

Scientific Method - Senses Lab

Problem Statement: Describe what you will be testing.

Hypothesis: If _____, then _____.

Materials: Ruler, graph paper

Procedures:

In groups of two, one student will drop the ruler and one will catch the ruler. Both students can use the results of the student who catches the ruler.

The student who is dropping the ruler holds the top of ruler vertical at the 30 cm end. The catching student puts the top of their index finger at the 0 cm mark and their thumb on the other side of the ruler. This allows the student to grab or pinch the ruler. The catching student has their fingers close to the ruler but not touching it. Once the other student drops the ruler, the catcher tries to catch the ruler between their thumb and index fingers. The highest point on the ruler where the catching student's index finger lands is recorded on handout. Repeat three times.

Sight: The catching student puts their finger on the 0 cm mark. The dropping student drops the ruler without any other clues. The catcher tries to grab the ruler once it is dropped. Record your results. Repeat three more times.

Touch: The catching student puts their finger on the 0 cm mark and closes his/her eyes. The dropping student taps the catcher on the arm and drops the ruler at the same time. Once the catcher's arm is touched, they try to grab the ruler. Record your results. Repeat three more times.

Sound: The catching student puts their finger on the 0 cm mark and closes his/her eyes. The student who drops the ruler says "now" and drops the ruler at the same time. Once the catcher hears "now," they try to grab the ruler. Record your results. Repeat three more times.

Experiment:

****Use a RULER to copy the chart below****

Trial	Sight	Touch	Sound
1			
2			
3			
4			
5			
Average			

Independent variable: _____ Dependent variable: _____

Graphing:

Create a bar graph with the averages on the x-axis and the numbers 0 to 30 cm on the y-axis. Make sure to title and label the x and y axes. **USE GRAPH PAPER**

Analysis:

- 1) Which sense was fastest? _____
- 2) Which sense was slowest? _____
- 3) Did the ruler drop to the floor during any of your trials?
- 4) Were the results of the sight trials the same as the average?
- 5) Why did you perform five trials for each sense instead of one?

Conclusion: Write a clear, single sentence that summarizes the report and is directly related to the hypothesis. Example of a conclusion statement: *The plants treated with fertilizer grew an average of four inches taller than the plants not treated with fertilizer.*