

Penny lab

[Psychology](#), [Psychotherapy](#)



Penny Lab Experiment

Objectives

To determine how soap affects the surface tension of water. Hypothesis In this experiment the hypothesis was that soap was going to affect the surface tension by weakening the bonds and allowing less water on the penny.

Materials

- Penny
- Beaker x2 (One containing soapy water the other containing pure tap)
- Paper towels
- Lab review sheet
- Pencil
- Pipette

Procedure First we picked who would drop the water onto the penny. We did this to ensure that the drops were even in size.

We then carefully dropped water from the dropper onto the head side of the penny while counting the number of drops.

Data	Trial 1	Trial 2	Trial 3	Average
Tap Water	37 drops	32 drops	44 drops	37 drops
Soapy Water	16 drops	14 drops	10 drops	13 drops

Calculations Tap Water - $(37+32+44)/3= 37$ Soapy Water- $(16+14+10)/3= 13$ -Conclusion In this experiment we confirmed the hypothesis that soap affects water by lowering surface tension thus lowering the amount that can fit on a penny.

Post Lab

Explain what surface tension is/ Surface tension is water's ability to stick to itself. Why were many trials taken and averaged? / To get better and more accurate responses. In this experiment, what was your control group? / The plain tap water. Identify the independent variable in the experiment. / The soap in the water. Identify the dependent variable in the experiment. / The amount of drops that would fit on the penny. What if the question was how does sugar affect surface tension of water?

Using the scientific method answer how you would answer this question. First we would make an observation about how water's surface tension could be affected. Next we would propose a hypothesis. Like if we add sugar to water the water's surface tension will be greater. Then we would follow the steps of the experiment performed earlier. We would then be able to prove or disprove the hypothesis we created. Then we would draw conclusions based on our results.