

GRADE 1: LESSON PLAN 1

ANATOMY: WHERE IS YOUR HEART? WHAT DOES IT DO?

Goals

Students will be able to describe the location of the heart and its general function.

Instructional objectives

Students will be able to

1. Identify the size and general location of the heart.
2. Identify the heart as a muscle.
3. Describe, in general terms, the heart's basic function, which is to pump blood through the body.

Background information

The heart is a muscle that pumps (or pushes) blood through the body. Located just to the left of the middle of your chest, your heart is about the size of your own fist.

Materials

1. Illustration: "Inside Me" (Activity 1-A)
2. Poem: "My Special Pump" (Activity 1-B)
3. Worksheet: "Where Is Your Heart?" (Activity 1-C)
4. Crayons or markers
5. Stethoscope or model made from tubing and top section of a 2-liter bottle or a funnel
6. Model of basic pump (bicycle pump, balloon, plastic liquid-soap bottle, etc.)
7. Classroom computer with Internet access

Introduction

Tell students that you have a riddle for them to answer: What is something that we all have, is the size of your fist, and makes a lub-dub sound? After students guess correctly that you are describing the heart, encourage them to share with the class any other information that they know about the heart. Write some key words on the board or chart paper to record their ideas. Put the title "What We Know About Our Hearts" at the top of the chart. Tell students that they will be learning more about the heart: where it is located, its size, and what it looks like. They will learn things that they can do to have a healthy and strong heart.

Lesson procedures/activities

1. Ask students if they know where their heart is located. Ask them to show you where they place their hand when they say the "Pledge of Allegiance" each day. Remind them that their heart is about the size of their fist. Have them make a fist and place it on their chests, over their hearts. Present the illustration "Inside Me" (Activity 1-A) on a transparency or enlarged poster, so that students can see the location of the heart inside their bodies.
2. Introduce the poem titled "My Special Pump" (Activity 1-B). Students may wish to recite it as a rap song. Challenge the class to make up actions that will help them remember the song.
3. Ask the class if anyone noticed that "My Special Pump" refers to the heart as a muscle. Tell them it is a different kind of muscle than those in our arms and legs. Have them extend one of their arms by their side and feel the muscle (the biceps) at the top of the arm with the other hand. Ask them to notice how it feels. Next, ask

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them to flex their biceps muscle and feel the difference. Ask them to feel the difference in the muscle. They will probably say it is bigger or harder. Explain how they had to think to move their arm up and flex that kind of muscle. The muscle in their arm is a skeletal muscle. Tell them the heart muscle is different; it keeps working without us having to do anything. The heart muscle is a smooth muscle that flexes and relaxes on its own, even while we are sleeping.

4. Ask the students what they think causes the “lub-dub” sound the heart makes. Ask them if they know the name of the instrument the doctor or nurse uses to listen to the heartbeat. (If possible, borrow a stethoscope from the school nurse, so the students will have an opportunity to listen to their own heartbeat. If a stethoscope is not available, a model of one can be made by cutting off the top section off of a 2-liter bottle or by using a medium-to large-sized funnel and attaching rubber tubing to the mouth of the bottle top or end of the funnel. For sanitary purposes, if you use a long enough piece of tubing, you can snip off a piece at the end each time it is used. A cardboard paper-towel tube could be used, but it is not as effective for hearing the heart, especially in a typical classroom environment.) After students have the experience of hearing a heartbeat, show them how they can feel their heartbeat by placing their first two fingers on the inside of their wrist or front of their neck. You will probably need to assist students in placing their fingers on the best location to find their pulse.
5. Tell students that the sound of our heart beating tells us our heart is pumping blood through our body. Ask them to hold out their fist again, but this time, ask them to squeeze and relax their fist again and again. Explain that this how a pump works and that our heart muscle works like a pump.

Using a bicycle pump, a balloon partially filled with water and securely tied, a kitchen basting utensil, or a liquid-soap bottle, allow students to experiment with pumping actions. Explain to students that our hearts push (or pump) blood throughout our bodies. The blood carries good things to our bodies’ cells (like oxygen from the air we breathe and nutrients from the food we eat) and takes away the bad things we don’t need. Refer to the “Inside

Me” illustration to show students where their lungs are. Have them breathe in deeply and breathe out again.

