoughtful and kind toward others, people are likely to be caring toward them. They should listen politely and not talk when others are speaking. It's especially important to be caring to people who might look different from them or dress differently from the way they do.

ACTIVITY

Discuss ways friends can care for one another:

- Help a friend choose good foods to eat and exercise to stay healthy.
- Ask a classmate you usually don't play with to play a game with you.
- Help a classmate with schoolwork.
- Be a good listener when a friend needs to talk—don't interrupt.
- Make a get-well card, and send it to a sick friend.
- Don't make fun of anyone . . . ever!

Using the Poster

Activity Suggest that small groups of children make a mural showing different ways in which friends can show they care about one another.

Display Poster 1 to remind children of ways friends can show that they care for one another. The poster can be displayed in the classroom, the school cafeteria, or another common area.

Chapter Review

Pages 22–23

Use Health Words 5 pts. each

1. b
2. d
3. c
4. a

Reading Skill 20 pts.

5. baby, child, teenager
   Possible sentences:
   A **baby** needs a lot of care.
   A **child** learns to do things.
   A **teenager** is bigger and older than a child.

Use Life Skills 20 pts. each

6. Lea is talking with her mother to get help in making her exercise plan.
7. You can set a goal, make a plan to meet the goal, work toward the goal, and ask yourself how you're doing.

Write About It 20 pts.

8. Possible responses:
   - Wear safety gear, such as a helmet, when biking and playing sports.
   - Eat foods that help keep bones hard and strong.
   - Exercise to keep bones and muscles healthy and strong.
   - Stretch muscles before exercising.
   - Exercise and play sports that make me breathe harder. This will make my lungs and heart stronger.
   - Eat vegetables and fruit to help with digestion.
   - Get plenty of sleep to let my brain rest.

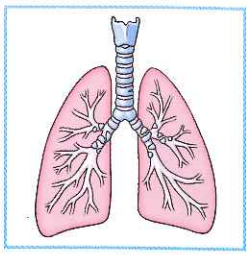
Chapter Review

Use Health Words

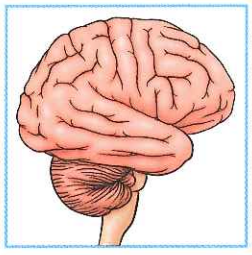
Tell which picture goes with the word.

1. lungs
2. heart
3. brain
4. muscle

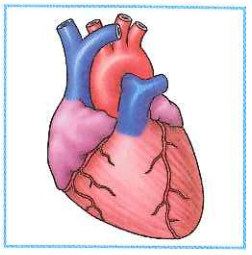
a.



b.



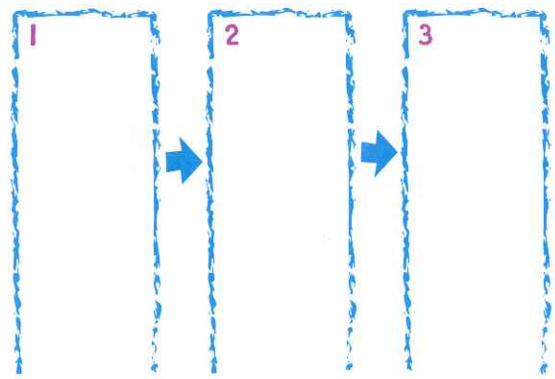
c.



d.

Reading Skill

5. Sequence these words–teenager, baby, child. Write a sentence for each word.

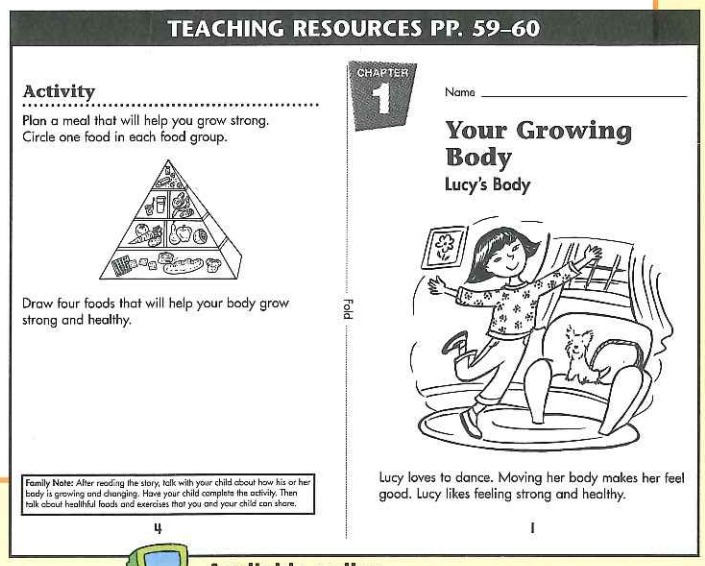


Take-Home Booklet

Distribute copies of the Take-Home Booklet. Have children fold the pages to make four-page booklets to share with their families.

Alternative
Read the Take-Home Booklet story aloud.

Supports the Coordinated School Health Program



Available online.

Use Life Skills

Look at the picture. Then answer the questions.

6. What is Lea doing to help her set a goal?
7. How can you set and reach health goals?

Write About It

8. Write a list of ways you can care for your body as you grow.

I can care for my body.

Performance Assessment

Use the Chapter Project and the rubric provided on the Project Evaluation Sheet. See *Assessment Guide* pp. 18, 56, 62.

Portfolio Assessment

Have children select their best work from the following suggestions:

- Leveled Activities, pp. 6, 14
- Lesson Review, pp. 11, 17
- Writing Activity, p. 20

See *Assessment Guide* pp. 12–16.

Formal Assessment

ASSESSMENT GUIDE P. 19

1 Chapter Test

Name _____

Your Growing Body

Choose the best title for each list. Write the letter of the title on the line.

a. Caring for Your Nervous System
b. Caring for Your Skeletal System
c. Caring for Your Digestive System

1. b	**2.** c	**3.** a
Eat foods that help keep bones hard and strong. Wear a helmet and other safety gear to protect your bones when you play sports. Exercise to keep bones healthy and strong.	Eat vegetables and fruits. Eat slowly. Chew your food well.	Wear a helmet to protect your head and brain when you ride a bike or play sports. Get enough sleep.

ASSESSMENT GUIDE P. 20

Name _____

Write the word that best answers the riddle.

4. I am made up of many small bones.
I help you sit, stand, and move.
I am also called a backbone.
I am your spine.

5. We pull on your bones to move them.
Some of us help hold you up.
You should stretch us before you exercise.
We are your muscles.

Circle the letter of the word that best completes the sentence.

6. When you breathe in, ____ moves into your lungs.
a. blood **b.** food **(c.)** air

7. After you are a teenager, you will be ____.
(a.) an adult **b.** eyes **c.** bones

8. Your ____ lets you think, remember, and have feelings.
a. stomach **(b.)** brain **c.** tongue

ASSESSMENT GUIDE P. 21

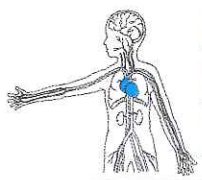
Name _____

9. Read the sentences. Write them in order in the boxes.

Food moves to the stomach.
Your tongue pushes food into your throat.
Your teeth bite and chew food.

Your teeth bite and chew food.	Your tongue pushes food into your throat.	Food moves to the stomach.

10. Color the heart. Write about what it does.



Possible response: The heart pumps blood through the blood vessels. It is always pumping. Your heartbeat is the sound of your heart pumping.