Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*\*This is not a “binder” assignment. It will be turned in separately\*\*\*

Design Your Own Experiment Project

Your project for GVC 1 is to design and conduct your own scientific investigation. You will need to follow the steps of the scientific method, create a visual representation of your project, and answer questions about changes in matter.

Due Date: monday, Oct. 3rd (a day) tuesday, Oct. 4th (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. Does chewing affect the physical properties of gum?
2. Do white candles burn at a different rate than colored candles?
3. How does the shape of an ice cube affect how quickly it melts?
4. How will adding different flavors of Kool-Aid to water affect the water’s boiling point?
5. What brand of trash bag can withstand the most weight before ripping?
6. Given the same amount of water, how does pot size affect the amount of time it takes to boil water?
7. Which brand of chocolate bar melts fastest in the sun?
8. Which can support more weight: paper or plastic grocery bags?
9. Does water corrode a copper penny at a different rate than a silver nickel?
10. How does adding different clear liquids (water, vinegar, rubbing alcohol, hydrogen peroxide, etc.) effect milk?

Assignment Requirements:

**Scientific Investigation:**

1. You must investigate one of the above questions using all steps of the scientific method.
2. Completed investigations may be presented in one of the following visual representations:
   * Poster (must have at least 5 pictures)
   * Powerpoint/prezi (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)
3. You must be in your pictures or video (or your voice)
4. Students may work alone or with ONE other student in any DMS 8th grade science class

(If working with another student, you may turn in 1 visual representation, but EACH student must turn in the written assessment. If your visual representation is a powerpoint/prezi or video, a copy or link to the YouTube video must be turned into each teacher.)

**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: 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. What have you learned? \_\_\_\_\_\_\_/2pts

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. Remember, your hypothesis must be written as an If….. then…. Because… Statement. \_\_\_\_\_\_\_/1pt

Independent Variable: (This is what you are testing) \_\_\_\_\_\_\_/1pt

Dependent Variable: (This depends on the independent variable. It is the outcome) \_\_\_\_\_\_\_/1pt

Controlled Variables: (Stays the same) \_\_\_\_\_\_\_/1pt

Materials: Make a list of the materials that you used to complete your scientific investigation. (add more materials if needed) \_\_\_\_\_\_\_/1pt

1.

2.

3.

4.

5.

6.

Procedures: List the steps that you took to complete your investigation. You may add additional steps if needed. (write small) \_\_\_\_\_\_\_/3pts

1.

2.

3.

4.

5.

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7.

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9.

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17.

18.

Observations: List or draw observations that you make while you are completing your investigation. \_\_\_\_\_\_\_/2pts

1.

2.

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Data: Your investigation must include data with numbers. You can display it as a graph or chart. \_\_\_\_\_\_\_/2pts

Conclusion: What is the answer to your question? Was your hypothesis correct? \_\_\_\_\_\_\_/1pt

Properties: List any physical and/or chemical properties involved in your investigation. \_\_\_\_\_\_\_/2pts

Changes: List any physical and/or chemical changes involved in your investigation. \_\_\_\_\_\_\_/2pts

Visual Representation (poster, powerpoint/prezi, video) rubric: \_\_\_\_\_\_/10pts

* Hypothesis explained (2 pts)
* Procedures explained (2 pts)
* Observations explained (2 pts)
* Conclusion explained (2 pts)
* Easy to follow (2 pts)
* You will get an automatic 0 on the visual presentation if you are not in the video or pictures.

Total Score \_\_\_\_\_\_/30pts