Point out that the lungs are breathing in air that we need and breathing out air that has been used.

6. Ask students to hold out their arm and make a fist again. This time, explain that you want them to continue flexing their fist until you tell them to stop. When students appear to tire, tell them they may stop. Ask them how their hand feels. Most will say it is tired or it hurts. Remind them that our heart muscle works all of the time, without us doing anything or thinking about it. Healthy hearts do a good job pumping blood to our bodies, but an unhealthy heart can have a hard time doing its job.
7. Divide students into groups and have them rotate through the centers. Provide detailed directions for each center.
 - **Centers 1 and 2: Pumping Stations:** Use dishpans (to catch water), rubber tubing, a funnel, and water. Students can experiment with the flow of water (representing the blood) through the tubes (representing the arteries and veins). Provide craft syringes, basting utensils, plastic soap bottles, and smaller tubing for experimenting. Make permanent obstructions in some of the tubing so that students can begin to understand what happens when the heart tries to pump blood through blocked blood vessels.
 - **Centers 3 and 4: Computer Stations:** Allow small groups of students to view animated illustrations of the heart and the flow of blood. See the Texas Heart Institute website (texasheart.org) for animated graphics of the heart. Allow students to discuss what they observe.

Guided practice

Using the illustration “Inside Me” (Activity 1–A), have students identify the heart and color it red, identify the lungs and color them green, and identify the blood vessels (arteries and veins) and color them blue. With a partner at their table, have them discuss how the heart works.

Independent practice

Have students draw the heart and lungs in the correct location on an illustration of the human body (“Where Is Your Heart?”; Activity 1–C). Have them write a description of what the heart and lungs do. Challenge them to show the arteries that carry blood to the rest of the body.

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Extension activity

Allow students to explore Internet sites that describe how the lungs and heart work together to supply oxygen-rich blood to

the body and how the inner parts of the heart work. (Example website: www.howstuffworks.com)

Assessment

Using an observation checklist during guided and independent practice activities and during whole class response, you should be able to assess students' understanding of the objectives:

	Tom	Sara	Steven	Lara	Paul
Described the size and location of the heart	X	X	X	X	X
Drew the heart in the correct location on an illustration of the human body	X		X	X	
Indicated the heart is a muscle that pumps blood through the body	X	X	X	X	X

Closure

Refer back to the chart, "What We Know About Our Hearts," that you made with the class at the beginning of the lesson. Review some of the ideas that students had about the heart.

Ask them if they want to make any changes or add new ideas to their class list. End the lesson with volunteers leading the class in singing or reciting "My Special Pump."

GRADE 1: LESSON PLAN 2

NUTRITION: MAKING HEALTHY FOOD CHOICES

Goals

Students will understand the importance of making healthy food choices for a healthy heart.

Instructional objectives

Students will be able to

1. Discuss the connection between what we eat and a healthy body and heart.
2. Discriminate between healthy foods, or “good choices,” and “junk food.”
3. Plan a healthy meal or snack.

Background information

Students must be able to identify foods that they eat everyday, either from pictures or by name. They need to understand the concept of “healthy” as something that is good for the body. Students also need a basic understanding of the heart’s function—that it pumps the oxygen- and nutrient-carrying blood that our bodies need to be healthy. Students should also understand the definition of a healthy diet, which includes recommended daily servings from each of the major food groups and portion sizes based on age and activity level.

Materials

1. Worksheet: “Healthy Meals and Snacks” (Activity 1–D)
2. Booklet: “I’m Heart Smart!” (Activity 1–E)
3. Old magazines or newspapers
4. Paper, crayons, scissors, glue
5. Kraft (butcher) paper
6. Simple illustration or representation of the major food groups or the MyPyramid food guidance system
7. Pictures for discussion
8. Selections of children’s literature on subject of food choices
(see *Additional Resources*)
9. Worksheet: Connect the Dots (Activity 1–F)
10. Worksheet: Word Search (Activity 1–G)

Introduction

Display a picture of a person who appears to be sick in bed and a picture of an active person who appears to be happy and healthy. Encourage a discussion about how the people in the pictures might feel. Ask students to talk about the things we can do to make sure we are like the healthy, active person.

