



HEART HEALTH

LEARNING OBJECTIVES

Youth will learn how much blood is pumped through the heart in one minute. They will then learn how to measure someone's blood pressure and heartbeat using a blood pressure cuff and a stethoscope.

LIFE SKILLS

- Healthy Lifestyle choices
- Disease prevention

SUPPLIES

- 2 large dishpans, buckets or bowls
- 1.3 gallons of water
- A 1/4 cup measuring cup
- Measuring spoons
- Watch or timer
- Stethoscope

TIME

30-45 Minutes.

Varies on number of participants

STANDARDS

MS-LS1-3. Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. (Grades 6-8)

BACKGROUND

In just one day, the heart pumps 1,900 gallons of blood through your body! That's amazing! To break this down on a smaller scale for you to understand, the heart pumps 1.3 gallons per minute. A little over a gallon per minute means that in each heartbeat, the heart is pumping 2.4 ounces of blood, or about 1/4 cup.

DO

1. Set up the activity outdoors or in an area that can safely get wet.
2. Place the two containers next to each other on a table.
3. Fill one of the containers with 1.3 gallons of water, leaving the other empty. The heart can pump 1.3 gallons of blood in 1 minute.
4. One youth at the time will use the 1/4 measuring cup to transfer as much water as possible to the empty container. They will only have 1 minute to do so to represent what they can pump in the minute.
5. You can set up multiple stations so that there are multiple youth going at one time. Use the measuring spoons to show restricted blood flow.

REFLECT

1. How many gallons of blood is pumped through the heart in one minute?
2. About how many beats does it take to pump blood through the heart in one minute?
3. When talking about blood pressure, what is the top reading and the bottom reading called?
4. How would readings be different taken right after exercising verse at rest?
5. What were the least and most challenging part of the lesson?



APPLY

Take the blood pressure cuff and the stethoscope and practice with a partner. How could you use this information in your day-to-day life? By knowing how to take your blood pressure and heart rate, you will know the healthy levels you should be at. This will help you with disease prevention.

Adaptations – Have the youth take their heart rates and write them down. Next, have them exercise for 1 minute and then have them take their heart rate again.

RELATED CAREERS

Thoracic Surgeon - a surgeon who has special training in operating on organs inside the chest, including the heart and lungs.

Cardiologist - a physician who's an expert in the care of your heart and blood vessels.

Cardiovascular Technologist - works in a cardiac lab and performs very complex procedures, including stent implants, cardiac pacemakers, and defibrillators.

COMMUNITY PARTNERSHIPS

Use the following to make a connection in your local community. You can have a professional come in to demonstrate how to take blood pressures, speak about their career path, and more!

- Local Nurse
- Local Doctor

RESOURCES

- [SWITCH - Iowa Switch | Healthy Lifestyles for Today's Youth and Families](#)
- [Iowa Heart Foundation](#)

STUDENT EVALUATION



- How much blood does the heart pump?
- I feel comfortable using a cuff and stethoscope?. Yes or No.
- I am interested in STEM (Science, Technology, Engineering, and Math) after this lesson? Yes or No.
- Do you want more information about health careers?
- Share something you learned today.

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