**The Scientific Method  - Plop Plop  Fizz Fizz**

In this lab, you will develop and test a hypothesis, analyze data and draw conclusions.
You are given guidance at each step of the way.  Fill out this form completely - do not skip steps!

**Step 1:  Question or Observation**

**Question:   What factors will make an alka-seltzer tablet dissolve faster**

Variables to test:
.....Tap water,  Warm water,  Cold water,  Salt Water,  Acidic water (using vinegar)

Of the variables above, which should serve as your CONTROL group?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Develop an If/Then Question for each variable being tested.

1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Independent or Manipulated Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent or Responding Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Control: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 2:  Develop a hypothesis.  Finish this statement…**

Alka seltzer will dissolve fastest in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ water, and the slowest in \_\_\_\_\_\_\_\_\_ water.

**Step 3:  Design and Conduct and Experiment**

Answer these questions regarding your experimental design:

A)  Will you use a whole tablet or a half a tablet of alka seltzer?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
B)  How will you measure how quickly it dissolves?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
C)  How much water will you place in your beakers?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
D) Will this amount be the same in all of your tests?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
E)  What safety precautions should you take? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 4:  Create a table to record your results. Record results using a graph**

|  |  |
| --- | --- |
| Type of Water | Dissolve Time |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |

**Step 5:   Draw Conclusions. Write a paragraph to restate your hypothesis and to summarize your finding qualitatively**