Intro to Science Graphing Senses Lab

Problem:

Which of your senses is the keenest?

Background Information:

We rely on our senses to feel, smell, taste and hear our way through this world. In this lab we are going to test three of our senses: sight, touch, and sound. You will be also testing your reaction time! You will be doing this by dropping a ruler and measuring how fast you can react to catching it.

Hypothesis:

_____

_____

Materials:

- You need a partner. Your first task is to decide who is the catcher and who is the dropper. Don't worry – both jobs are equally fun!
- ruler
- -pencil
- -3 pieces of graph paper

Procedure:

1. The student who is dropping the ruler holds the top of the ruler at the 30 cm mark.

2. The catching student puts the top of their index finger at the 0 cm marks and their thumb on the other side of the ruler. This allows the student to pinch the ruler when it drops.
3. The catching student has to close their fingers but not actually touch the ruler before the trial begins.
4. The other student drops the ruler and results are recorded on your data table.

Sight: The catching student puts their finger on the 0 cm mark. The dropping student drops the ruler without any other cues. The catch tries to grab the ruler once it's dropped. Record your results and repeat 3 times.

Touch: The catching student puts their finger on the 0 cm mark and closes his or 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 and repeat 3 times.

<u>Sound:</u> The catching student puts their fingers on the 0 cm mark and closes his or her eyes. The student who is dropping the ruler says 'NOW' and then lets go of the ruler. When the catcher hears "NOW" they try to grab the ruler. Record your results and repeat 3 times.

Results*:

Trial	Sight	Touch	Sound
1			
2			
3			
Average			

Independent Variable_____

Dependent Variable:_____

***When you have your data, please add it to our list on the board.**

Part 2: Graphing

Create a bar graph on the attached grid. Include each student name on the x axis with numbers 0 to 30 on the y axis.

You will need to create three different bar graphs using the results from the entire class. Use the entire piece of graph paper for each graph. That's why you have 3!

Discussion Questions:
1. Why is it necessary to do three trials?

2. Which sense is the fastest? Which is the slowest?

3. What is the difference between an independent and a dependent variable?

4. What were 3 things that could have messed up your results?