

GRADE K: 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 K-A)
2. Poem: "I Have a Heart" (Activity K-B)
3. Worksheet: "Where Is Your Heart?" (Activity K-C)
4. Illustration: "What Your Heart Looks Like" (Activity K-D)
5. Kraft (butcher) paper
6. Crayons, markers, glue, and scissors
7. Stethoscope or model made from tubing and top section of a 2-liter bottle or a funnel
8. Model of a basic pump (bicycle pump, balloon, liquid-soap bottle, etc.)
9. Fabrics, yarn, buttons, etc.

Introduction

Tell students you are going to describe something that is very important and something that everyone has. Ask them to try to guess as you give them a few hints.

- Hold out your hand and make a fist (model for them). That's the size of a special muscle you have inside your body. Can you guess what it is?
- It makes a "lub-dub" sound.
- It's always working for you, without your having to think about it.
- Doctors can hear it beating by listening to it with a stethoscope.

After the students guess correctly that you are describing the heart, encourage them to share with the class what they know about the heart. 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. Ask them to make a fist and place it over their heart. Remind them they have already learned that their heart is about the size of their fist and is located in the same spot that their hand covers during the "Pledge of Allegiance." Present Activity K-A on a transparency or enlarged poster, so that students can see the location of the heart inside their bodies.

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Activities for the Classroom

GRADE K: LESSON PLAN 1

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

2. Introduce the poem, "I Have a Heart" (Activity K–B). Exaggerate the actions that go along with the poem to help students learn.
3. Ask the students if anyone heard you say the heart was 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 them to extend their arm up and bend it at the elbow, showing them how to flex their biceps muscle. Then ask them to feel the difference in the muscle now. 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. Tell them the heart muscle is different; it keeps working without us having to do anything. It 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 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 is 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 the 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 muscles work 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. Review the poem "I Have a Heart," along with the actions, until students can repeat the poem and actions with little help.

Guided practice

Give students Activity K–C and stickers. Ask students if they remember where to find their heart. (They should place their hand over their heart.) Using Activity K–C, which has the outline of a person, tell students to choose a sticker and place it on the spot where the heart would be located. Once they have identified the correct location, allow them to color the picture and personalize it.

Independent practice

Have individual students lie down on pieces of Kraft paper. Either the teacher or another student traces around them using a crayon or marker. Have the students label the drawing with their names. Students should color and cut out the heart illustration from "What Your Heart Looks Like"

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 Activities for the Classroom

GRADE K: LESSON PLAN 1
 ANATOMY: WHERE IS YOUR HEART? WHAT DOES IT DO?

(Activity K–D) and glue the heart on their life-sized tracing. Students may color and decorate their self-portraits using a variety of materials, including buttons, yarn, etc. Exhibit the completed portraits around the room.

Extension activities

For those students ready for more complex tasks and learning, consider the following ideas:

- Pumping Station.** 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.
- Computer Station.** Allow small groups of students to view animated illustrations of the inner parts of the heart, such as the heart valves, and what they do. Discuss what the students observe.

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:

	John	Brent	Stacy	Allan	Amy
Located the heart on self	x	x	x	x	x
Located the heart on illustration	x		x	x	
Indicated the size of the heart	x	x	x	x	x
Indicated the heart is a muscle that pumps blood through the body	x		x	x	x

Closure

Take a gallery tour of the self-portraits hanging on the walls. Ask students to share with a partner something they learned about the heart today (remind them of the riddle). End the lesson with volunteers leading the class in repeating the poem "I Have a Heart."

GRADE K: 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. Illustration: “Inside Me” (Activity K–A)
2. Booklet: “I’m Heart Smart!” (Activity K–E)
3. Toy foods or artificial fruits and vegetables; cans of food or packages of food with pictures on the containers; or pictures of food from magazines mounted on poster paper
4. Bags, baskets, or buckets and play money
5. Old magazines or newspapers
6. Box of clothing and hats for costumes
7. Paper, crayons, scissors, glue, pipe cleaners, etc.
8. Paper plates
9. Kraft (butcher) paper
10. Simple illustration or representation of the major food groups or the MyPlate food guidance system
11. Pictures for discussion
12. Playdough or clay
13. Selections of children’s literature on subject of food choices (*see Additional Resources*)

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.

GRADE K: LESSON PLAN 2

NUTRITION: MAKING HEALTHY FOOD CHOICES

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.

