Name	Teacher	Period
		Date

Evaluating Evidence as a Class

Question: Did a chemical reaction occur when vinegar and baking soda were mixed together?

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

a) The vinegar and baking soda reacted with each other and there was a change in temperature.
b) When the baking soda and vinegar were mixed together the average temperature decreased 7°C for all groups.
c) See above data chart.

Answer Yes or No in each column				
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

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?