



How the Heart Works

Lesson Title: How the Heart Works

Grade Level: 2nd-5th

Purpose: Teach age appropriate skills for fire and life safety while teaching to statewide learning standards.

Materials Needed (Optional):

For Demonstration

- Picture of the Heart and Circulatory System

Standards:

Next Generation Science Standards:

Science:

[LS1.A: Structure and Function](#)

All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular).

[LS1.A: Structure and Function](#)

In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.

[LS1.A: Structure and Function](#)

Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level.

Washington State Health and PE Standards

Health

[H1.Sa2.4b](#) Understand basic first aid for minor injuries.

[H1.Sa2.5](#) Explain how to respond to emergency situations.

Safety:

- First Aid
- Hands Only CPR

Objectives: The students will demonstrate understanding of:

- The Circulatory System
- The Heart
- Heart Health
- CPR and First Aid

Vocabulary:

- **Platelets**-a part of the blood stream that helps with clotting and the formation of scabs.
- **Ventricle**-the lower chambers of the heart that help pump blood to the entire body.
- **Atrium**-the top chamber of the heart.
- **CPR**-Cardio Pulmonary Resuscitation-compressions that pump oxygen and blood in the event of a cardiac arrest or heart attack.



Time: 45-60 minutes for presentation and demonstration.

Instructional Content:

Use this bulleted list to guide you and keep you on track and meeting all objectives for lesson. Everyone has their own style for teaching, the most important thing is the make it fun and engaging for the kids.

Warm up Activities: (5-7 Minutes)

- **Mini KWL:**
 - Ask students to individually make a mini KWL chart about the Heart and the Circulatory System..
 - K-What do you already know about the Heart?
 - W-What do I want to know about the Heart?
- **Bell Ringer:**
 - How the Heart Works Bell Ringer
 - Have students complete the top portion of the How the Heart Works Bell Ringer.
- **Entrance Ticket:**
 - Ask students to try to define: Platelets, Ventricle, Atrium, CPR

Video:

- Follow the link:
 - http://www.snofire7.org/preparedness_education/home_education_lessons/lesson-details.cfm?record_id=7
- Watch Video:
 - Run time: 43:40
- Have students fill out the worksheet as they watch.

Closure Activities: (5-7 Minutes)

- **How the Heart Works Bell Ringer:**
 - Have students complete the exit ticket activity on the How the Heart Works Bell Ringer.
 - **Exit Ticket:** On the bell ringer at the top of the first page, see if you circled the correct picture, and if you labeled the body and the heart correctly. If not, correct what you wrote with a different color.
- **Exit Ticket:**
 - Ask students to use what they learned to add more detail to the definitions they wrote at the beginning of class for the following words:
 - Platelets, Ventricle, Atrium, CPR
- **Mini KWL:**
 - Ask students to finish the last column for the KWL chart about the Heart and the Circulatory System.
 - L-What did you learn?

Homework and Enrichment Activities:

- Heart Worksheet
- First Aid Worksheet
- First Aid Kit Challenge

Handouts:

- How the Heart Works Bell Ringer
- KWL Chart





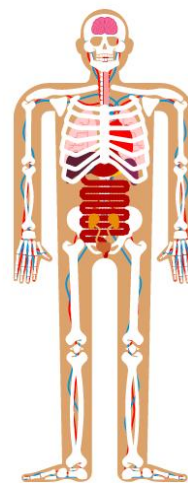
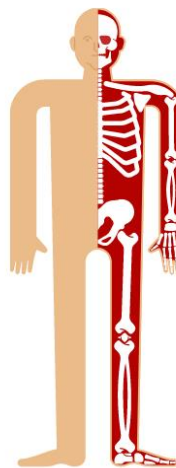
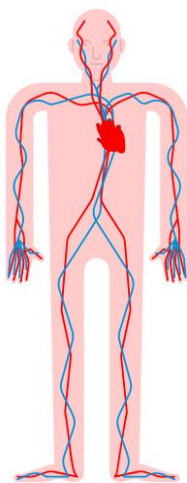
Name _____

