

Name: _____

Period: _____

Date: _____

Reaction Rate Lab Writeup

Paragraph 1: Introduction

- Purpose of the lab
- Definition of reaction rate
- Definition of collision theory

Paragraph 2: Surface Area

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| <i>CLAIM</i> | Increasing the surface area of reactants in a chemical reaction (increases/decreases) the rate of the reaction. |
| <i>EVIDENCE</i> | <ul style="list-style-type: none">• The reaction between solid calcium carbonate and HCl progressed (faster/slower) than the reaction between powdered calcium and HCl.• Include your data (# of seconds, etc.) |
| <i>REASONING</i> | <ul style="list-style-type: none">• Explain WHY surface area affects reaction rate in terms of collision theory |

Paragraph 3: Temperature

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| <i>CLAIM</i> | Increasing the temperature of a chemical reaction (increases/decreases) the rate of the reaction. |
| <i>EVIDENCE</i> | <ul style="list-style-type: none">• The reaction between Alka-Seltzer and water progressed the fastest using (cold/room temperature/warm) water.• GRAPH of data (temperature on x-axis, length of reaction on y-axis)<ul style="list-style-type: none">○ Title○ Scatterplot with line of best fit○ Labeled axes with units• Describe your data in words (temperature and # of seconds) |
| <i>REASONING</i> | <ul style="list-style-type: none">• Explain WHY temperature affects reaction rate in terms of collision theory• Discuss a real life application of temperature and reaction rate |



Paragraph 4: Concentration

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| CLAIM | Increasing the concentration of reactants in a chemical reaction (increases/decreases) the rate of the reaction. |
| EVIDENCE | <ul style="list-style-type: none">• The reaction between zinc and HCl progressed the fastest using HCl with a concentration of (1M/3M/6M).• Include your data (can be observational for this section) |
| REASONING | <ul style="list-style-type: none">• Explain WHY reactant concentration affects reaction rate in terms of collision theory |

Paragraph 5: Use of a Catalyst

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| CLAIM | The use of a catalyst (increases/decreases) the rate of the reaction. |
| EVIDENCE | <ul style="list-style-type: none">• Define catalyst• The hydrogen peroxide reaction was catalyzed by (CaCl₂, KNO₃, Fe(NO₃)₃, NaCl).• Include your data (signs of a reaction occurring) |
| REASONING | <ul style="list-style-type: none">• Explain WHY catalysts affect reaction rate in terms of collision theory• Discuss how catalysts are relevant to your life |

Works Cited: MLA Format

- Cite sources used for real life application sections of report (and any other information that you researched)
- You must include in-text citations in addition to a works cited page