

REACTION IN A BEAKER- CONCLUSIONS

Endothermic means...

Exothermic means....

They are alike by....

They are different by.....

Conclusion paragraph:

•What do you think happened in each beaker? Explain

•What evidence of a chemical reaction did you observe in the beakers?

•Which reactions were endothermic? Exothermic?

•START WITH A TOPIC SENTENCE!! (which should answer the question: "Does a chemical reaction happen in the beakers?")

Reaction in a Bag



Problem: Does a chemical reaction happen in the bag?

1. List the "4 deadly warning signs of a chemical reaction." (pg 202)

- a. _____ b. _____
c. _____ d. _____

2. What is the **key characteristic of a chemical change?** In a chemical change, _____ are formed.

3. **Define** Reactant:

(pg 203)

Product:

Part B: Observations

Observations Before:

Sodium bicarbonate: _____ white powder- looks like baking

soda _____

Calcium Chloride: _____ white balls, looks slimy, smells like soap _____

Water with indicator: _____ liquid turns green from indicator- neutral

pH _____

Observations During:

Procedure (what you mixed)	Warning Signs/ observations	Endothermic / Exothermic and why
Calcium Chloride and water	Gets hotter, calcium chloride dissolves into water, color of water changes to lighter green	Exothermic- temperature rises about ____°C
Sodium bicarbonate and water	Gets colder, baking soda dissolves into water, color changes to a blue green,	Endothermic- temperature drops by ____°C
Sodium bicarbonate, Calcium Chloride and water	Fizzes, bubbles over the beaker, color changes to a light green, temperature rises a little, filmy appearance to beaker	Exothermic- temperature rises about ____°C
Acetic acid, indicator, and sodium bicarbonate	Fizzes, bubbles over the beaker, color changes from red to a yellow, then green. Temperature lowers, filmy appearance to beaker	Endothermic- temperature drops by ____°C

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- Which reactions were endothermic? Exothermic?
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1. List the "4 deadly warning signs of a chemical reaction." (pg 202)

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- d.



2. What is the **key characteristic of a chemical change**? In a chemical change, _____ are formed.

3. **Define** Reactant:
(pg 203)

Product:

4. **Observations of the reactants** before mixing.

a. Calcium Chloride (CaCl_2): _____

b. Baking Soda (NaHCO_3): _____

c. Phenol Red ($\text{C}_{19}\text{H}_{13}\text{O}_5\text{S}$): _____

5. **Data:** List EVERYTHING that happens, temp, change in solids, etc.

6. **Analysis:** List your observations that correspond to the "4 deadly warning signs of a chemical reaction" and for each tell why you believe it is a new substance.

Observation	Warning sign (pg. 202)	Why it's evidence of a new substance

7. **Conclusion:** Was there a chemical reaction? ____ How do you know?