

RECOVERY HEART RATE

Follow the instructions below, and answer any questions on this page in the space provided.

Push the power button on the bottom side of the Spark to get it out of sleep mode. The top left of the Spark should say "Page 3."

Keep this question in mind as you go through the activity:
How does exercise affect your heart rate?

On the top left of the screen, next to the page number, click the right arrow once. You should now be on page 4.

Read the questions on the screen and briefly discuss them with your group member(s).

On this page, circle the response that applies to you in the space below.

1) What is your daily level of physical and sports activity?

High Medium Low

2) Do you ever become winded after climbing a set of stairs or running short distances?

Yes No

Move to page 5. (Click the right arrow at the top left of the screen.)

Read the paragraph on screen and fill in the blanks below.

Being physically fit means our bodies respond effectively to exercise. Repeated exercise _____ heart muscle as it strengthens skeletal muscle. As a result, an athlete's heart can pump _____ blood during each contraction. The more forceful beat allows longer exercise and _____ recovery rates.

Move to page 7. (Click the right arrow twice.)

Q1: What do you think your resting heart rate will be while relaxing in a chair?

Move to page 8. (Click the right arrow once.)

Q2: How do you think your resting heart rate will change when you run? (Will it increase?)

Move to page 9.

Q3: How long do you think it will take your heart rate to recover to normal after exercising?

Move to page 10 and read the setup instructions; then move to page 11.

Instructions:

Step 1 – have one group member sit in a chair.

Step 2 – have the sitting group member hold the heart rate grips in their hands.

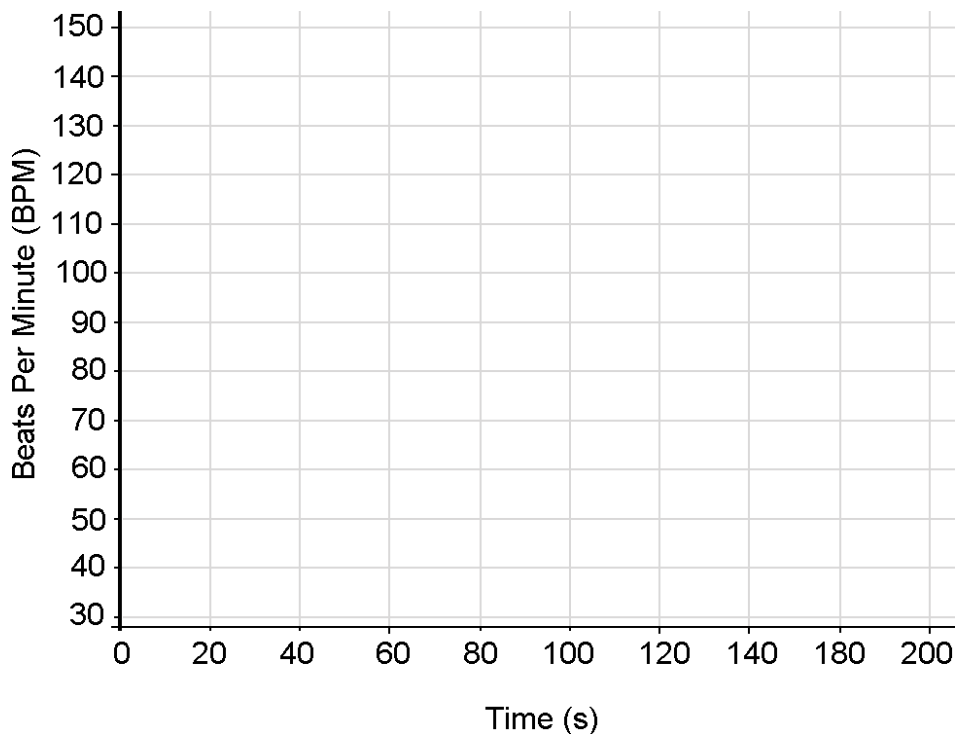
Step 3 – record the data by pressing the green triangle in the bottom right.

Step 4 – record the data for 30 seconds.

