

2003 National Teacher Training Institute

Grade K

“Heart Beating Exercise”

Master Teacher

Kim Speer

Time Allotment

30 minutes

Overview

This lesson is about the effects of exercise and good eating habits on the heart. Students will examine video clips and Web sites, and participate in hands-on activities in which they can explore the most important muscle in their body, the heart.

Differentiation of Instruction

This lesson was written for kindergarten level students in my multi-handicapped school. The students may be older, but academically function on a kindergarten level. The video will need to be interpreted if you have deaf students in your class.

Activities for this lesson are based on guidelines from SC Curriculum Standards Implementation Guide, Chapter Four, pages 7-8, 19. Differentiation of Instruction (<http://www.myschools.com/offices/cso/SIG/k5.htm>) modifications for special needs students are included in the lesson plan. The modifications support the achievement of the selected standards.

Subject Matter

Science

Learning Objectives

Students will be able to:

- ✎ Take their pulse while resting/sitting and then again during exercise;
- ✎ Record the information;
- ✎ Identify good food and bad foods;

- ✎ Identify good exercise and bad habits that go along with no exercise.

South Carolina Standards

(These Standards are available online at <http://www.myschools.com/Offices/CSO/>.)
II. A.2. b.: Identify the uses of body parts.

Media Components

Video

Head to Toe, Lesson 3: “In A Heartbeat.”
This video allows children to explore information about the human heart.

Web Sites

Kids Health

(<http://www.kidshealth.org/kid/>). This site reinforces the information learned in the video on what the heart is and what it does. It shows a picture of the heart and a moving heart pumping blood.

American Heart Association

Activity Checkup

(<http://www.americanheart.org/presenter.jhtml?identifier=3003415>)

“Activities for the Heart,” “Follow the Blood” and “Making Healthful Choices” will be used in the lesson plan. The site also has other activity sheets to use with students up to grade 5.

Materials

board

markers

Activity sheets:

- “Activities for the Heart” (1 per student, printed from Web site)
- “Follow the Blood” (1 per student, printed from Web site)
- “Making Healthful Choices” (1 per student, printed from Web site)

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“Activity Check-up” (1 per student, printed from Web site)
“My Heartbeat” (1 per group of 2-4 students, included in lesson plan)
plastic tubs filled with water (1 per group of 2-4 students)
sponge ball per student
paper towels (2 per student)
pencils (1 per student)

Equipment

VCR
computer(s) (1 per group of two students)
teacher’s computer with overhead projection system attached

Adapting NTTI Strategies for Deaf/Hard of Hearing and/or Visually-Impaired Students

Adapting Video

- ✎ Closed captioned and total communication for deaf students
 - Interpret (sign) closed-captioned video to provide total communication for deaf students.
 - Use visual communication to enhance understanding of the video scenes for students not reading at the vocabulary level of the captions.
 - Signing over narration helps students focus when an emphasis on certain information is needed.
- ✎ PAUSE strategy and closed captioned
 - When using closed captioned, pausing the video can cause the loss of 1-3 sentences of closed-captioned as the pause is released and the video begins to play at the pause point. Suggestions for modifying the PAUSE strategy:

- The teacher may need to rewind after the pause and then begin to play the video.
- Play closed-captioned in longer segments and provide a video guide sheet with the **Focus for Media Interaction**.
- Play the video segments through from the beginning point to the ending point. The **Focus for Media Interaction** would be given at the beginning. Tell the students that they will watch the entire segment, and then watch it again, pausing for them to answer the focus task for each segment. Tell them some of the caption is lost at pause points, read carefully the first time.

✎ Non-captioned video

- Prepare to interpret (sign) the video for deaf students.
- Arrange for a qualified interpreter to sign the video. Plan the lesson in advance to allow time for this arrangement.

✎ Screen size for visually-impaired students

- Use a projection device with the VCR to project the video to a large screen.
- Allow students to sit close to TV or large screen.
- Determine how the students can touch the TV screen, if not by hand, then with a pointer (yardstick). Provide an opportunity for the visually-impaired student to touch or trace images if touch would enhance the learning.

Adapting Web Sites

✎ Web sites with audio

- Provide an interpreter for each hearing-impaired student.

