

# HEALTH CAREER AWARENESS ACTIVITIES

**Project Name:** Pulse Check

**Grade Level:** 3–5

**Standard:**

3.A.1.1	4.S.1.1	5.S.1.1
3.A.3.1	4.A.1.1	5.A.1.2
3.S.1.1	4.LVS.1.1	5.LVS.2.1
3.LVS.1.1	4.LVS.1.2	5.LVS.1.2
3.LVS.1.2		

*All lesson plans are designed with the purpose of increasing students' awareness of the variety of health careers that are available to them.*

**Purpose:** The lesson provides students with the opportunity to learn about the circulatory system and conduct an experiment where they take their pulses after different types of activity.

**Materials Needed:**

- A Diagram of the Heart – attached
- Vocabulary List – attached
- Measuring Your Pulse Rate handout – attached
- Wall clock with second hand or stop watch

**Duration:** 25–30 minutes

**Instructions:**

- You may want to make copies of the heart diagram, vocabulary list, and pulse rate handout to give to each student.
- Tell the students that they will be conducting an experiment with their own hearts to identify how fast the heart beats during different types of activities.
- Using **Heart Diagram** show the parts of the heart (right atrium, right ventricle, left atrium, and left ventricle). Tell the students that the heart is the hardest working muscle in the

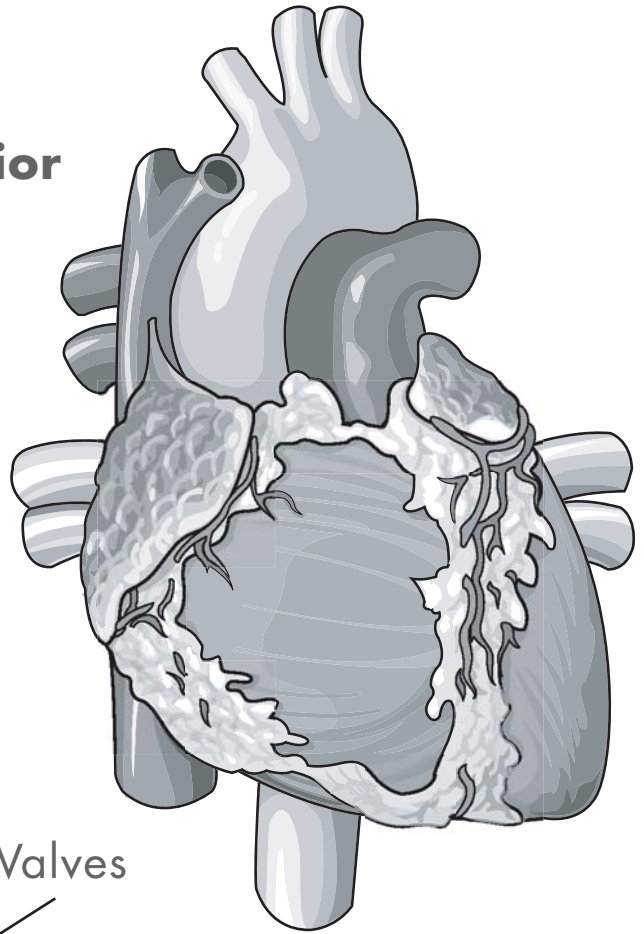
body. It works all the time. The right atrium and ventricle push blood to the lungs to get oxygen from each breath. The left atrium and ventricle pumps the oxygen rich blood out to the body. *(Note: The names of the parts of the heart are not necessarily important for the student to remember, but are used to describe how the heart functions).*

