

Master Teacher

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Time Allotment

30 minutes

Overview

This lesson is about where the heart is, what the heart is and how the heart works. The students will see how the heart is closely related to a water pump. Students will examine videos clips and Web sites, and participate in hands-on activities in which they can explore the most important muscle in their bodies, 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 the 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:

- ✎ Locate where the heart is in the body;

- ✎ Identify the heart;
- ✎ Describe the function of the heart.

South Carolina Standards

(These Standards are available online at <http://www.myschools.com/Offices/CSO/>.)

- II. A. 2.a. Name major body parts.
- 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. This site is used with the students.

Making Friends

(<http://www.makingfriends.com>)

This site has many craft ideas. Print the worksheet "friends" to be used with the lesson.

Materials

board

markers

Activity Sheets "Friends" and

"Follow the Blood" (1 per student)

stickers of the heart (1 per student)

blank paper (1 sheet per student)

crayons (1 box for each table group of 3-4 students)

pencils (1 per student)

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Equipment

videotape
TV and VCR and remote control
computer(s) for students
teacher's computer with 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.
 - 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.

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- 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.
- ✎ Make a copy of the worksheet, “Friends?” for each student.
- Go to the Web site
<http://www.makingfriends.com>.
Scroll down the left side and find “Come on in and make a friend.”
Pick the type of friend (I chose athletic.) and click on it. Now pick a more specific type of friend (I chose basketball.). This screen will allow you to print outlines of the children, which is great for the first activity. Each sheet will have two friends on it. They will use the first friend on the page for the **Introductory Activity** and the second friend for one of the **Culminating Activities**. Now you look under friend bodies and click on outline. Now you can

choose different bodies. You can choose the same for all students or mix them up. It even has a body of a child in a wheelchair. This would be good if you have a student in a wheelchair in your class.

- ✎ Load Shockwave plug-in (available free at **<http://www.macromedia.com>**) on all computers.
- ✎ Preview and bookmark the Web sites on each computer to be used by the students and you.
- ✎ Prepare the hands-on element by filling the tubs with water.
- ✎ Make a copy of the activity sheet “Follow The Blood” for each student.
You will need the **Adobe Acrobat Reader** to read and print the “Follow your Blood” activity sheet. You need one per student. If your computer is not already configured to view PDFs (portable document files), you may download free, either the Macintosh or PC version from **adobe.com**.
Note: 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.
- ✎ When using media, provide students with a **Focus for Media Interaction**, a specific task to complete and/or information to identify during or after

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viewing of video segments, Web sites, or other multimedia elements.

Introductory Activity

Step 1: Brainstorm with the students to determine how much they know about the heart and its function. Take any answers.

Step 2: Give the students one sticker and the activity sheet, “Friends?” They will place a sticker of the heart on the first picture where they feel the heart is located in the body.

Step 3: Ask the students to place their hands over where they think their hearts are located in their bodies.

Step 4: Tell the students they are going to watch a video about the heart. The video will show where the heart is in the body and how it works.

Learning Activities

Step 1: Explain that the students will watch three 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 after Bob says, “Don't move anything” and the screen has all three children together. Joy begins by saying “I feel something moving.” Provide students with a **Focus for Media Interaction** by telling them: “When the video shows where your heart is located, raise your hand.” PAUSE the video when a student raises his/her hand or when Bob asks the children, “Can you feel your heart beating within your chest? Beat, beat, beat.”

Step 3: Ask the children if they were able to correctly find their heart? Did they put their hand in the right place? Look at the paused video. Who has their hand in the right place? Who does not?

Step 4: Fast-forward then pause the video just past the screen with the number 4000 on the bottom of the screen. Use the following question as your **Focus for Media**

Interaction: What is the function of the heart? Accept all answers, explore a few, and then restart the video. START the video when Bob says, “Your heart beats four-thousand times and it never stops.” STOP the video when Bob says, “Your heart pumps blood.” The word blood is on the screen in front of Bob. Ask the students what they have learned from the video. What is its function? Allow the students to ask questions.

Step 5: Use the following question as your **Focus for Media Interaction:** What is the heart: a bone or muscle? FAST FORWARD the video just past the end of the heart play scene with Diego and Christopher. Bob and Joy are applauding. START the video after Bob says, “Pretty funny stuff, eh Joy.” She says, “Yes.” The video should start with Bob saying, “What they say is true.” STOP the video when you see the child being pulled across the screen in a red wagon. The song in the background continues with, “The beat goes on.” Ask the students to identify the heart as a bone or a muscle.

Culminating Activity

Step 1: Hand out another sticker to each student. Ask the students to place the second sticker of the heart in the right place on the second body. Ask who was right the first time.

Step 2: Tell the students that they are going to use the Internet to check the information

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we have learned. Use the following question as your **Focus for Media Interaction**: What is the heart and its function?

Step 3: Use the bookmarked site *All about the Heart* (<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 4: 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 this information to the students. **Focus for Media Interaction:** Tell the students to place their hand over their heart when you read a statement about the heart that was also in the video.

Step 5: 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.” Ask the


students how the heart is working in the same way as the pump in the video. Direct them to the conclusion that the heart pumps blood throughout the body.

Step 6: 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.

Cross-Curricular Extensions

Physical Education: Exercise is good for the heart. It makes the heart “pump” stronger. What types of things can the students do in physical education to help their heart? Jump rope, run on the track, exercise, and play games.

Community Connections

 School nurse could come in and let the students listen to their hearts for the pumping sound.