Experimental Design Lab

Problem: You are a bank teller who thinks that people are turning in rolls of pennies that do not contain the correct number of pennies. You do not want to count all the pennies but want an easy way to identify how many pennies are in an unknown roll.

Supplies – Unlimited loose pennies, One roll of unknown pennies, ruler

How to complete your lab organizer!!

Title: Catchy but Relevant

Purpose: Why are we doing this?

Skip My Hypothesis for now!!

Materials Needed: List your supplies

Safety Precautions: List at least 3 appropriate items from your Lab Safety Contract

Independent Variable: What are YOU going to change?

Dependent Variable: What are YOU going to measure after you change your independent variable?

Describe your control group/What factors must be kept constant: List at least 3 things that will stay the same

Describe the experimental group: List the different values of your IV you are going to use

How will the results be measured? List your IV & DV with the units of measurement

What is the one factor being tested? List your DV

NOW – Write your Hypothesis – Describe the relationship you think will occur between your IV & DV. Also – answer the question why are we doing this if needed.

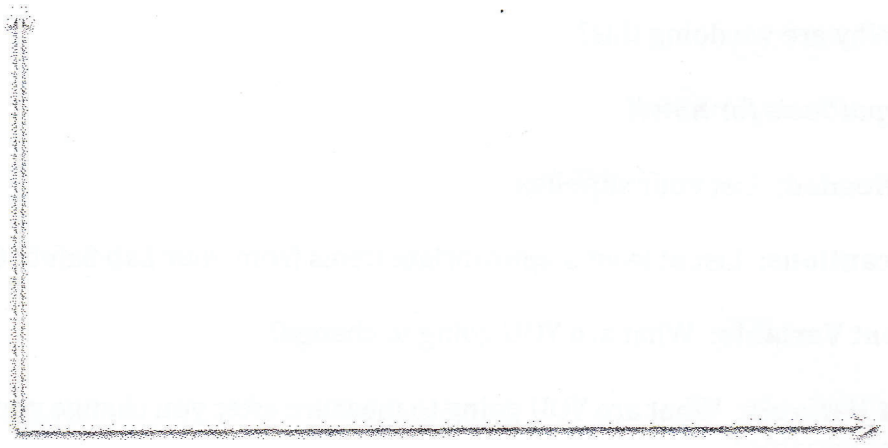
List the procedural steps of the experiment. Number or bullet point these!!
What are you going to do ?

Record your data or describe your observations.

Data Chart:

Independent Variable (units)	Dependent Variable (Units)
You	You
Choose	Measure
These	These
Values!!	Values!!
You must have at least 3 data points!	More is better!!

Graph
When possible – create a graph. IV on the x axis, DV on the y axis.



My Conclusion:
Describe the trend you see in your data. Identify any "strange" data points. Discuss any procedural errors.

Was your hypothesis proven or disproven? Explain...
You must cite data (my data showed, my graph demonstrated).