Review the general function of the heart, and ask students what might happen if we don’t take care of our hearts.

Lesson procedures/activities

Choose a piece of children’s literature on the subject of food choices (see *Additional Resources*), such as *Finn Cooks* by Birtie Miller, to read to the students. Discuss the main characters’ food choices. For example, using the book *Finn Cooks*, students could list all of the “junk food” or unhealthy choices that Finn makes. Emphasize the point that Finn makes some of the same food choices that we do. Tell the students that just as Finn’s mother wants to make a meal that is better for Finn, so do we want to make meals that are healthful and good for us.

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NUTRITION: MAKING HEALTHY FOOD CHOICES

1. Introduce a simple version of the major food groups or of MyPyramid that includes pictures of food. Discuss the different classifications of foods with the students. Create a graphic organizer, such as a “tree chart,” by writing the title word “Food.” On separate “branches” drawn from the title, write the main food groups underneath. Draw a number of smaller “branches” off of the main categories for students to place the foods that they will categorize. According to the new MyPyramid, the food groups are Fruits, Vegetables, Meat and Beans, Milk, Grains, and Oils. Discuss how MyPyramid recommends several daily servings of some foods and limits other foods. Talk about how eating too much of one kind of food can be unhealthy. Remind students of what happened to Finn when he ate a lot of “junk food.” Help students understand that we need all of the nutrients from all of the food groups to have a healthy body, but that some of these foods should be eaten in limited amounts. Using MyPyramid, discuss which foods should be limited.
2. Show pictures of food choices and have students vote on those choices by giving a “thumbs up” for healthy food choices and “thumbs down” for unhealthy or “junk food” choices.
3. Divide students into groups that will rotate through centers. Before students begin the rotations, explain the directions for each center and show examples of the products that they will make at some of the centers.
 - **Center 1: Smart-Shopper Card Sort** Find pictures of a wide variety of foods that could be found in the grocery store and glue them to card stock paper. On another card, draw or glue a picture of a shopping cart, and on yet another card, draw or glue a picture of a waste can. Students will card sort at this center by placing all of the healthy foods under the shopping cart picture and all of the “junk food” under the waste can picture. Place a letter on the back of each card, so that students may use a check sheet to assess themselves.

- **Center 2: Planning a Healthy Meal** Place this center under a poster with a picture of a kitchen. Provide a collection of magazines or newspaper advertisements, glue, scissors, crayons, and the “Healthy Meals and Snacks” worksheet (Activity 1–D). Using the food group chart or MyPyramid as a guide, have students find pictures of food in magazines or newspapers and plan a meal. Students may plan a healthy snack or a complete breakfast, lunch, or dinner. After students have completed the worksheet, they may look for pictures of unhealthy choices or “junk food” and glue them to the bottom of the page.
- **Center 3: Food Tree (Classification Center)** Have students draw with markers or crayons a picture of their favorite food. They will need to determine the primary food group the food or dish represents. Have them cut out the picture so that it will fit on the “tree chart” at the front of the room. Working with a partner, have the students tape their food under the correct food-group category.
- **Center 4: Learning to Make Better Choices** Have students review the book that was read to the class. (For the purposes of providing an example of how this center could be developed, the book *Finn Cooks* will be used.) Have students work together to create an alternative ending to the story or to change the story so that the main character—in this case, Finn—makes healthy food choices.

Independent practice

In a large-group setting, show the students an enlarged version of “Inside Me” (Activity 1–A). Review the earlier discussion about what the heart needs: healthy foods from all of the food groups and exercise to stay strong. Have students begin to work in their booklets, “I’m Heart Smart!” (Activity 1–E), with drawings, words, and pictures. Review the directions for the pages that you want students to complete.

