Name: _____ Per: _____

This is not a "binder" assignment. It will be turned in separately

DESIGN YOUR OWN EXPERIMENT HONORS PROJECT

Your project for the honors component for Quarter 1 is to design and conduct your own scientific investigation. You will need to follow the steps of the scientific method and create a visual representation of your project.

DUE DATE: SEPT. 25TH (A DAY) OR SEPT. 26TH (B DAY)

You may choose from one of the following **questions** to investigate (or get approval from your teacher for a question of your own choice):

1. Do white candles burn at a different rate than colored candles?
2. How does the shape of an ice cube affect how quickly it melts?
3. How will adding different flavors of Kool-Aid to water affect the water's boiling point?
4. What brand of trash bag can withstand the most weight before ripping?
5. Given the same amount of water, how does pot size affect the amount of time it takes to boil water?
6. Which can support more weight: paper or plastic grocery bags?

ASSIGNMENT REQUIREMENTS:

Scientific Investigation:

a. You must investigate one of the above questions using all steps of the scientific method.
b. Your investigation must include qualitative AND quantitative observation… it MUST be measurable with numbers.
c. Completed investigations will include one of the following visual representations:
   - Website (must have at least 5 pictures)
   - Powerpoint/prezi/google slides (must have at least 5 pictures)
   - Video (must be at least 30 seconds but no longer than 2 minutes. Video must be uploaded to YouTube and shared with your teacher)
d. You must be in your pictures or video (or your voice)

(If your visual representation is a powerpoint/prezi/google slides or video, the shared link must be emailed to each teacher by 8:00 a.m. the day the project is due.)

Mrs. Scholes (anisa.scholes@washk12.org) Mr. Miller (ryan.miller@washk12.org) Mrs. White (joy.white@washk12.org)

***If you cannot complete this at home, please arrange a time with your teacher to use the lab after school.

Written Assignment: You must also complete this Scientific Investigation written assessment.

SCIENTIFIC INVESTIGATION WRITTEN ASSESSMENT

Question: Which question did you decide to investigate? _____/1pt

Research: Before doing the experiment, spend some time learning about your question. Use reliable internet resources, books from the library, your science textbook or other resources. Not only do you want to be an expert on your topic, you want to teach others about your topic. Cite your sources. _____/3pts

Sources:

Hypothesis: Based on your research, decide what you think the outcome of your investigation will be and make a good guess as to what you think the answer to your question will be.

_____/1pt

If_____
then_____
because_____

Independent Variable: (The variable that is changed by the scientist "I Change") _____/1pt

Dependent Variable: (The variable that changes because of what the scientist changes "Data") _____/1pt

Controlled Variables: (Stays the same) _____/1pt

Materials: Make a list of the materials that you used to complete your scientific investigation.

_____/1pt

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Procedures: List the steps that you took to complete your investigation. _____/3pts

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Observations: List or draw observations that you make while you are completing your investigation. _____/3pts

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Data: Your investigation must include data with numbers. You must display it as a graph or chart.

_____/4pts

Conclusion: Write out the conclusion to your question. Explain how your hypothesis was proven correct or incorrect. _____/1pt

Subtotal: _____/20pts

Visual Representation:

Please **circle** the format that you used: (website, powerpoint/prezi/google slides, video)

- Hypothesis explained _____/1pt
- Variables & Controls explained _____/1pt
- Materials explained _____/1pt
- Procedures explained _____/1pt
- Observations explained _____/1pt
- Data represented (charts/graphs) _____/2pts
- Conclusion explained _____/1pt
- Easy to follow _____/2pts
- **You will get an automatic 0 on the visual presentation if you are not in the video or pictures.**

_____/10pts

TOTAL SCORE _____/30pts

HONORS CREDIT Yes No

***In order to receive Honors Credit for 8th grade science for Quarter 1, students must achieve "Mastery" on this project of 80%. A mastery score on this project is 24/30 or higher. Students much achieve mastery by turning the project in on or before the due date and achieve the mastery score on the first attempt. The score for this project does not go on the student's grade. Achieving mastery on this project will give the student "8th Grade Honors Science" credit on their transcript. Projects will be accepted late with a 20% deduction.