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# Stimulus-Response Lab - Comparing reaction time between senses 

Hypothesis: My fastest sense is $\qquad$ .

## Procedure

1) You will be working in pairs: one person will hold the top of the ruler (near the highest number) and the other person will place his/her fingers just below the 0 mark on the ruler, but not touching the ruler.
2) The ruler will be dropped and your partner must try to catch it as fast as possible. Record the distance the ruler traveled in centimeter (cm).
3) Repeat the procedure 4 times for a total of 5 times and record your data.
4) Now repeat the procedure 5 times with each modification and record your data:
5) Persons catching the ruler have their eyes closed. Persons dropping the ruler are going to say 'Drop' as they release it.
6) Persons catching the ruler have their eyes closed. Persons dropping the ruler are going to slightly touch their partners as they release it.
7) Switch function and repeat the procedure. Record the data.
8) Convert your centimeters data into time in seconds using the given conversion chart.
9) Average yours and your partner's data. Make a graph.

Table 1. Reaction measured in centimeters.

|  | Subject 1 |  |  |  |  | Reaction in cm |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Trial | Visual | Auditory | Tactile | Visual | Auditory | Tactile |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |

Converting Chart

| Centimeters | Time (seconds) | Centimeters | Time (seconds) | Centimeters | Time (seconds) |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 3.0 | 0.08 | 10.0 | 0.14 | 17.0 | 0.19 |
| 4.0 | 0.09 | 11.0 | 0.15 | 18.0 | 0.19 |
| 5.0 | 0.10 | 12.0 | 0.16 | 19.0 | 0.20 |
| 6.0 | 0.11 | 13.0 | 0.16 | 20.0 | 0.20 |
| 7.0 | 0.12 | 14.0 | 0.17 | 23.0 | 0.22 |
| 8.0 | 0.13 | 15.0 | 0.17 | 25.5 | 0.23 |
| 9.0 | 0.14 | 16.0 | 0.18 | 30.5 | 0.30 |

Table 2. Reaction converted from centimeters to seconds.

|  | Reaction in seconds |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Trial | Visual | Auditory | Tactile | Visual | Auditory | Tactile |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |

Table 3. Average reaction time in seconds.

|  | Subject 1 |  |  | Subject 2 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Average Time | Visual | Auditory | Tactile | Visual | Auditory | Tactile |
| Sum |  |  |  |  |  |  |
| Average |  |  |  |  |  |  |

Graph yours and your partner's results in seconds!! Make sure to include labels with units and a title.
Analysis Questions - Restate the question and write down your answers. Make sure to number your answers.

1) Which one is the independent variable and how do you know?
2) Which one is the dependent variable and how do you know?
3) Which of your senses was faster? Did you accept or reject your hypothesis?
4) What variables were controlled?
5) How could we make this experiment better?
6) Explain what processes happened in your body in order for you to catch the ruler.
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