Assessment

Using an observation checklist and rubric, you may assess students’ understanding of the lesson objectives as you observe their responses during center activities and large-group discussions and from examination of their booklet product.

Objective	Demonstrated lesson objective	Partially demonstrated lesson objective	Did not demonstrate understanding of the objective
Describes, through activities or verbally, the connection between a healthy diet and a healthy heart	X		
Discriminates healthy foods from “junk foods”	X		
Plans at least one healthy meal or snack		X	

Lesson adaptations

Students with fine motor difficulties may experience more success in Centers 1 and 4, while students who are reluctant to verbalize or have expressive language difficulties may be more successful in Centers 1, 2, and 3. An attempt has been made to create center activities that will accommodate diverse learning styles and abilities.

** Additional independent activities (Activities 1–F and 1–G) can be used for independent center activities.*

Extension activities

For students who are ready for more complex learning tasks, the following activities may be considered:

- Using menus from local restaurants, have students break down meal options and categorize the items to determine if each option includes foods from the different food groups. Have them discuss what they would typically order from the restaurant and decide if they need to make changes in their eating habits.
- Have students interview the cafeteria manager at the school to find out how school lunch menus are chosen and planned. Have them share the information with the class.

Closure

Provide an opportunity for students to share with their classmates their meal plans and their food tree item. Ask for a volunteer from each center group to share how they changed the story that was read to the class so that the main character in their story made healthy food choices.

Culminating activity

Involve students and parents in making a “I’m Heart Smart!” cookbook to share with the school. Ask each family to submit a favorite recipe that includes healthy ingredients, along with an illustration by the student. Once all of the recipes have been submitted, compile them into a class cookbook to be displayed in the library, office, or clinic. Distribute copies to families at an informal “Food Fair,” where each family brings their favorite healthy dish to share with others.

GRADE 1: LESSON PLAN 2

ADDITIONAL RESOURCES

Children's literature

- Bagley, Katie. *Eat Right*.
- Barchers, Suzanne and Rauhen, Peter. *Storybook Stew*.
- Barron, Rex. *Showdown at the Food Pyramid*.
- Berenstain, Stan and Berenstain, Jan. *The Berenstain Bears and Too Much Junk Food*.
- Carle, Eric. *The Very Hungry Caterpillar*.
- Child, Lauren. *I Will Never Not Ever Eat a Tomato*.
- Cooper, Helen. *Pumpkin Soup*.
- Ehlert, Lou. *Eating the Alphabet*.
- Ehlert, Lou. *Growing Vegetable Soup*.
- Frankel, Alona. *Prudence's Book of Food*.
- Gaga and Friends. *Pass the Celery, Ellery*.
- Gordon, Sharon. *You Are What You Eat*.
- Gustafson, Scott. *Alphabet Soup*.
- Herman, Debbie. *Carla's Sandwich*.
- Hobar, Russell. *Bread and Jam for Francis*.
- Kelley, True. *School Lunch*.
- Mayer, Mercer. *Good for Me and You*.
- Miller, Birte. *Finn Cooks*.
- Rockwell, Lizzie. *Good Enough to Eat*.
- Rubel, Nicole. *No More Vegetables*.
- Sears, William. *Eat Healthy, Feel Great*.
- Sharmat, Mitchell. *Gregory the Terrible Eater*.
- Sliverstein, Alvin. *Eat Your Vegetable! Drink Your Milk!*
- Smallwood, Sally. *Cool as a Cucumber*.
- Smallwood, Sally. *Sweet as a Strawberry*.
- Snow, Regeen. *Eat Your Peas, Louise*.
- Stevens, Janet and Crummel Stevens, Susan. *Cook-a-Doodle-Do*.
- Trumbauer, Lisa. *Eating Well*.
- Wells, Rosemary. *Max and Ruby's Midas*.
- Williams, Rozanne Lanczak. *Good Choices for Cat and Dog*.