1. Introduce a simple version of the major food groups or of MyPlate that includes pictures of food. Discuss the different classifications of foods with the students. Provide toy foods or pictures of foods for students to match with the foods on the food group chart. Ask students to tell the class what their favorite fruits and vegetables are and discuss how they taste. Help students categorize foods under the headings protein, dairy, grains, fruits, and vegetables. 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 MyPlate, 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. (Make sure you choose pictures of foods that can be readily recognized and discriminated by kindergartners.)
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: Shopping for Healthy Food Choices**
Set up a small area of the room to represent a grocery store, with items on shelves made to look like food items you would find in a store. Designate something to represent a cash register with play money. Provide

students with play money and shopping containers. Students may take turns role playing as the clerk. Students in the center are to shop for healthy choices to make a favorite meal. The clerk will check their baskets to make sure their choices are "good choices."

- **Center 2: Planning a Healthy Meal**

Set up an area of the room to represent a home kitchen. Provide a collection of magazines or newspaper advertisements, glue, scissors, crayons, and paper plates. Using a food group chart or MyPlate as a guide, have students find pictures of food in magazines or newspapers and plan a meal. Provide an example to show students how they can organize their plates to include their choices. Tell the students they may plan a healthy snack or a complete breakfast, lunch, or dinner. After the students have completed putting the pictures on their plates, they may categorize them under labels you have placed in the room: Healthy Snack, Healthy Breakfast, Healthy Lunch, Healthy Dinner.

- **Center 3: Food Groups (Classification Center)**

Provide clay, playdough, crayons, heavy paper, pipe cleaners, and other materials. Students may use these materials to create a representation of their favorite healthy food, which will be displayed in the Class Art Museum.

- **Center 4: Helping Finn Make Better Choices**

(For the purposes of providing an example of how this center could be developed, the book *Finn Cooks* will be used.) Set up a box of clothing, props, hats, and furniture from the Home Center. Because this could be a rather noisy center, consider a location where there will be minimal distractions for other groups. Have the students role play the story as it was read to them. Then, have the students change the story so that Finn is making better food choices and have them role play it again.

Independent practice

In a large-group setting, show the students an enlarged version of "Inside Me" (Activity K-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 K-E), with drawings, words, and pictures. (For kindergarten students, it may be best to cut the pages apart and give directions one page at a time.)

GRADE K: LESSON PLAN 2

NUTRITION: MAKING HEALTHY FOOD CHOICES

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 2 and 3. Activities have been designed to meet the developmental needs of diverse learners, because students are given the opportunity to match concrete objects to representations of objects and manipulate a variety of objects and materials. They are also given opportunities to apply their learning about healthy food choices through simulations of "real-life" experiences.

** An additional independent activity (Activity K-F) is included in the Lesson Plan Activities section.*

Extension activities

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

- Using copies of a menu from a restaurant that uses pictures, have students circle or put a check mark beside those items that are healthy choices and put an "X" through those that are not good choices.

Closure

Provide an opportunity for students to share with their classmates their self-portraits, healthy meals, and their food art. As students are sharing, take the opportunity to review the lesson objectives.

Culminating activity

Make a list of the students' favorite fruits and vegetables as they share their meals and food art with classmates. Either purchase the ingredients for a fruit salad and vegetable soup for the class, or send a list of the food items home and ask parents to help in providing the ingredients. With the help of parent volunteers, prepare the feast in class, allowing the students to watch as the different fruits and vegetables are cut. Some students may have never experienced the taste of some of the foods. It is important to introduce students to new foods and increase the variety of what they eat, but it should also be pointed out that some people prefer some foods over others, and we don't have to eat every kind of fruit or vegetable to achieve proper nutrition.

GRADE K: 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.choosemyplate.gov

GRADE K: 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 K–A)
2. Booklet: "I'm Heart Smart!" (Activity K–E) (Redistribute the students' booklets that were begun in the previous lesson)
3. Newspapers and magazines
4. Scissors, glue, crayons, paper
5. Taped music

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 the enlarged version of the illustration "Inside Me" (Activity K-A). Point to the lungs and explain that these 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 healthy. Show pictures of people, of all ages, involved in different types of sports

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GRADE K: LESSON PLAN 3

EXERCISE: EXERCISE FOR A STRONG HEART

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.