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- Use with small groups with teacher interpreting and guiding the activity.
 - Direct students to alternate text files for the video/audio if available.
- ✎ Screen size for visually-impaired students
- Use a projection device with the computer to project to a large screen.
 - Allow students to sit close to computer screen or projector screen.
 - Determine how the students can touch the screen, if not by hand, then with a pointer (yardstick). Provide an opportunity for the visually-impaired student to touch or trace images if touch would enhance the learning.
- ✎ Web sites with total communication for the blind
- Use sites encoded with Braille.
 - Use sites with audio.
 - Use sites that are easily read by text reader software. (Page is formatted from left to right allowing tab or arrow keys to move the reader through the text and images. Images have alternate text that identifies the image in relation to the text on the page.)

Prep for Teachers

- ✎ Preview and cue the video.
- ✎ For each student make a copy of the following activity sheets:
“Activities for the Heart”
“Follow the Blood”
“Making Healthful Choices.”
- ✎ Make a copy of the activity sheet “My Heartbeat” for each group.

You will need the **Adobe Acrobat Reader** to read and print all the individual activity sheets and the one the students will print for homework. If your computer is not already configured to view PDFs (portable document files), you may download free, either the Macintosh or PC version from **<http://www.adobe.com>**.

(Note to Teacher: To print pages off the PDF, you will need to print them from the Adobe Acrobat Reader application using the Adobe Acrobat Reader tool bar or print menu.

Scroll down and click on the link on the left side “for students.” Scroll down on the left side again and click on the “student activities pages.” Now click on “Follow The Blood” activity page. You can now print one and make copies for each student.

- ✎ Preview and bookmark the Web sites on each computer to be used by the students. The students will print the copy of the worksheet “Activity Check-up” from the Web site during the lesson.
- ✎ Load Shockwave plug-in (available free at **<http://www.macromedia.com>**) on all computers.
- ✎ Prepare the hands-on element by filling the tubs with water.
- ✎ Assign students to sit in specific groups (pre-determined by you). This grouping will be used in the introduction and counting the pulse later in the lesson.
- ✎ When using media, provide students with a **Focus for Media Interaction**, a specific task to complete and/or

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information to identify during or after viewing of video segments, Web sites, or other multimedia elements.

Introductory Activity

Step 1: Brainstorm with the students about how many times they think their hearts beat in one minute. Accept all answers and write them on the board.

Step 2: Give each group one plastic tub of water and each member a sponge.

Step 3: Instruct the students to put the balls in the water and squeeze them in a continuous motion. They will practice five squeezes.

Step 4: Then instruct the students to put the balls in the water and squeeze them in a continuous motion until you say stop. Count or sign to 70.

Step 5: Explain to the students about the number of times their hearts should beat each minute (70).

Learning Activities

Step 1: Explain that the students will watch several different segments of the video “In a Heartbeat.” The segments will help them to answer the questions asked by you. Describe the individuals in the video. These people are a teacher, Bob, and three students, Diego, Joy, and Christopher.

Step 2: Insert the video in the VCR. The video should be cued to the first segment. Begin the video where Bob says, “Have you ever seen what your heart looks like?” Bob is on the screen and the question is right before he shows the valentine. Provide students with a **Focus for Media Interaction** by asking, “What is the size of your heart?” Tell the students to raise their hands when they know the correct answer.

PAUSE the video here and ask for the answer. Bob is holding the heart model in one hand and the other hand is a fist.

Step 3: Provide students with a **Focus for Media Interaction** by asking, “How does the heart move the blood through your body?” RESTART the video and allow it to continue to run. STOP it when Bob says, “Tubes go through your body and they go everywhere.” Bob is leaning on a green screen framed in white. Hand out the “Follow the Blood” activity sheet and have the students complete it by connecting the dots. This will show how the heart moves the blood.

Step 4: Focus for Media Interaction: How can you check your heartbeat? Take all answers. FAST FORWARD the video until Bob and the children come together and sit in a half circle. RESTART the video with Bob saying “Hi guys.” Let the video run until Bob says, “So you can count your heartbeat by counting those little pulses you feel right here.” Bob is holding two fingers on the pulse in his neck. STOP the video. Check for comprehension by completing the following activity.

