

PENNY LAB



The number of water drops that can fit on a penny will surprise you!!

Supplies:

Dropper	Penny
Beaker	50 mL tap water
7 (seven) Paper Towels	50 mL soapy water (<u>not needed</u> until _____)

Directions:

1. SM STEP #1: QUESTION - **How** does soap affect the water's surface tension?
2. SM STEP #2: RESEARCH – use the internet to determine: a) what is _____? and b) what is soap's _____ on the surface tension of water. Write a summary of your research below (1-3 sentences).
3. SM STEP #3: HYPOTHESIS – write your testable hypothesis below.
4. Gather supplies.
5. SM STEP #4: EXPERIMENT – follow the instructions below:
 - a. Place your penny (_____-side up) on top of _____ dry paper towels.
 - b. Using your _____, gently drop of water onto the surface of the penny – keeping your dropper at least _____ above the water's _____.
Count the number of drops as you go!!
 - c. When you place a _____ on the penny and it causes the water to _____ off the penny, stop adding water and record your number of drops in the Trial 1 space.

- d. Using another paper towel, dry off your penny and follow steps _____ again, until you have completed five trials for the heads side of the penny.
- e. Next, complete steps #B - D using the _____ of the penny.
- f. Again, complete five different trials.
- g. Carefully dump your tap water _____ and refill your beaker with 50 mL of _____, found in the pitcher by the sink; and begin the experiment again, using soapy water.
- h. Calculate the _____ number of drops for water heads and tails; soapy water heads and tails. Ask me if you do not remember how to calculate the _____ .

DATA CHART - SM STEP #5 – ANALYZE RESULTS (and create graph)

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	MEAN
Tap Water (Heads)						
Tap Water (Tails)						
Soapy Water (Heads)						
Soapy Water (Tails)						

- 6. SM STEP #6: CONCLUSION – follow the instructions below:
 - a. Write a paragraph below (using complete sentences) to explain how the soap affects the surface tension of water. USE YOUR DATA TO HELP FORM YOUR ANSWER.

Post Lab Analysis.

In this lab, what was the . . .		
Independent Variable?	Dependent Variable?	Control Variable?