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

Divide a piece of butcher paper into two sections. Label the first section “Quiet Things I Do” and label the second section “Things I Do That Exercise My Heart.” Give each table of students a pile of magazines and scissors and tell them to find a picture for each topic. Encourage partners to work together. Have each student or pair of students share their activities with the class, as they place their activities on the class collage. Talk to students about how it is important to do quiet activities, such as reading, drawing, working on puzzles, and playing board games, but that it

is the active activity, such as running, skating, and playing ball, that exercises our hearts.

Independent practice

Give students their “I’m Heart Smart!” booklets (Activity K–E), which they began in the previous lesson, and have them turn to the pages about physical activity. On one page, direct them to draw pictures or cut and paste pictures from magazines that show activities or exercises they like to do. On the opposite page, have them draw or paste pictures of activities they want to learn how to do. On the last page, they can draw a happy picture of themselves. After students have completed their booklets, allow them to take them home to share with their families.

** An additional independent activity, “Which Exercises Help My Heart?” (Activity K–G), is 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

Using the class collage, ask students to help you make a chart of quiet activities and exercise activities that they would like to do this week. Ask them to check to ensure the class has included some of each type of activity every day. Hang the chart on the wall, and check off their activities each day.

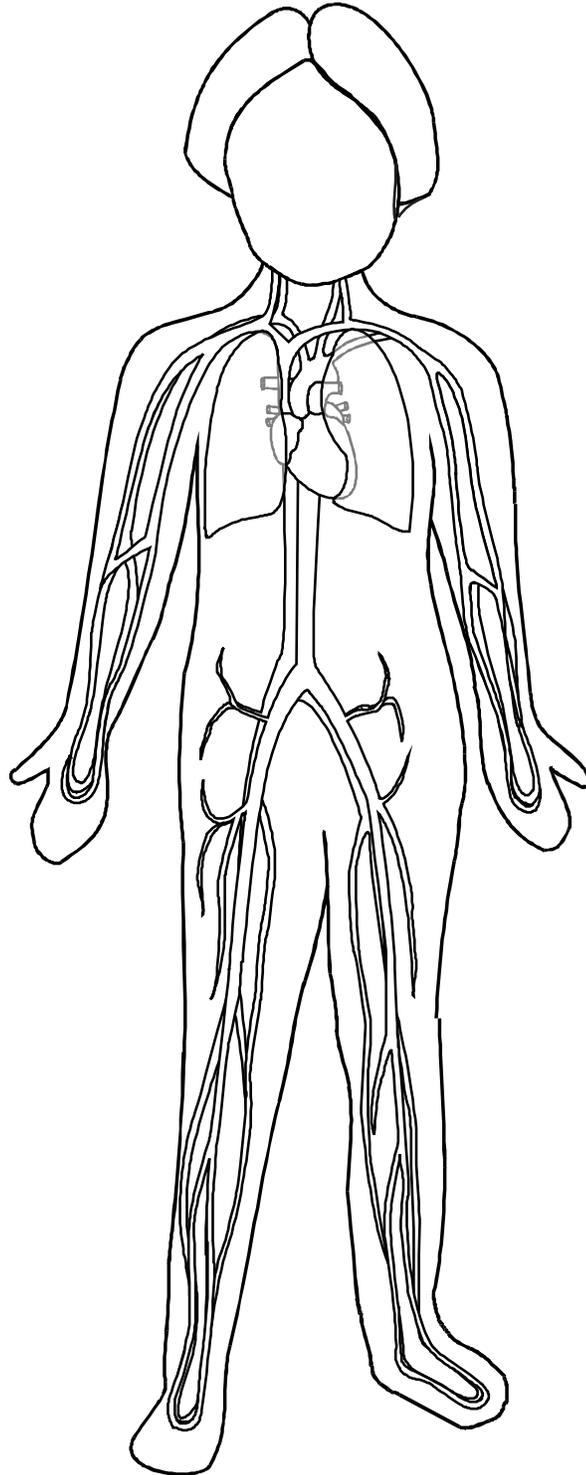
Culminating activity

Encourage students to participate in a “I’m Heart Smart” class campaign. Have them create campaign signs to carry and ribbons or badges to wear that remind everyone to “Eat Well” and “Exercise Your Heart.” With the school’s permission, students could parade in the hallways at the beginning of school or in the cafeteria during lunch, carrying their campaign signs and wearing their badges.

