Lab 2.3 Circulatory System Name:

 Date:

 Block:

Question: Does your heart rate and respiratory rate return to normal immediately after exercise?

Materials:

* Heart rate monitor
* Running shoes / PE Strip
* pen , paper

Procedure:

1. Choose which of the following methods you will be using to take your heart rate for the duration of the lab. You can take your radial pulse (at your wrist) or your carotid pulse (on your neck).
2. Person A will sit in a chair for 5 minutes. At the end of the five minutes, person A will take your resting heart rate and their partner will take their resting respiratory rate. Record these in the Data/Observations/Results section.
3. Person A will complete the chosen activity for 2 minutes.
4. Immediately after the completion of the activity, Person A will measure their heart rate and their partner will measure their respiratory rate. Record these data in Table 1.
5. Person A will sit down, and measure their heart rate and their partner will measure their respiratory rate at the following intervals: 1 minute, 3 minute and 5 minutes after you complete the exercise. Record this data in Table 1.
6. Repeat Steps #2-5 with Person B completing the exercise while person A assists them with measuring their respiratory rate.

Data/Observations/Results:

Heart rate is measured in:

Respiratory rate is measured in:

My resting heart rate is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

My resting respiratory rate is: \_\_\_\_\_\_\_\_\_\_\_

Table 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Time | Post-exercise | After 1 min | After 3 min | After 5 min |
| Measurement | Heart rate | Resp. Rate | Heart rate | Resp. Rate | Heart rate | Resp. Rate | Heart rate | Resp. Rate |
| Activity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |  |  |  |  |  |  |  |

Results:

1. Prepare a graph of your experimental data. The x-axis will be time (minutes) and your y-axis will be heart and respiratory rate (beats or breaths per minute). You will have two lines on your graph – one for heart rate and the other for respiratory rate. Be sure to use an appropriate scale and to have a legend to identify which line is for which exercise.

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Legend:

Conclusion:

1. Describe what happened to your heart rate and respiratory rate during exercise as well as after the exercise. Why do you think this happened?

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1. Some people’s heart rate and respiratory rates return to their resting rates faster than other people. Explain what this is an indication of (hint: do some research)

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**LAB 2-3: MEAURING HEART and RESP RATE-SELF ASSESSMENT RUBRIC**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **3** | **2** | **1** |
| **DATA/** | Data tables are accurate, neat, and complete.  | Most of the data tables are complete.  | The data tables are incomplete.  |
| **SAFETY, SKILL & CLEAN-UP** | Student is on task and follows procedures safely. Materials are cleaned up and disposed of as teacher instructed. | Some reminders needed to be on task and follow procedures safely. Materials are cleaned up and disposed of with some reminders.  | Many reminders needed to be on task and follow procedures safely. Materials are cleaned up and disposed of, with many reminders.  |
| **CONCLUSION** | Conclusion neatly and accurately answers the questions in full, complete sentences using dark, blue or black ink or pencil. | Conclusion answers the questions, using dark, blue or black ink/or pencil. | Conclusion stated but does not answer the question. |
|  | 5 | 3-4 | 1-2 |
| **RESULTS GRAPH** | The graph is titled, neat and complete. Axes are labelled and units given. A legend is included. | Most of the aspects of the graph is completed.  | Few of the aspects of the graph is completed. |
| **Self Assessment Rubric**  |  |  | Student completes self assessment (1) |

 **/ 15**

**TEACHER ASSESSMENT RUBRIC**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **3** | **2** | **1** |
| **DATA/** | Data tables are accurate, neat, and complete.  | Most of the data tables are complete.  | The data tables are incomplete.  |
| **SAFETY, SKILL & CLEAN-UP** | Student is on task and follows procedures safely. Materials are cleaned up and disposed of as teacher instructed. | Some reminders needed to be on task and follow procedures safely. Materials are cleaned up and disposed of with some reminders.  | Many reminders needed to be on task and follow procedures safely. Materials are cleaned up and disposed of, with many reminders.  |
| **CONCLUSION** | Conclusion neatly and accurately answers the questions in full, complete sentences using dark, blue or black ink or pencil. | Conclusion answers the questions, using dark, blue or black ink/or pencil. | Conclusion stated but does not answer the question. |
|  | 5 | 3-4 | 1-2 |
| **RESULTS GRAPH** | The graph is titled, neat and complete. Axes are labelled and units given. A legend is included. | Most of the aspects of the graph is completed.  | Few of the aspects of the graph is completed. |
| **Self Assessment Rubric**  |  |  | Student completes self assessment (1) |

 **/ 15**