Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ Ast: \_\_\_\_\_

**PENNY DROPS LAB**

Physical Science Honors

**INTRO:**

Dihydrogen monoxide, commonly known as “water,” is a very special compound. Its properties are not only unique, but it is essential for supporting life on Earth as we know it. Water molecules, consisting of two hydrogens bonded to one oxygen atom, behave in complex and interesting ways as a result of these special properties. However, because water is so familiar to us, we often overlook some of its strange behaviors and think of them as “normal”. Today, you and your group will investigate some of the unique properties of water by designing and conducting a controlled experiment using water along with other liquid solutions.

**TASK:**

Using a pipette (dropper), count the maximum number of drops of various solutions that will fit on top of a penny before the liquid “spills” over the edge of the penny.

You will have access to the following materials:

* Tap water
* Soap-water solution
* Isopropyl alcohol
* Plastic pipettes (droppers)
* Paper towels

**GUIDING QUESTION:**

**How does the type of solution affect the number of drops of a liquid that will fit on top of a penny?**

**TIPS:**

1. Make sure you keep the pipettes (droppers) separated in the correct solutions. DO NOT CROSS-CONTAMINATE YOUR SOLUTIONS!
2. Be sure to thoroughly rinse your penny after each trial. USE WARM WATER, *NOT SOAP*, TO CLEAN YOUR PENNY IN BETWEEN TRIALS. DRY IT COMPLETELY BEFORE THE NEXT TEST.
3. Go slow with your dropper. COUNT INDIVIDUAL DROPS ONE AT A TIME.

**SAFETY:**

* Isopropyl alcohol is harmful if ingested. DO NOT DRINK IT!
* Isopropyl alcohol may “sting” if it contacts open wounds.

**DATA:**

Use the bottom/back of this paper to organize your data.