Websites

- texasheart.org
- www.americanheart.org
- www.health.howstuffworks.com/adam-200083.htm
- www.mypyramid.gov

GRADE 1: LESSON PLAN 3

EXERCISE: EXERCISE FOR A STRONG HEART

Goals

Students will recognize the role that physical activity and exercise play in keeping the body and heart strong and healthy.

Instructional objectives

Students will be able to

1. Explain that exercise keeps the heart strong and healthy.
2. Identify activities that are good for the heart.

Background information

When we engage in physical activities, we breathe faster, and our lungs take in more oxygen. As we breathe faster, our hearts begin to pump faster to deliver the oxygen-rich blood to all parts of our bodies. Regular exercise makes our heart grow stronger.

Materials

1. Illustration: “Inside Me” (Activity 1–A)
2. Booklet: “I’m Heart Smart!” (Activity 1–E) (Redistribute the students’ booklets that were begun in the previous lesson)
3. Newspapers and magazines
4. Scissors, glue, crayons, paper
5. Taped music
6. Worksheet: Word Search (Activity 1–G)
7. Worksheet: Word Scramble (Activity 1–H)

Introduction

Gather students in an area where they can move safely. Tell students they are going to play “Follow the Leader” as you lead them in dance movements and exercises. Tell them when the music starts, they can begin marching in place. Then have them copy your movements until the music stops. After you lead them through a variety of movements and exercises, stop the music. While students continue to stand and cool down from their exercising, ask questions to elicit discussion about the signs they can see and feel that show them their hearts and lungs are working harder. Suggest that they hold one of their hands in front of their nose and mouth. “Are you breathing heavily or softly?” Now put your hand on your chest, over your heart. “Do you feel it beating harder? Are you feeling warmer than you were before? What do you think this kind of exercise will do for your heart?”

Lesson procedures/activities

Refer to an enlarged version of the illustration “Inside Me” (Activity 1–A). Identify the lungs and explain that they are the parts of the body that help us breathe in good air and breathe out used air. Explain that when we exercise, our lungs work harder to take in more oxygenated air. The lungs fill the blood with oxygen, and the heart begins to pump faster to get that oxygen-rich blood to other parts of the body. Explain to students that that is why we feel our heart beating faster and why we begin breathing harder during and after we exercise. Remind them that when we exercise our muscles, they get stronger. Ask them if our heart is a muscle. Will it grow stronger if we exercise?

1. Just as we need to eat foods from different food groups to nourish our bodies, we also need to perform different kinds of exercises to keep our bodies strong and

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EXERCISE: EXERCISE FOR A STRONG HEART

healthy. Show pictures of people, of all ages, involved in different types of sports and exercises. Also show pictures of people doing daily activities, such as mowing the lawn, cleaning the house, or washing the car. Encourage students to talk about activities that they have done, and allow them to demonstrate a few.

2. Talk about how some exercises make our muscles stronger (strength-building exercises), some make the heart and lungs strong and healthy (aerobic exercise), and some stretch the muscles and keep the body flexible (flexibility exercises). Ask students to follow your actions as you lead them through simple strength-building, aerobic, and flexibility exercises. Lead them in “cool-down” exercises to rest the heart and lungs. Lead a discussion about how we need to be engaged in a variety of exercises so that all parts of our bodies grow strong and stay healthy.

Adaptations

For students with physical challenges, fine or gross motor, show them ways to approximate the movements or have them use adapted equipment or materials for their participation. For example, for those unable to march in place, have them swing their arms as if they were marching. Accept and encourage any movements a child can do. For students who have difficulty cutting with scissors, use pictures on sticker sheets instead. Adapted scissors are also an option. When planning for these students, consult with the physical education teacher or occupational or physical therapists who serve your school for ideas in adapting the activity. A classroom aide or parent volunteer will be helpful in implementing the adapted activity.

Guided practice

On chart paper, have students list all of the activities that they have done since yesterday. Divide the chart paper into three sections: activities at school, activities after school, and activities with family at home. Call on volunteers to come to the chart and draw a star by the activities that they think will exercise the heart. Then call on volunteers to come to the chart and write “shhh” by those activities that

are quiet activities. Remind students that activities such as reading a book, drawing, or playing a board game are good for the mind, but such activities are not active enough to help the heart. Discuss how we need to have both types of activities every day—quiet activities to exercise our minds and active activities to exercise our bodies.

