

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.
2. Introduce the poem, "I Have a Heart" (Activity K-B). Exaggerate the actions that go along with the poem to help students learn.

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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” (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.

Project Heart

Activities for the Classroom

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Extension activities

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

1. **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.
2. **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."