The Scientific Method: The Thumb Lab Partner's Name:

Name:

Introduction:

The scientific method is important for setting up meaningful experiments for all branches of science. There are several steps to the method:

1. Determine the problem (Experimental Question)
2. Develop a hypothesis
3. Design a controlled procedure
4. Collect and organize data
5. Draw a conclusion

Today you will be running a controlled experiment; you will be asked to: Formulate a hypothesis, run the experiment, collect and organize the data, and draw a conclusion. You will need to fill out the form on this page and follow with a formal laboratory report format.

Experimental Question: Will everyday tasks take longer or happen faster without the use of your thumbs?

Hypothesis (If…then…because):

Procedure:

1. Using a second hand timer, determine how long it takes you to complete four of the following tasks (your choice).
    a. Write your full name (First, Middle, Last) in cursive.
    b. Take the top off a soda bottle and put it back on.
    c. Turn to page 56 in your textbook.
    d. Unite your shoe, take it off, put it back on, and tie it.
    e. Unbutton and button a button.
    f. Look up the word "ecology" in the index of the textbook.
2. Write your times in the table below.
3. Now complete the same four tasks, with the same partner, with your thumbs taped up.
4. Write your times in the table below.

Data Table

Activity	Time to complete with thumbs	Time to complete without thumbs

Questions:

1. What is the experimental question?

2. What is your hypothesis?

3. Explain how you came up with your hypothesis.

4. What is the control in this experiment?

5. What is the Independent Variable in this experiment?

6. What is the Dependent Variable in this experiment?

7. Describe at least two of your results, explain why you got the results that you did.

8. Give at least 3 errors that occurred during your experiment & explain how that impacted your results.
   1.

   2.

   3.