- Show the students how to take their own pulses on the wrist or on the side of the neck. Explain that what they feel is the heartbeat, called a pulse, caused by the heart's pumping blood through arteries in the body.
- Use **Vocabulary List** to review the words: pulse and pulse rate.
- Have students practice taking their pulses during six-second intervals. Using a stopwatch or wall clock to track time, say, "START" to initiate the count and "STOP" when six seconds have passed.
- Distribute **Measuring Your Pulse Rate** handout and review, explaining that students will conduct multiple trials just as a scientist would do for an experiment. Have the students study the grid and point out that they will multiply their pulse counts by ten (adding a zero) so their pulse rate tallies will be for one minute.
- Have students work in teams of two or three to conduct three trials for each of the three different physical activities (lying down, walking, and jumping jacks). Ask the students to record their data on their handouts. Time the students to engage in each activity for two minutes before taking their pulses. Have students rest for one minute between activities. *(Note: Only one or two trials of the activities may be possible, depending on the class time available).*
- When students have finished filling in their handouts, discuss the following topics and questions.
  - Does everyone have the same heart rate at rest? What about after the different activities? What does this mean? Explain that there is a wide range of normal heart rates.
  - Why is the heart rate different for the three activities? Remind students that the heart is a muscle and like other muscles, exercise makes the heart muscle stronger.
  - Ask what the students think their hearts are doing during the different activities. Remind students that the heart is part of the circulatory system where the arteries, veins, and capillaries work with the heart to deliver oxygen and nutrients to the whole body.
  - Explain there are many physicians who work with people's hearts. These doctors are called cardiologists. Some cardiologists work only with children and are called pediatric cardiologists. A pediatrician is a doctor who works with children. Introduce the related **Vocabulary List**.

#### References:

- [http://www.nlm.nih.gov/changingthefaceofmedicine/resources/lesson\\_3\\_4.html](http://www.nlm.nih.gov/changingthefaceofmedicine/resources/lesson_3_4.html)
- National Library of Medicine, National Institute of Health