GRADE K: LESSON PLAN ACTIVITIES

- K-A Inside Me (illustration)
- K-B I Have a Heart (poem)
- K-C Anatomy: Where Is Your Heart? (worksheet)
- K-D Anatomy: What Does My Heart Look Like? (worksheet)
- K-E Nutrition: I'm Heart Smart! (student booklet)
- K-F Nutrition: Which Foods Are Good for Me? (worksheet)
- K-G Exercise: Which Exercises Help My Heart? (worksheet)

ANATOMY INSIDE ME



Project Heart
Activities for the Classroom

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?

I Have A Heart

I have a heart *(point to your heart)*
You have one too. *(point to your friend)*
We all have a heart, *(point to everyone)*
But what does it do? *(shrug your shoulders)*

My heart is a muscle
That makes me strong. *(flex your arm muscles)*
My heart pumps blood *(make sweeping motion from head to toes)*
through me all day long. *(jump up and down)*



TEXAS HEART INSTITUTE

at St. Luke's Episcopal Hospital

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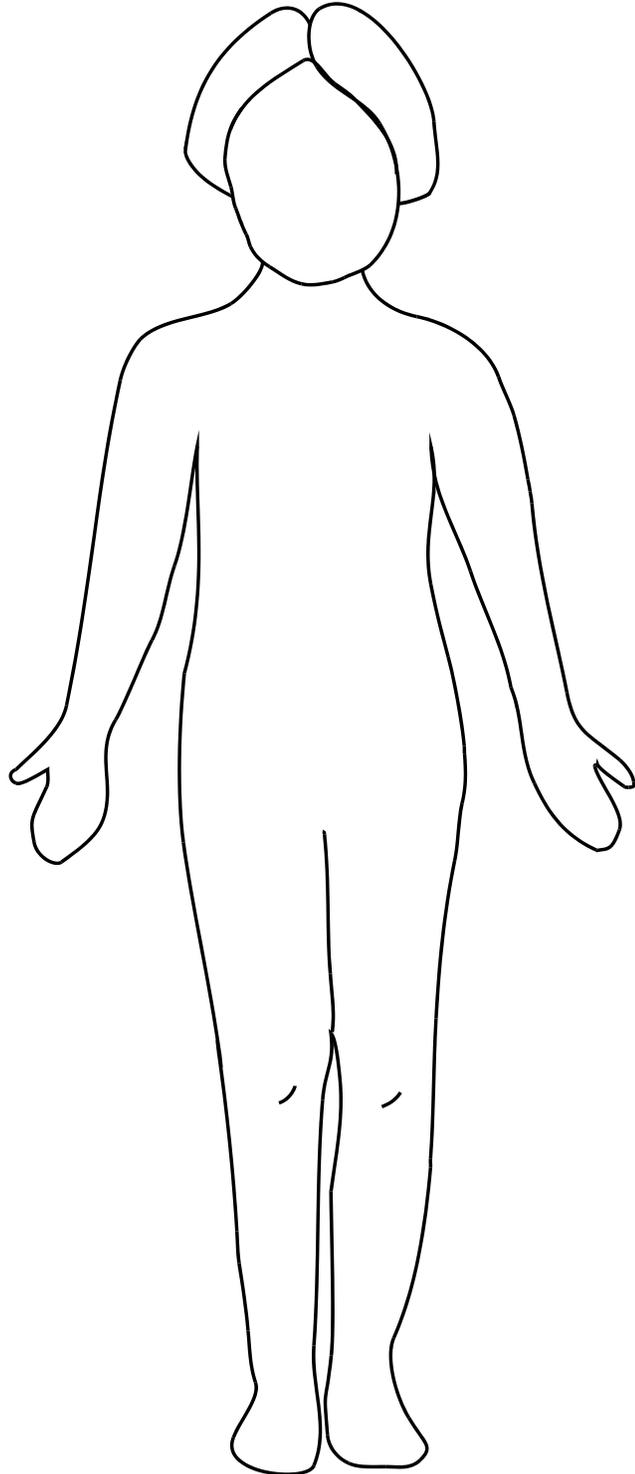
Activities for the Classroom

Do you know where your heart is located?

Place a sticker where your heart is located. When you're done, you can color the rest of the picture to look like you.

ANATOMY

WHERE IS YOUR HEART?