HOW THE HEART WORKS

BELL RINGER

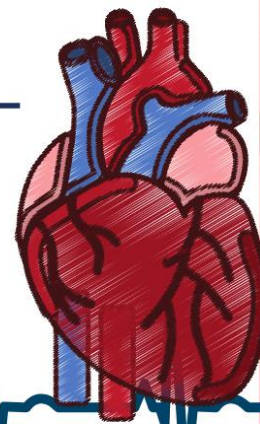
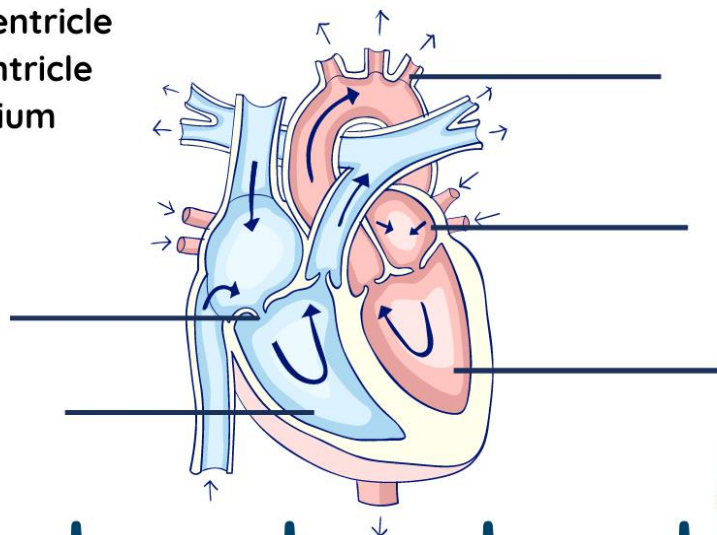
Directions: Answer the following questions before watching the video. If you don't know the answer, use your best guess:

1) **Identifying:** Circle the picture that best represents the circulatory system. Once you do that, try to label the different parts of the circulatory system.



2) **Labeling:** Label the following on the heart:

- Right Ventricle
- Left Ventricle
- Left Atrium
- Valve
- Aorta



Directions: While watching the video, fill in the blanks:

3) Matching

___ deliver oxygen to the body.

___ is the liquid that transports all of the blood cells.

___ help the body fight infection.

___ help form scabs and clots.

A. Platelets

B. Red Blood Cells

C. White Blood Cells

D. Plasma

4) Vocabulary:

In the heart, the _____ are located near the bottom, and they help pump blood to other parts of the body. The left _____ is located near the top of the heart.

5) Hypothesis for the Pump Experiment:

What are the jar and straw representing?

6) Fill in the blanks:

You can remember the steps you take to help someone who is unconscious or not awake them by remembering the 3 C's:

CPR STANDS FOR...

C _____

P _____

R _____

Check

Check the scene

- Scene is _____

Check the person

- Hey hey are you _____?

Call

Call for Help

Call _____ and ask for an AED

Care

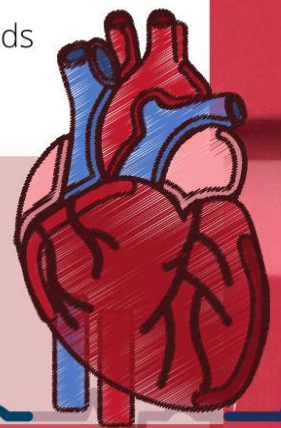
Care for breathing

- Check b _____ for 5 seconds

Care for circulation

- CPR

Exit Ticket: On the bell ringer activity at the top of the first page, see if you circled the correct picture, and if you labeled the body and the heart correctly. If not, correct what you wrote with a different color.



MINI KWL CHART



NAME OF STUDENT:

SUBJECT:

LESSON:

**WHAT I
KNOW:**

**WHAT I
WANT TO
KNOW:**

**WHAT I
LEARNED:**

