**LAB MAP for AP Investigation 00 – OREOS (modified from Dan Mott)**

**Directions: I will provide balances/scales, 5 Double-Stuff Oreos, 5 Regular Oreos, wax paper and a plastic knife to each Lab Team. Your team will design your lab based upon the claims put forth by Nabisco. Make a copy of this document and share with your team. It will be your rough draft for each of your individual Lab Notebooks.**

[**5-Element Flowchart:**](https://docs.google.com/document/d/1oMxsDoQhyjTLanU9zX6K56on4SSzfvpUNksx6oGyvIw/edit?usp=sharing) I would get feedback from me on your flowchart (once you design it) before collecting data. Once your flowchart has been discussed, construct your data table BEFORE collecting any data.

[**AP Lab Rubric: Oreos:**](https://docs.google.com/document/d/172SRVeIqE688ivv-Ze2XB9HBfif2uNB0_SS1zqdqCXQ/edit?usp=sharing) I strongly suggest that you read through the entire rubric, especially the “Professionalism” before starting.

**1. Driving Question/Purpose:** ***type***

**2. Background/Pre-Lab:** (This is information that would help you decide your hypothesis and would demonstrate the rationale of any necessary derived calculations.) ***type***

**3. Hypothesis:**

1. If/then/because statement: ***type***
2. Variables identified: Independent (what you are varying): ***type***

Dependent (what you are measuring): ***type***

1. Constants (what is the same for all aspects of the experiment): ***type***
2. Control (what you are comparing your independent variable to): ***type***

**4.** [**Flowchart**](https://docs.google.com/document/d/18-SLZEnutengyYazDwCeHT8hI9MqC9ARLzJPVxPCMCE/edit?usp=sharing)**/Procedures:** I would insert a picture of your five-element flowchart here - but BEFORE YOU DO - come and discuss your flowchart with me for feedback.

***{insert picture of hand-drawn diagram}***

**5. Safety Considerations:*****type***

**6. Data Table Set-up:** First column is the independent variable, followed by your dependent variable (data) and finally any derived calculations.  **Include any math calculations** used for your derived calculations ( *below your data table* in your notebook – if appropriate.

Title: ***type***

**[NO GRAPH FOR THIS LAB]**

**7. Analysis C-E-R:** These are complete sentences that highlight the information from the graphs. This would also include any statistical analysis (if done) as well as sources of error. It must include:

CLAIM (underlined in yellow): What trend do you see in your data? ***type***

EVIDENCE (underline in blue): Include specifics from your data to support your claim(s). Don’t explain - just identify/list the quantitative. Was your data significant? ***type***

REASON (underline in green): How does your evidence support your claim - what underlying scientific principle does your evidence support? This is where you explain your evidence. ***type***

ERROR/UNCERTAINTY (underline in pink): Identify unavoidable error/uncertainties that might have affected your data. Be specific about its effects on your data. NO HYPOTHETICAL/HUMAN ERROR! If you make a mistake/error, during data collection, STOP, fix the problem, and then start again. *If no unavoidable error occurred, write “No significant error occurred during this experiment.”* ***type***

**8. Conclusions:** A summary statement starting with, “Our data supports/does not support my hypothesis…” Answer what have you determined regarding the “Driving Question”. What could you do to reduce the experimental uncertainty? ***type***