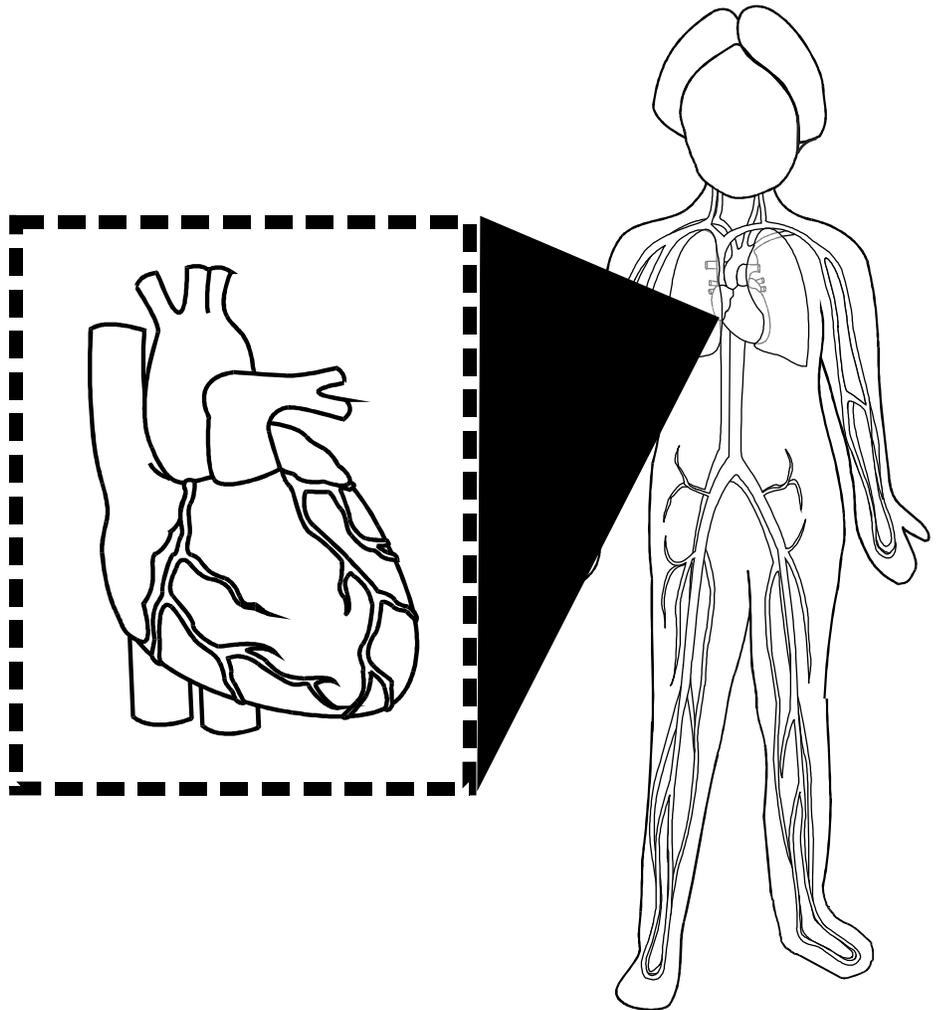
Project Heart
Activities for the Classroom

Your heart probably doesn't look the way you expected!

Your heart isn't shaped like the ones you see on Valentine's Day cards. In fact, your heart looks very different.

ANATOMY

WHAT DOES MY HEART LOOK LIKE?





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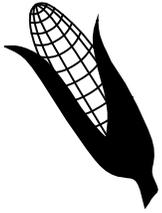
Project Heart

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I'm Heart Smart!

by

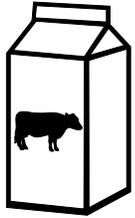
This is a picture of me with a healthy—and happy—heart!



Vegetables



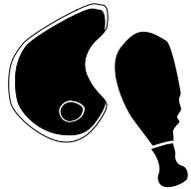
Fruits



Dairy



Grains



Protein

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.

I Have a Heart

I have a heart
You have one too.
We all have a heart,
But what does it do?

My heart is a muscle
That makes me strong.
My heart pumps blood
through me all day long.

These are exercises I want to learn how to do.