Remember - once you start recording it will take about 10 seconds for the meter to start returning values. Be sure to stay still while you are recording.

When you are done recording, press the stop button in the bottom left corner.

Sketch the graph in the space provided below.



(clear data?)

Q4: How did your resting heart rate compare to your prediction? (Was your prediction higher or lower?)

When all members of the group have recorded their resting heart rate, move to page 13. Pick who will be running first from your group, and continue discussing the following questions until the teachers call for the first group to go outside.

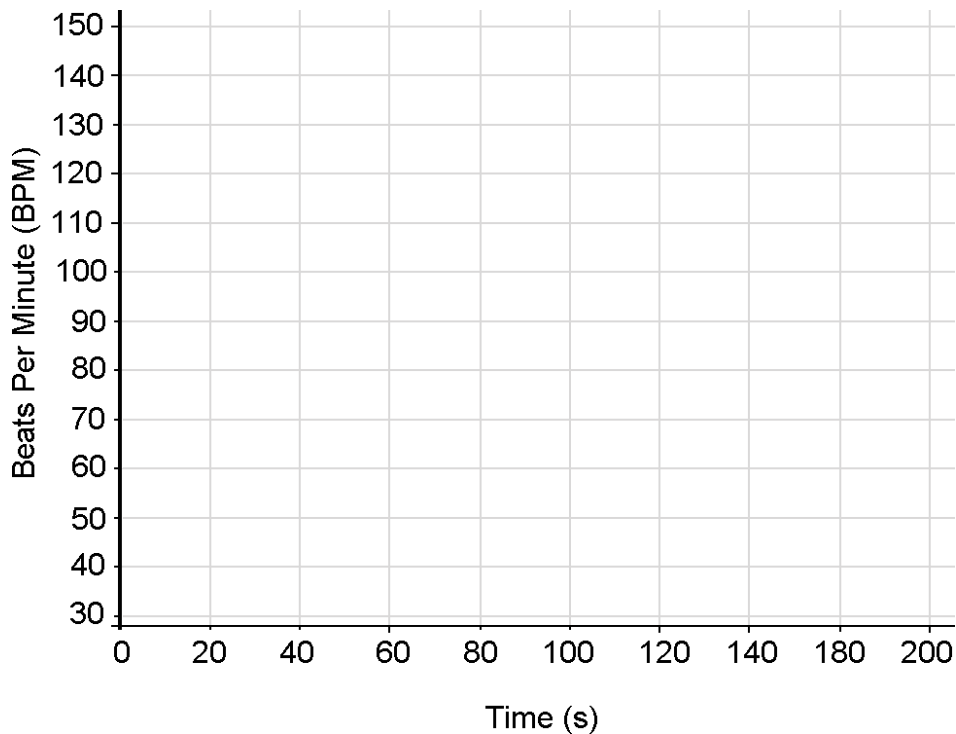
Outside instructions:

Run a full lap around the basketball court, and carefully back into the classroom. Be sure to follow the cones.

When you get back into the classroom, find your Spark member and immediately begin recording on the Spark. (If the spark is in sleep mode, turn it on by pressing the button on the bottom.)

Continue recording until you reach your original resting heart rate. The push the stop button in the bottom left corner.

Sketch the graph in the space provided.



Q5: Observe the graph you just made. How does this compare to your prediction?

Move to **page 16**. (Click the right arrow twice.)

Q7: Calculate the difference between your running heart rate and your resting heart rate using the formula below.

(Heart rate first recorded immediately after running) - (resting heart rate) = difference

Move to page 17.

Q8: Using your graph, calculate the percentage change in heart rate using the formula below.

$$\frac{\text{Difference in heart rates}}{\text{Resting heart rate}} \times 100 = \text{percentage change}$$

Move to page 18

Q9: Use the graph to determine the time it took for your heart rate to return to resting level.

Move to page 19

Q10: How did your actual recovery time compare to your prediction?

While you wait for the other groups to finish, discuss the relationship between level of physical activity and recovery time with your group members.