

Scientific Method

Title: Pulse rates: A controlled Experiment

Purpose: To determine how holding your breath or standing will affect your pulse rate.

Hypothesis: I believe that _____ will cause my heart rate to _____ compared to my resting pulse rate.

Define: hypothesis: _____

Control: _____

Independent variable: _____

Dependent variable: _____

Experiment:

A. Materials: _____

B. Procedure:

1. Sit quietly at your desk with your head down.
2. Find your pulse in your wrist or neck and count the beats for 30 seconds. Your teacher will instruct you when to start and stop.
3. Record your number in the data table.
4. Repeat step 2 and 3 twice. Calculate your average pulse rate and record your results.
5. Choose one of the two activities—holding your breath or standing. Form a hypothesis on how this will affect your pulse rate.
6. Doing the activity you selected, record your pulse rate for 30 seconds. Record your number.
7. Repeat step 6 twice. Calculate your average pulse rate and record your result.

Data:

Control Data Table

Trial	1	2	3	Average
BPM sitting				

Experimental Data Table

Trial	1	2	3	Average
BPM				

Conclusion:

1. Why is this a controlled experiment?

2. What is the Independent variable in this experiment? _____

3. In this experiment, what is the control and why? _____

4. Does holding your breath or standing seem to affect your

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1. Why is this a controlled experiment?

2. What is the Independent variable in this experiment? _____

3. In this experiment, what is the control and why? _____

4. Does holding your breath or standing seem to affect your resting pulse rate? If so how does it affect it? _____

5. Was the data collected Qualitative or Quantitative? _____

6. Why did you perform more than one trial when collecting your data? _____

7. What are some possible sources of errors in this experiment?