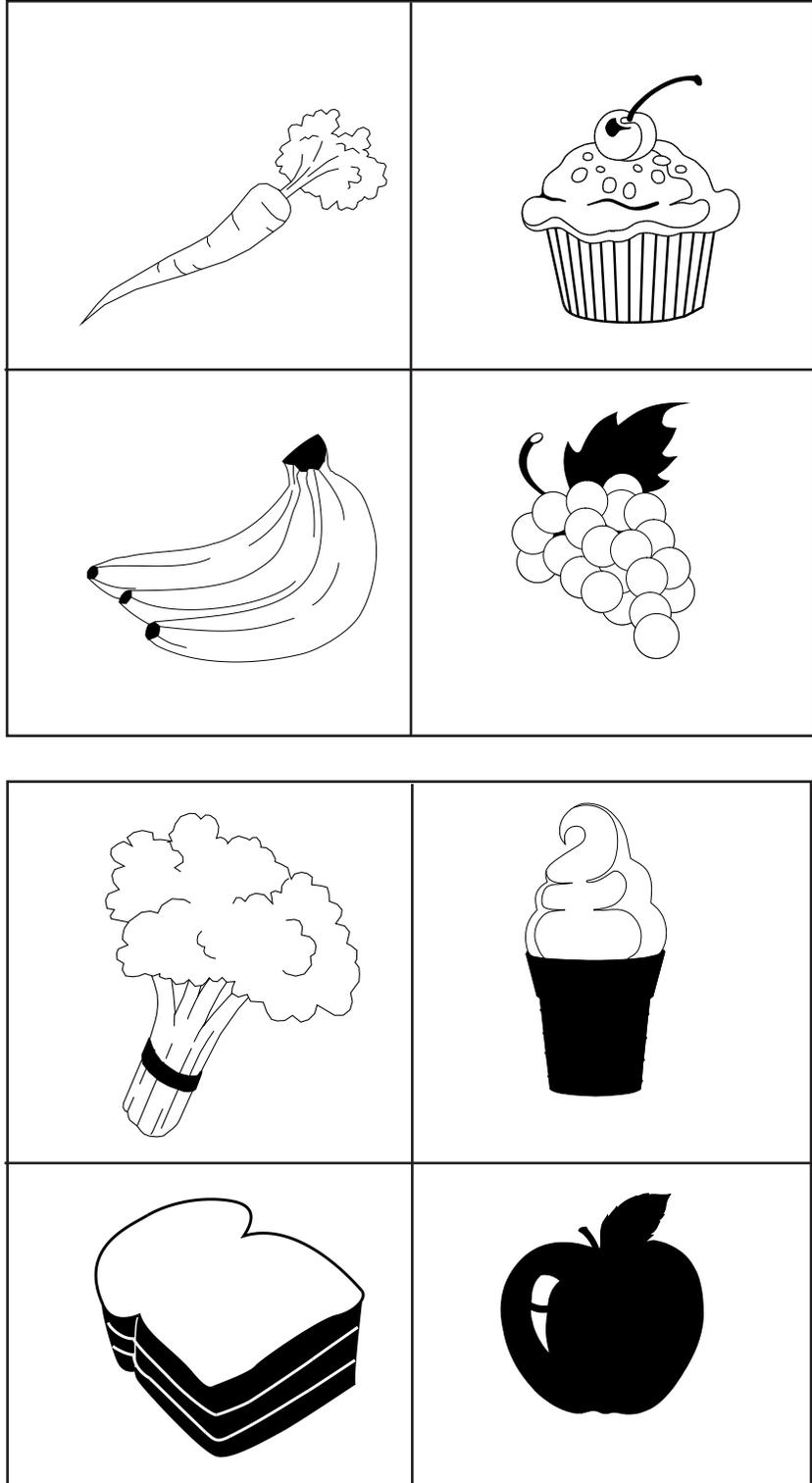
Project Heart
Activities for the Classroom

Fruits and vegetables are good for your body and your heart.

Can you find the three foods that are good for you? Circle the foods that are good for you and put an "X" through the food that is not good for you. When you're done, you can color the pictures of foods that are good for you.

NUTRITION

WHICH FOODS ARE GOOD FOR ME?



Project Heart
Activities for the Classroom

Do you know that exercise is good for your heart?

Circle the activities that are good for your heart. Draw an "X" through the activities that are not. When you're done, you can color the pictures of the exercises that are good for your heart.

EXERCISE

WHICH ACTIVITIES HELP MY HEART?

