Lesson: Alka-Seltzer Experiment	Name:
Teacher:	Date:

Fizzing Science: Exploring the Chemistry of Alka-Seltzer Reactions Experiment Guide – STEM Scholars Hub
www.innovatewithmrbarbado.com https://www.youtube.com/@STEMClub-z7l

Objective:

Students will observe and analyze the reaction between Alka-Seltzer and water, focusing on acid-base reactions and carbon dioxide gas production. They will record their observations, explore factors affecting the reaction (such as water volume and tablet quantity), and discuss how these factors impact the fizzing outcome.

Materials Required:

- Alka-Seltzer tablets
- Water (room temperature)
- Clear plastic cup or small beaker
- Stopwatch or timer
- Stirring rod (optional)

Safety Precautions:

- Wear safety goggles at all times to protect your eyes from splashes.
- Handle Alka-Seltzer tablets carefully; do **not** ingest.
- Conduct the experiment on a stable, flat surface to prevent spills.
- Avoid inhaling the gas directly.
- Supervise and clean up immediately if any spills occur.

Procedure:

1. **Prepare the Equipment:** Place the clear cup or beaker on a flat, stable surface.
2. **Add Water:** Pour approximately 100 mL of water into the cup.
3. **Drop the Tablet:** Quickly drop one Alka-Seltzer tablet into the water and start the timer immediately.
4. **Observe the Reaction:** Watch the tablet dissolve and record changes such as fizzing, bubbling, or color changes if colored tablets are used.
5. **Record Observations:** Note the time it takes for the reaction to begin, the duration, and the intensity of fizzing.
6. **Optional Gas Measurement:** Attach a balloon to the opening of a bottle to capture the gas and measure its volume if desired.

Scientific Inquiry Questions:

1. What did you notice about how the Alka-Seltzer tablet reacted in water?

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2. How quickly did the reaction start after the tablet was added?

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3. How long did the fizzing last?

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4. Describe the size and number of bubbles you observed.

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5. What gas do you think was produced during the reaction?

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6. How did changing the amount of water affect the reaction?

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7. How did using more than one tablet change the reaction?

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8. Explain why the reaction is considered a chemical change.

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9. Was energy released or absorbed during the reaction? How can you tell?

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10. How is this reaction similar to chemical reactions that occur in everyday life?

Note: Clean-Up

- Dispose of used tablets and water containers according to classroom guidelines.
- Wash your hands after handling materials.
- Wipe up any spills to prevent slipping hazards.
- Store all materials properly for future use.