

Honest Abe – Watering Pennies

Lab Sheet

You might think that you can't fit many drops of water on the surface of a penny. Pennies are just so small! In the Drops on a Penny experiment, though, you'll experience surface tension and cohesion at their finest. How many drops of water can you fit? There's only one way to find out... by adding one drop at a time!

In this lab you will have an opportunity to observe some of water's unique properties. You will be working with pre-assigned groups in the lab area.

Materials:

- Composition Notebook
- Pencil / Pen
- Lab Sheet
- Pennies
- Pipette
- Water
- Rubbing Alcohol
- Beakers
- Paper Towel

Procedure:

1. Set up your lab notebook. Put this write up on the correct page, with the correct set up
2. Write a prediction (hypothesis) for what you think will happen when placing drops of water and drops of rubbing alcohol onto the surface of the penny.
3. Set your penny flat, face up, on a paper towel.
4. Use the pipette to get water from your beaker.
5. Place the drops of water onto the surface (face) of the penny, one at a time. Do this very carefully. You are going to have to count the drops and record your findings.
6. Record the number of drops it took for you to cover the face of the penny without spilling any water off of the surface of the penny.
7. Repeat this procedure for the water two more times to get a total of 3 trials.
8. Follow the same procedures for the rubbing alcohol that you did for the water. You should have a total of 3 trials with the rubbing alcohol.
9. You should have a total of 6 trials. 3 with water and 3 with rubbing alcohol.
10. Explain your results. What were the differences between the rubbing alcohol and the water? Why did this happen? You need to write a conclusion about your results using what you know about the properties of water. You may use a book to find more information about the properties of water as well if you need to.

11. Now it's your turn! You need to design your own experiment. You have results for water and rubbing alcohol. You need to choose some other type of liquid from the choices on your table to test against the water and the rubbing alcohol.
12. This substance will just be added to another row or column in your table.
13. Be sure to follow the correct procedure and steps to get accurate results.
14. On a separate sheet of paper you need to write down all of the parts of experimental design and staple or tape it into your composition notebook as a flap above your lab.