Independent practice

Distribute the students’ “I’m Heart Smart!” booklets (Activity K–E), which they began in the previous lesson, and have them turn to the pages about active and inactive things that we like to do. On one page, ask them to draw or cut and paste pictures from magazines that show physical activities that exercise the heart. On the opposite page, have them draw or paste pictures that represent quiet activities that rest the heart. On the last page, they can draw a happy picture of themselves. After they have completed their booklets, allow them to take them home to share with their families.

** Additional activities (Activities I–G and I–H) are included in the Lesson Plan Activities section.*

Assessment

Using an observation checklist, assess students’ understanding of the lesson objectives during large-group discussions and by their responses in their booklet product.

Closure

Have students tell a partner at their table something they learned about the heart and exercise.

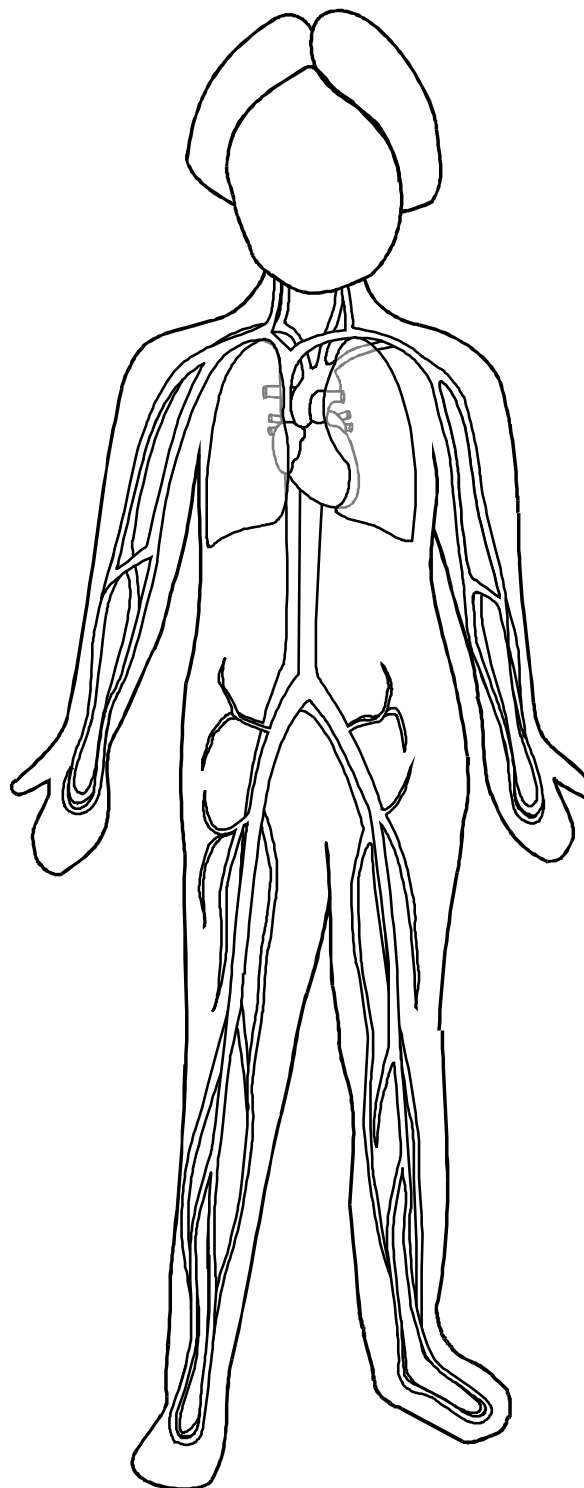
Culminating activity

Ask students to involve their families in charting their physical activities for one week. Challenge them to think of creative ways to involve their entire family in different activities. Remind them that daily activities and work, such as yard work and cleaning the house, are also types of physical activity that can exercise the heart. Suggest some fun things families can do together, such as a kickball game, skating or biking, chasing a Frisbee, or swimming. The following week, encourage students to share their charts and family pictures.

