**Evaluating Evidence as a Class**

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| **Question:** Did a chemical reaction occur when vinegar and baking soda were mixed together? | **Answer Yes or No in each column** | | | |  |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Student Data** | | | | | | | |  | Average  Balloon Diameter  Before | Average  Balloon Diameter After (cm) | Vinegar  Initial Average Temperature | Average  Temperature of Vinegar & Baking Soda | Average  Change in Temp. | Group  Observations | | Average of 5 Trials | 4 (cm) | 19 (cm) | 22 (°C) | 15 (°C) | - 7 (°C) | Bubbles formed in flask  Balloon expanded an average 15cm in diameter; |   **Given Scientific Evidence**   1. The vinegar and baking soda reacted with each other and there was a change in temperature. 2. When the baking soda and vinegar were mixed together the average temperature decreased 7°C for all groups. 3. See above data chart. | **Does Evidence include TREND or pattern over multiple trials, samples, or observations, without inferences?**  (e.g. mean, median, mode, frequency, range) | **Are multiple trials, tests or observations reported and analyzed (RELIABLE)** | **Is the Evidence ACCURATE and/or APPROPRIATE for the data and question** | **Is there more than one piece of appropriate Evidence?** (ENOUGH evidence) | **Total Score**  (Add # Yes in all columns) |
| E1 | E2 | E3 | E4 | Total |
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**Answer the following questions:**

Which Evidence is the strongest: **(circle one) a, b, c** Why?

Which Evidence is the weakest: **(circle one) a, b, c** Why?