Step 5: Let the students practice feeling their pulse. Tell the students to count for 10 seconds. Tell the students you are going give them a sheet, “My Heartbeat,” one activity sheet per group. The students will record their pulses/heartbeats on the paper beside their names.

Step 6: Have the students stand up. Tell them they will now jump (students in wheelchairs can move their arms) until you say stop.

Step 7: Instruct the students to sit down and get ready to count their pulses/heartbeats again. Now start. After 10 seconds, ask the

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students to record these numbers by their names. Discuss the different numbers. Were any the same?

Step 8: Use the following question as your **Focus for Media Interaction:** Why did you get a different number? Record the answers on the board.

Step 9: FAST FORWARD and START the video with Bob saying, “Why do you think your heart was beating faster when you were jumping?” The picture of the heartbeat chart is followed by a close-up of Bob. STOP the video when Bob says, “So they can get the job done.” Bob and the students are sitting on the risers. Discuss the answers on the board and which was right.

Step 10: Use the following question as your **Focus for Media Interaction:** What things are good and what things are bad for the heart? Make a list on the board. FAST FORWARD then START the video when Bob says, “Your heart starts beating even before you were born.” Bob and Joy are sitting on the risers. This is the next scene after Joy has listened to the unborn heartbeat. STOP the video after Bob says, “You are giving your heart the exercise it needs to stay strong.” The scene follows the skit on the heart. The picture is a close-up of Bob.

Step 11: Make a new list of good/bad things for the heart from the video and compare it to the list on the board.

Culminating Activity

Step 1: Hand out the “Activities for the Heart” sheet. Ask the students to complete the sheet. The students will be circling pictures on the page that are good for the heart.

Step 2: Hand out the “Making Healthful Choices” sheet. Ask the students to complete the sheet. The students will circle pictures that are the “most” healthful for breakfast, snack, lunch and dinner.

Step 3: Tell the students that they are going to use the Internet to check the information we have learned. Use the following question as your **Focus for Media Interaction:** What is the heart and its function?

Step 4: Use the bookmarked site *All About the Heart—Kids Health* (<http://www.kidshealth.org/kid/>) as a teacher-led activity. Use a projection system with the computer to assist readers and non-readers to navigate the site.

Step 5: Direct the students to click on the link “kids.” The students will then be directed to click on the link “My Body” and then click on “heart.” Read “Working that muscle” information to the students. Provide students with a **Focus for Media Interaction** by asking them to place their hand over their heart when you read a statement about the heart that was also in the video. Both sources tell about the heart being a muscle and the size of your heart about the size of your fist.

Step 6: The students will then navigate to another link. Direct the students to the bottom of the page to the right and click on the link “It’s Great to Circulate.” Provide students with a **Focus for Media Interaction** by asking them how the heart works. Ask them to describe the action taking place.

Step 7: From what the students learned from the video and the Web site would they be able to complete the “Follow the Blood” activity sheet. This sheet will lead them through the heart.

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Step 8: Now the student will click on the bookmarked site *Activities* (<http://www.americanheart.org/presenter.jhtml?identifier=3003415>).

They will navigate, with the help of the teacher on the screen, to the site with student activity sheet “Activity Check-up.” They will click on the link “Activity Checkup.” Students will click on Activity Checkup Adobe PDF, File Size 37.0 KB The students will each click on print on the Adobe Acrobat Menu. This will be their homework assignment for the week. They will need to have their parents help them record the activities they participated in that were good for the heart. These activities can be done at home or school. The sheet gives a suggestion on the first line and then the students and their parents will fill in the rest.

Cross-Curricular Extensions

Physical Education: The physical education teacher could have the student record their heartbeat at the beginning of class and after an activity in class.

Health: The health teacher can discuss the food chart and how much of each area they should eat each day.

Community Connections

- ✍ Have a local college athlete come in and talk about the benefits of exercise.
- ✍ Have a “Jump Rope for Heart” demonstration team come in and perform.
- ✍ Have a “Jump Rope for Heart” Fundraiser in your school. This program will provide you with ropes, materials, and lesson plans to help the children learn more about their heart and how to help others. It also includes several videos to help the students learn how to perform many types of jumping skills.

Student Materials

My Heart Beat Activity Sheet