

## "Worksheet: What Is Your Pulse Rate?"

### Listening to Your Heartbeat

For this exercise, you will need the following materials:

- Stethoscope
- Stopwatch

Make sure the earpieces of the stethoscope are cleaned with rubbing alcohol wipes.

Listen to your own heartbeat. Place the earpieces in your ears and place the "bell" over your left chest.

### Listening to Your Heartbeat

In the space below, describe the sounds that you hear.

What do you think is causing the sounds that you hear?

### Taking Your Pulse

In this exercise, you will locate your pulse. You will also determine your resting pulse rate and your pulse rate after a short exercise.

Locate your pulse by lightly pressing two fingertips on the underside of the wrist just below the base of your thumb. You can also find your pulse on your neck; place two fingers on your Adam's apple and slowly slide your fingers upward to the side. If you are having trouble – ask the instructor for assistance.

What is causing the pulse that you are feeling?

After you have found your pulse, you will now take the "*rate*" of your pulse. The rate is the speed at which something happens. Pulse rates are usually measured in how many beats per minute. The pulses that you are feeling correspond directly to the number of heartbeats.

Since it is difficult to count the number of pulses that occur in one minute, you are going to count the number of pulses that occur in 15 seconds and then convert it to 60 seconds (1 minute).

Because pulse rates are usually measured in minutes, it is very difficult to compare our results with anything else. Therefore, you must convert our results to the number of heartbeats per minute. This can be done by multiplying the number of pulses in 15 seconds by 4.

For example,

19 pulses/ 15 seconds

$19 * 4 = 76$  pulses / minute

### Step 1

While your partner measures the time with a stopwatch, measure your resting pulse rate.

Resting Heart Rate (15 sec)	Multiplication Factor	Resting Heart Rate (1 minute)
	* 4	

### Step 2

Next we are going to exercise then take our pulse. Just outside the classroom, is a marked distance. Run, or walk rapidly the distance back and fourth three times, then immediately take your pulse with the aid of your partner.

Pulse (15 sec)	Multiplication Factor	Pulse Rate (minute)
	* 4	

### Step 3

Wait 1 minute then take your pulse again. Repeat again after 3 minutes. Record your results.

Pulse (15 sec)	Multiplication Factor	Pulse Rate (minute)
1 minute <input type="text"/>	* 4	
3 minutes <input type="text"/>	* 4	

### Step 4

Repeat steps 1-3 two more times and complete this table.

Trial #	Pulse Rate Immediately After Exercise (minute)	Pulse Rate 1 Minute After Exercise (minute)	Pulse Rate 3 Minutes After Exercise (minute)
1			
2			
3			
Average			

### Step 5 Lab Report

1. Enter this table in the Excel spread sheet program.
2. Use the Function =average( #, # ) to calculate averages.
3. Construct a labeled line graph of the averages.
4. Write a lab report that summaries today's exercises. The lab report should include the following:
  - This handout (completed)
  - A line graph
  - Type summary that explains how the scientific method was used in this exercise
  - A detailed explanation of the graph included in the discussion