GRADE 1: LESSON PLAN ACTIVITIES

- 1-A Inside Me (illustration)
- 1-B My Special Pump (poem)
- 1-C Where is Your Heart? (worksheet)
- 1-D Healthy Meals and Snacks (worksheet)
- 1-E I'm Heart Smart! (student booklet)
- 1-F Connect the Dots (worksheet)
- 1-G Word Search (worksheet)
- 1-H Word Scramble (worksheet)

ANATOMY INSIDE ME



Do you know what your heart does?

This poem will help you remember the heart is a muscle that pumps blood through your body.

ANATOMY

WHAT DOES YOUR HEART DO?

My Special Pump

My heart is a special pump
and it's good at pumping blood.
When I listen to my heartbeat
I hear it go lub-dub.

My heart is made of muscle,
which makes it very strong.
If I work to keep it healthy,
it will last my whole life-long!

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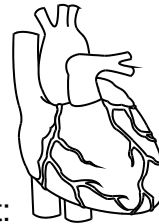
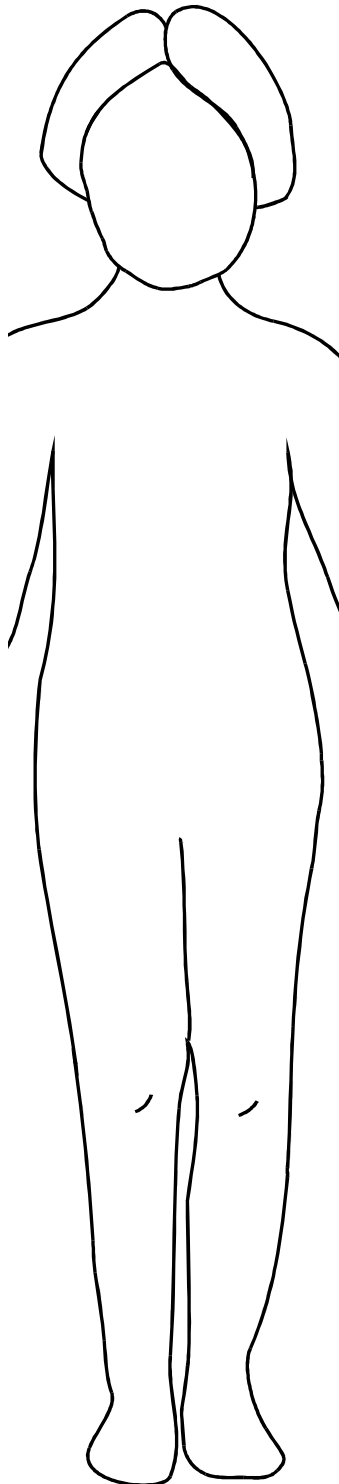
Do you know where your heart is located?

In the picture, draw the heart and lungs in their proper location. On the blank lines, write what the heart and lungs do.

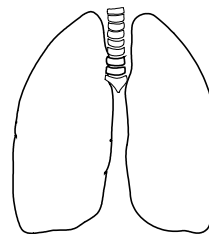
CHALLENGE: Draw the arteries. (Here's a hint: arteries carry blood to the rest of the body.)

ANATOMY

WHERE ARE YOUR HEART AND LUNGS?



Heart:



Lungs:

Your heart needs healthy food—not junk food—to stay strong.

Can you choose a healthy meal or snack?

Using magazines and newspapers, cut out pictures of healthy foods. Glue the pictures to your plate.

