

Area/Skill - Science	Cognitive Skill Level - Analysis	Correlation to Framework - 03.02/03.04/03.05/03.06	Lesson Number - 20
<p>Activity Title - Blood Pressure and Heart Disease</p> <p>Goal/Objective</p> <p>To analyze scientific information on the human circulatory system and write an opinion deduced from the information provided.</p> <p>Lesson Outline Introduction</p> <p>Discuss that heart attacks are one of the major causes of death. High blood pressure contributes greatly to heart disease. People need to be aware of their own health and take steps to prevent heart disease that is caused by high blood pressure.</p> <p>Activity</p> <p>Distribute the handout on The Human Heart As a Pump. Have the students read the handout and research the subject of blood pressure and heart disease using available resources. Have the students write an opinion deduced from the information provided on how blood pressure in the arteries and veins may vary.</p> <p>Debriefing/Evaluation Activity</p> <p>Have the students present their opinion by reading their paper or discussing their findings orally.</p>		<p>Materials/Texts/Realia/Handouts</p> <ul style="list-style-type: none"> • Handout - The Human Heart As a Pump • Paper and pencils • Research materials, texts, media that provide information on heart disease 	
<p>Real-Life Connection</p> <p>Have students discuss people they have know who have had high blood pressure, heart disease, and or strokes. Discuss the real-life implications of taking care of one's health and preventative measures that are available.</p>		<p>Extension Activity</p> <p>Have students research the correlation between heart disease, blood pressure, and strokes. Have them list the steps that they can take to prevent these diseases in their personal lives.</p> <p>ESE/ESOL Accommodations</p> <p>Pair students who need assistance with another student who will read the article with them.</p> <p>Highlight major concepts in articles provided to students.</p> <p>Provide students with a graphic organizer on which they can list the reasons for heart disease and preventative measures.</p>	

GED 2002 Teachers' Handbook of Lesson Plans

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Activity Title - Blood Pressure and Heart Disease

Introduction

Ask: How many of you have known someone with heart disease? Did they also have high blood pressure? Are you aware of your own blood pressure level? Do you know where to get it checked?

Say: Preventive medicine when it comes to blood pressure and heart disease is very important. Today, you are going to learn more about one of the leading killers in the United States - heart disease.

Main Activity

Say: The GED Science Test often requires that you analyze information about a real-life health issue and then provide an informed decision based on the information provided. Today, you are going to make an informed decision based on some facts. Please read the information in the short handout **The Human Heart As a Pump**. After you have finished reading the article, form your own opinion about why blood pressure in the arteries and veins may vary from person to person. Remember to base your opinion on the facts. Write a short paragraph stating your opinion and your reasons.

Provide a copy of the handout **The Human Heart As a Pump** to each student.

Debriefing/Evaluation Activity

Ask: Why does blood pressure in the veins and arteries differ from person to person?

Write the students' ideas on the board. Have the students follow-up by researching the topic in materials available in the classroom. Compare the research that the students have located to their ideas on the board. *Ask:* Were your opinions based on facts from the article, knowledge that you already had, or merely opinions that you felt were reasonable? How were your opinions similar to the information that you located in your research? Different?

You may wish to provide a blood pressure screening for you students. Many community organizations or health clinics will provide free blood pressure screenings.

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Science Lesson 20 Handout**

The Human Heart As a Pump

The human heart is a pump. It is a device consisting of muscles and valves. These muscles contract and valves open and close to move blood through the heart. They work together to pump blood out of the heart and into the arteries of the body. Contractions of the muscles in the heart exert pressure on the blood, forcing it to move through arteries and capillaries. One-way valves in the heart make the blood go in one direction.

The blood-flow away from the heart through the arteries is a result of the heart's pumping. The blood returns to the heart via veins. The return is the result of the movement of body muscles exerting pressure on the blood. The pressure on the blood causes the one-way valves to open and move the blood toward the heart.