



How many drops of H₂O can fit on a penny?

Take a Guess: How many drops of water can fit on one side of a penny? _____

Part A: Perform a CONTROL test for comparison with later results.

Step 1: Rinse a penny in tap water and dry completely.

Step 2: Place the penny on paper towel.

Step 3: Use an eye dropper to place drops of WATER on the penny (one at a time) until ANY amount of water runs over the edge of the penny.

Step 4: Record the number of drops for that trial in the table.

Repeat steps 1 - 4 three more times (for the other trials) before calculating your average.

Substance	Trial 1	Trial 2	Trial 3	Trial 4	Average
CONTROL					

Part B: Perform tests with the TESTING LIQUID.

Step 1: Start with a "clean" penny. Rinse the penny in tap water and dry completely. Be sure to remove as much residue as possible - without using soap!

Step 2: Hold the penny with the tweezers provided, then dip it into the TESTING LIQUID. Allow extra liquid to drip off the penny into the container before the next step.

Step 3: Place penny on paper towel. Place drops of WATER on the penny (one at a time) until ANY amount of water runs over the edge of the penny.

Step 4: Record your observations and the number of drops for that trial in the table.

Repeat steps 1 - 4 three more times before calculating the average.

Substance	Trial 1	Trial 2	Trial 3	Trial 4	Average
Penny covered in soap					

Part C: Answer each question related to the experiment.

1. Explain your results in terms of cohesion and surface tension.
2. Compare your results with other groups. Did they have the same results? Why or why not? Give at least two reasons.

Drops On A Penny Lab

Cohesion - Water molecules are _____ to other water molecules. The _____ end of water has a _____ charge and the _____ end has a _____ charge. The hydrogens of one water _____ are attracted to the oxygen from other water molecules. This attractive _____ is what gives water its _____ properties.

Surface Tension - Surface tension is the name we give to the _____ of water molecules at the _____ of a body of _____. The cohesion of water molecules forms a surface " _____ " or " _____ ." Some substances may _____ the cohesive force of water, which will reduce the _____ of the surface "skin" of the water.



Take a guess ...
How many paperclips can you fit into the glass before the water runs over?

Actual Amount = _____

Use this information to help you answer the questions on the lab sheet after you have completed the experiment!