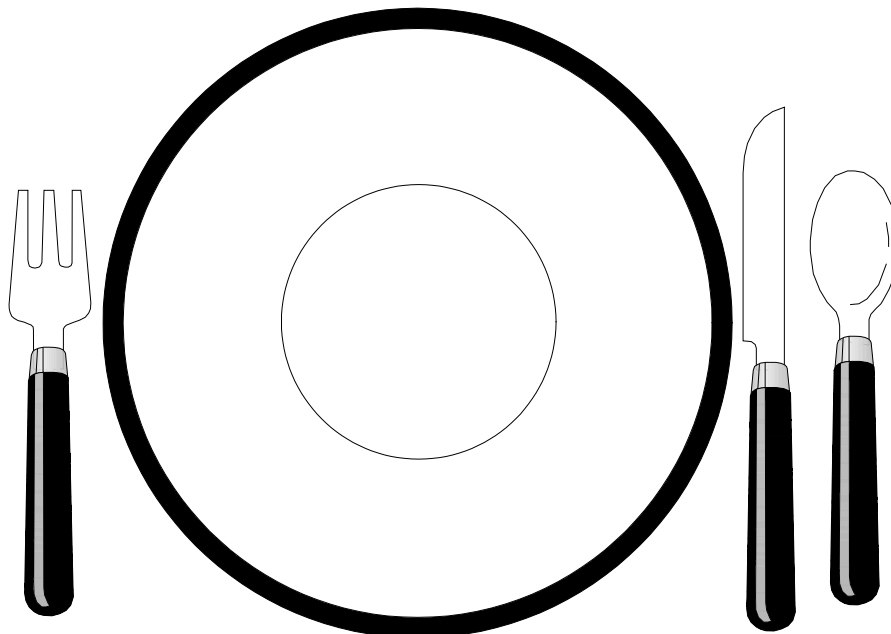
CHALLENGE: Find unhealthy food choices and glue them to the bottom of the page.

NUTRITION

HEART-SMART MEALS AND SNACKS

- Choose:**
- Breakfast
 - Lunch
 - Dinner
 - Snack

Healthy _____



- Choose:**
- Breakfast
 - Lunch
 - Dinner
 - Snack

Unhealthy _____

I'm Heart Smart!

by

This is a picture of me with a healthy—and
happy—heart!

Vegetables

Fruits

Meats/Beans

Milk

Grains

Fats/Oils

I know something about food groups!

I learned how to plan a healthy meal. This is my favorite meal.

If I want my heart to stay strong and healthy,
I need to exercise every day. These are some
exercises I like to do.

My heart beats all the time—even when I'm
asleep. If I want my heart to stay strong and
healthy, I need to make healthy food choices.
Here are some foods that are good for me.

My Special Pump

My heart is a special pump
and it's good at pumping blood.
When I listen to my heartbeat
I hear it go lub-dub.

My heart is made of muscle,
which makes it very strong.
If I work to keep it healthy,
it will last my whole life-long!

These are things I do quietly while resting my
heart.

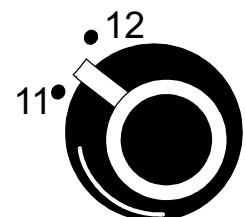
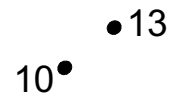
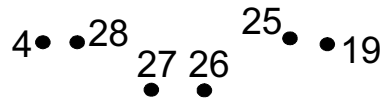
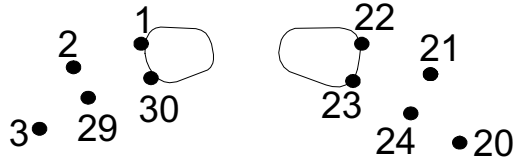
ACTIVITY

CONNECT THE DOTS

Connect the dots.

Connect all the dots to create a special instrument your doctor uses to listen to your heart.

What is it?





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Listed below are 7 words that are hidden in the puzzle. Can you find them all?

BEAT
BODY
HEART
LUB DUB
MUSCLE
PULSE
PUMP

ACTIVITY WORD SEARCH

H	E	A	R	T	U	E	O
B	O	D	Y	B	E	A	T
R	C	L	U	B	D	U	B
M	U	S	C	L	E	E	O
P	U	M	P	D	O	T	B
D	P	U	L	S	E	A	S



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Rearrange the letters
to form new words.

ACTIVITY WORD SCRAMBLE

Y O D B

--	--	--	--

E A T B

--	--	--	--

M P U P

--	--	--	--