**Exterior**



**Interior**

Right Atrium

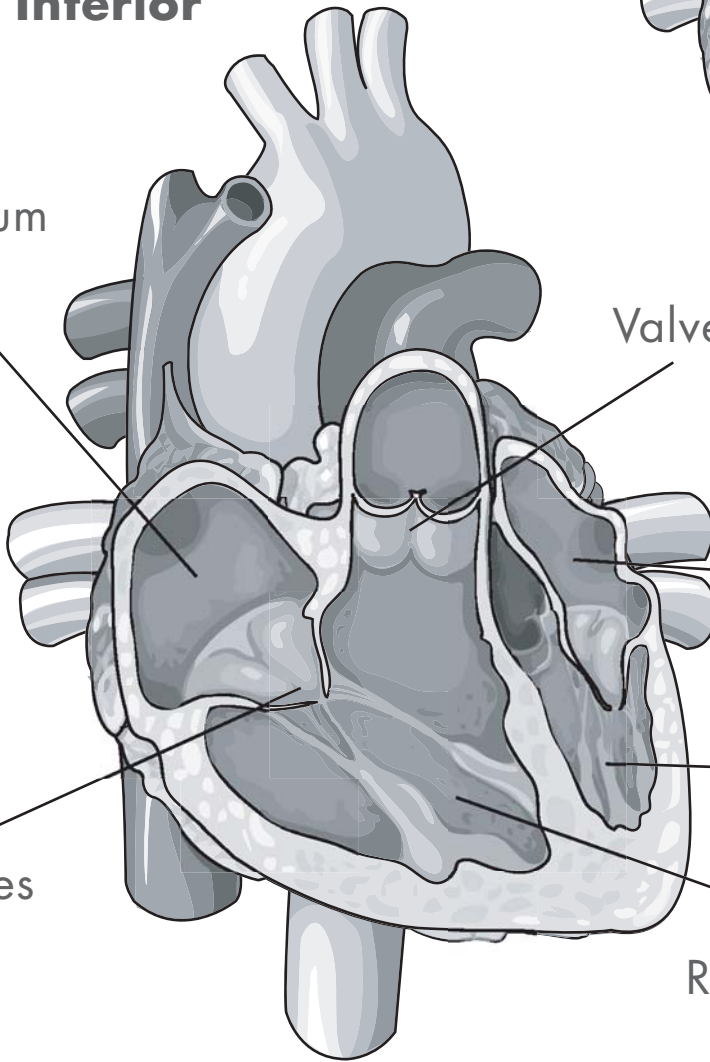
Valves

Left Atrium

Left Ventricle

Valves

Right Ventricle



## Vocabulary List

- **Blood vessels:** arteries, veins, and capillaries are all blood vessels.
- **Artery:** a blood vessel that carries blood away from the heart.
- **Vein:** a blood vessel that carries blood to the heart.
- **Capillary:** a very small blood vessel that connects an artery and a vein.
- **Heart:** a muscular organ that pumps blood to the lungs and the body.
- **Lungs:** organs that take in oxygen from the air and remove carbon dioxide from the body.
- **Circulatory system:** the system that carries blood around the body. It is composed of the heart, lungs, arteries, veins, and capillaries.
- **Pulse:** the beating of the heart that can be felt by pressing on an artery.
- **Pulse rate:** measurement of how fast the heart is beating.
- **Cardiologist:** a doctor who diagnoses and treats problems with the heart.
- **Pediatrician:** a doctor who treats children.

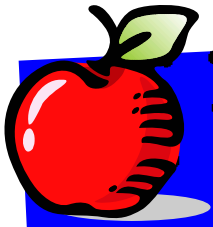
## Handout 2 | \* Measuring Your Pulse Rate

Name: \_\_\_\_\_ Date: \_\_\_\_\_

ACTIVITY	PULSE RATE - 6 seconds	PULSE RATE - 60 seconds (Add a zero to the 6 second pulse rate or multiply by 10)
Lying Down (#1)		
Lying Down (#2)		
Lying Down (#3)		
Walking (#1)		
Walking (#2)		
Walking (#3)		
Jumping Jacks (#1)		
Jumping Jacks (#2)		
Jumping Jacks (#3)		

1. Which activity had the highest heart rate? \_\_\_\_\_
2. Which activity had the lowest heart rate? \_\_\_\_\_
3. Tell in your own words why the heart rates are different:





# HEALTH CAREER AWARENESS ACTIVITIES

**Project Name:** Spell It Out

**Grade Level:** 3–5

**Standard:** 3.R.1.1      4.R.1.2      5.R.1.1  
3.W.1.3      4.W.3.1      5.W.1.1

*All lesson plans are designed with the purpose of increasing students' awareness of the variety of health careers that are available to them.*

**Purpose:** Students will build thematic vocabulary as they brainstorm words having to do with their health lesson. Students will help think of health-related words that spell out a message. They may write words in health journals or share them with others.

**Materials Needed:** Blackboard and chalk, pencil and paper, optional dictionaries

**Duration:** 10–15 minutes

**Instructions:**

- Select a list of health-related words to develop, or use suggestions below.
- Write a word on the board vertically, and ask students to read it aloud. For example:  
G  
E  
R  
M
- Discuss the meaning of the word. Beginning with the first letter, ask class to think of an adjective that begins with that letter and describes or relates to the concept of the word. For example:  
G — grimy
- Continue in this fashion until the word is complete. The final letter of each word should be a naming word, or noun, so the list presents a complete picture. Thus, the ideal string of words is a series of adjectives concluding in a noun, such as:  
G — grimy  
E — ever-growing  
R — rude  
M — menace

- Have the class come up with a list of health-related words. Let them each write their own acrostics.
- Share solutions with the class.
- If there is doubt as to whether any adjective relates to the original, vertically written word, a class vote could determine its suitability.

#### Other Examples

B — bad

A — airborne

C — collecting

T — tiny

E — evil

R — rabid

I — irritating

A — ailment

S — safe

A — antiseptic

N — neat

I — important

T — tested

I — interactive

Z — zero germs

E — excellent

R — remedy

#### Possible Extensions Include:

- Collect words and solutions into a book for the class. Feature the most creative solutions on the classroom bulletin board.
- Ask students to write a paragraph, essay or story about health and personal hygiene that uses at least 10 words the student or class has come up with during this activity.
- This activity lends itself well to an all class game or competition. The class could be divided into two teams and individually brainstorm adjectives. The side that comes up with the most creative words wins.
- Students may brainstorm their own lists of word topics, then trade with classmates to complete with adjectives. Encourage students to use dictionaries for more ideas.
- In a make-a-word activity, see how many other words students can create out of some of the health-related words that have been discussed. For example:

SANITIZE

1. tan 4. zit 7. sane

2. tin 5. eaten 8. ants

3. sit 6. seat 9. size