

Name:

Period:

Toilet Paper Lab

Step 1: Observation

After investigating the different toilet paper samples, write down at least 2 observations for each brand below. These do not need to be in complete sentences - bullet points are fine! (1 pt per box)

Food Lion	Aldi
Cottonelle	School TP

Step 2: Question

We are going to be investigating the strength of each brand of toilet paper. We will be using water to add moisture to the toilet paper and seeing how many pennies each brand of toilet paper will hold. Formulate a detailed research question below: (2 pts)

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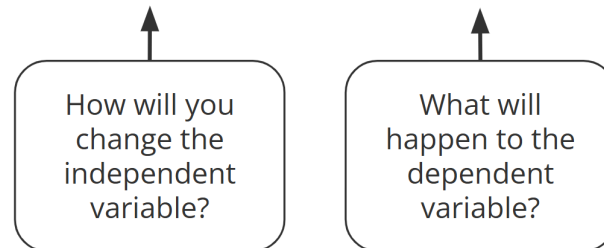
Name:

Period:

Step 3: Hypothesis

Generate a hypothesis in the box below. Remember, a hypothesis should be a prediction based on the research question and should be in "if...then..." format. (2 pts)

"IF _____, THEN _____."



Step 4: Experiment

Before we perform this experiment, we must identify our variables and groups. For each term below, identify the variable(s) or group being asked for. Remember, this should be specific to this experiment! These do not need to be in complete sentences. If there is not a control group, please write "no control group". (1 pt each)

Independent Variable:

Dependent Variable:

Controlled Variable (list 3):

Experimental Group:

Control Group:

Name:

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Now for the fun part: DATA COLLECTION! Read each step carefully and follow the directions in order. When asked to record data, please do so in the provided data table.

1. You will be given one brand of toilet paper to start with. Carefully rip off one square of toilet paper from the roll. (School brand will not have squares, so carefully rip a large square off the roll.)
2. Without ripping the toilet paper, place the square over the top of a plastic cup. Use a rubber band to secure the paper in place.
3. Using a pipette, add 5 drops of water to the center of the toilet paper. If you accidentally add more than 5 drops, start over with a new piece of toilet paper.
4. Wait 10 seconds for the water to spread.
5. Carefully place one penny at a time onto the center of the toilet paper. Continue placing pennies until the toilet paper rips and the pennies fall into the cup. Record the number of pennies that the toilet paper held in the data table next to the brand. This will be Trial #1.
6. Repeat Steps 1-5 for a total of 5 trials. When you have completed 5 trials for the first brand of toilet paper, let me know and I will give you a new brand of toilet paper.
7. Once you have completed 5 trials for all 4 brands of toilet paper and recorded your data, calculate the average number of pennies for each brand and record this number in your data table.
 - To do this, add up all the trials for one brand of toilet paper and then divide by the number of trials (5). Repeat this for each brand.

Data Table (5 pts):

TP Brand	# of Pennies					
	Trial #1	Trial #2	Trial #3	Trial #4	Trial #5	Average
Food Lion						
Aldi						
Cottonelle						
School						

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Step 5: Analysis

You will be graphing the average number of pennies that each toilet paper brand held. What kind of graph will be best for this? (circle one)

Bar Graph

Pie Chart

Line Graph

Please create a graph of this data on the grid below **IN PENCIL**. (5 pts) The brands of toilet paper should be on the x-axis and the average number of pennies should be on the y-axis. Your graph should include the following elements:

- Descriptive title at the top
- X-axis labeled with title and categories
- Y-axis labeled with title and units (if needed)
- 4 bars (one for each brand of toilet paper)
- A neat and clear design

