Experiment Proposal

The Guiding Question... | *How does the number of Mentos dropped into Diet Coke affect the strength of the reaction?*

Hypothesis 1

IF...***more Mentos causes a stronger reaction…***

Hypothesis 2

IF...***the number of Mentos does NOT affect the strength of the reaction…***

Hypothesis 3

IF...***more Mentos causes a weaker reaction…***

The Test

AND…

Procedure
1) *Tape meter sticks to outside wall*
2) *Place 2L bottle of Diet Coke in front of meter sticks*
3) *Count Mentos and place them in the PVC pipe with a notecard underneath*
4) *Open the Diet Coke and line up the PVC pipe with the opening (with notecard in between)*
5) *Remove the notecard, step back after Mentos fall*
6) *Measure and record the maximum spray height*
7) *Repeat steps for all trials (1,3,&5 mentos 2x each)*

Diagram of Equipment Setup

Meter Stick taped to Wall

maximum spray height

PVC tube with mint Mentos

notecard

2L bottle of Diet Coke
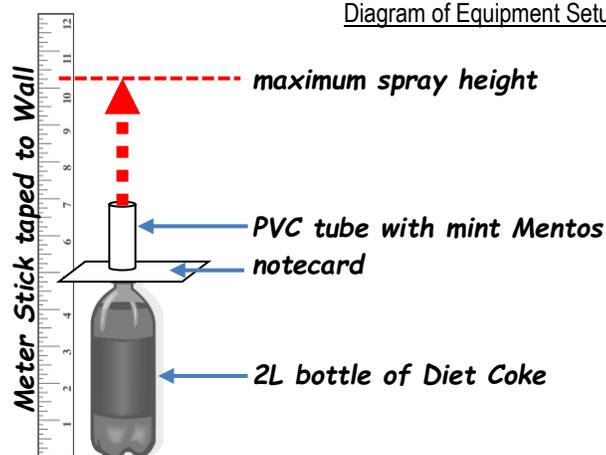
What data will you collect?
- ✓ *Number of Mentos used (independent variable)*
- ✓ *Maximum height of spray (dependent variable)*
- ✓ *Type/amount of soda (controlled)*
- ✓ *Type of Mentos (controlled)*
- ✓ *Temperature/condition of soda/Mentos (controlled)*

How will you analyze the data?
- *Merge data with other classes*
- *Calculate the average maximum spray height for each amount of Mentos (add maximum height for each trial and divide by the number of trials)*
- *COMPARE the average maximum spray heights for each number of Mentos in the reaction (data table AND bar graph)*

Predicted Result if Hypothesis 1 is Valid

THEN...***the average spray height will increase as more Mentos are added.***

Predicted Result if Hypothesis 2 is Valid

THEN...***the average spray height will remain constant as more Mentos are added.***

Predicted Result if Hypothesis 3 is Valid

THEN...***the average spray height will decrease as more Mentos are added.***

Your Data

AND…

**Your Analysis
and
Interpretation
of the Data**