

Energy Changes

Classroom activity to better understand temperature changes during a chemical reaction

Activity #1 – Baking Soda and Vinegar

Materials: 20 mL Vinegar
0.5 t. Baking Soda
Thermometer
Small Beaker

Data: Record the temperature of the vinegar BEFORE AND AFTER adding and stirring in the baking soda.

Conclusion: Answer the following questions using **complete sentences** (restate the question in your answer!).

1. Did the temperature increase, decrease, or stay the same when you combined the baking soda and vinegar?
2. What was the lowest/highest temperature reached after adding baking soda?
3. Was this change an endothermic or exothermic change? Explain your reasoning and support your answer with evidence.

Activity #2 – Water and Magnesium Chloride

Materials: 20 mL water
1.0 t. Magnesium Chloride
Thermometer
Small Beaker

Data: Record the temperature of the water BEFORE AND AFTER adding and stirring in the Magnesium Chloride.

Conclusion: Answer the following questions using **complete sentences** (restate the question in your answer!).

1. Did the temperature increase, decrease, or stay the same when you combined the water and Magnesium Chloride?
2. What was the lowest/highest temperature reached after adding Magnesium Chloride?
3. Was this change an endothermic or exothermic change? Explain your reasoning and support your answer with evidence.