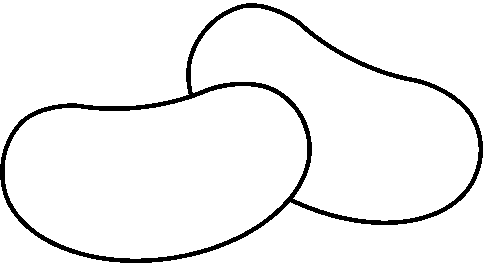
**Mass & Matter**

**That’s heavy man… heavy.**



**Mr. Beadle – Rm 202**

[**www.vhmsscience.weebly.com**](http://www.vhmsscience.weebly.com)

[**bbeadle@alpinedistrict.org**](mailto:bbeadle@alpinedistrict.org)

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_**

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| **Lab Activities** | **Score** |
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| Elastic Energy Experimental Design | /72 |

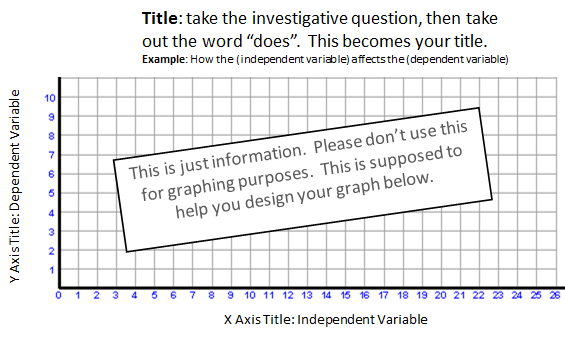
**Scientific Method & Experimental Design**

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| **Experimental Test Question & Hypothesis /10** |
| **Overall Question**: What is mass? What is matter?  What happens to our mass when we increase the amount of matter?  *Look at the variables that you’re testing and rephrase the overall question into a testable experimental question*:  How does (independent variable) affect (dependent variable)?  **Investigative question**: ( /4) |
| Example: **If** I change the (independent variable) **then** the (dependent variable) changes **because…**   * This statement should be a subset of a series of tests that tests the original hypothesis. * Include what you are changing in the independent variable and how that changes the dependent variable. * The “because” portion is the “why” behind the explanation of your possible outcomes.   **Your Hypothesis**: ( /6) |
| **Experimental Design: /10** |
| How are you going to carry out your experiment?  Be sure that you set up a step by step approach detailing each set of procedures.  (Think of a recipe book w. materials and procedures).   |  |  | | --- | --- | | **Materials**  (Bullet Points, Quantities & Items) | **Procedures**  (1. 2. 3.) | |  |  | |

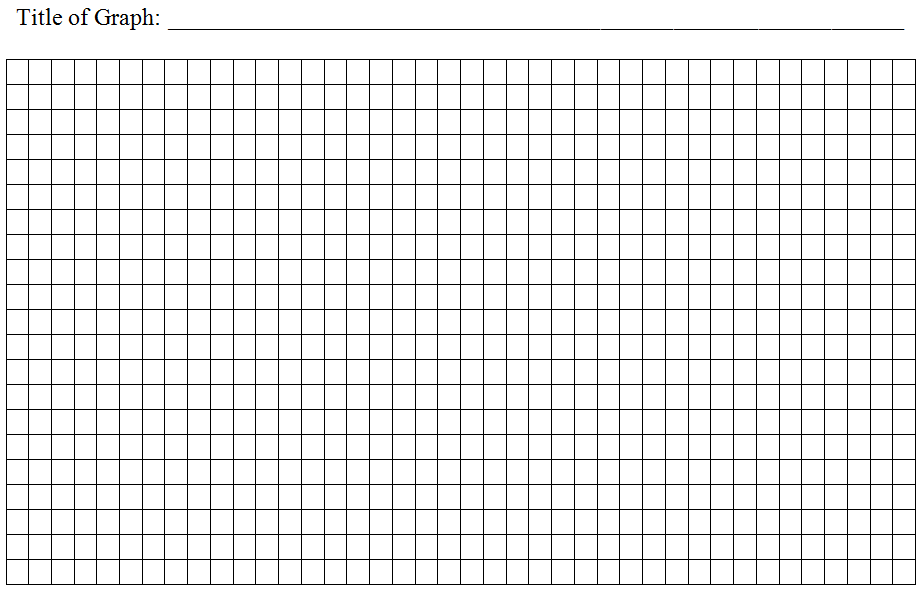
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| **Qualitative Observations** (What you see before, during or after the experiment - min 2):  **/4** |
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| **Data Table /20** |

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| **Data Analysis** (min 4): **/8** |
| * What is the range of your dependent data (Your high and low) and how does it compare to your independent range of data? * What is the average of your dependent data compared to the independent data? * What trends do you see according to your graph? * What data points don’t seem to match up to the trends? (These “bumps” in the graph are your possible experimental errors) |
| **Conclusion: /10** |
| * Summarize   + **Q**uestion & Hypothesis   + **P**rocedures   + **O**bservations, Trends, Results & Data Analysis related to the question/hypothesis.   + **E**xperimental errors * Final Concluding statements   + **C**onclusion 1:     - Does the data support or reject your original hypothesis?   + **C**onclusion 2:     - Explain the “why” behind the phenomenon that you witnessed and provide the reasoning to support why your hypothesis is correct or incorrect.     - Use your findings to give deeper insights in your research. * Next Steps:   + How can we apply what you learned to help explain other phenomenon?   + What is the next step in your research |
|  |