LT4: Reaction Rate Inquiry Lab

**Background:** Reaction rate can be affected by 5 factors. These factors include concentration, surface area, presence of a catalyst, temperature, and agitation. The rate of the reaction is defined as the length of time it takes for reactants to turn into products. For our purposes time will be used to determine reaction rate and evidence of chemical change will indicate reaction progress. Once no visible chemical change has taken place (which is subjective) the reaction would be over.

**Purpose:** Design an experiment to test at least one of the five factors that affect reaction rate, collect data, graph the data, and analyze the data in relation to its impact on reaction rate.

**Possible Materials (ask for any others you might want):**

* Tums tablets
* Alka Seltzer
* Acetic Acid
* Hydrochloric Acid (1M)
* Steel wool
* Sodium hydroxide
* Baking soda
* Yeast
* Stopwatch
* Safety goggles
* Glassware
* Hydrogen peroxide

***Schedule to complete LAB on time:***

**Day 1 AND 2:** Form a group of 2-4 reliable teammates. Choose the factor that your group wants to experiment with and how it affects reaction rate. List the **factor:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** Look online, in your chapter packet, and discuss how you want to test your factor. COMPLETE (CHECK AS YOU COMPLETE):

**TITLE\_\_\_\_\_, PURPOSE\_\_\_\_, HYPOTHESIS\_\_\_\_, MATERIALS\_\_\_\_, PROCEDURES\_\_\_\_\_, DATA TABLE\_\_\_\_**

**Day 2:** When all pre-writing is complete (see above), you can begin setting up your lab and collecting data. **REMEMBER** you need at least 3 pieces of data to support or reject your hypothesis.

**Day 3:** Collect Data

**Day 4**: Finish collecting data THEN finish the lab writing and graph

**Day 5:** Share results with classmates and Take notes on Factors affecting Reaction Rate

**\*\*\*The Lab Report and Graph are due \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**