

# Design an Investigation

**OBJECTIVE:** Students investigate and identify the law of conservation of mass. (TEKS 8C)

**PROBLEM:** How can the law of conservation of mass be demonstrated using a seltzer tablet?

**HYPOTHESIS:** (Record in your journal.)

**MATERIALS:**

- Seltzer tablet
- Flask
- Create a list of additional materials and ask the teacher

**PROCEDURES:**

Design an investigation to demonstrate the law of conservation of mass using a seltzer tablet and flask. Be specific in your procedures so another person or group could reproduce your investigation and gather the same data and observations. Once the procedures are written, conduct your investigation. Be sure to collect data and observations during each trial. If you change your procedures along the way, make adjustments to your procedures in your journal.

**DATA/OBSERVATIONS:** (Record in your journal.)

Create a data table to organize your observations and data for each trial.

**ANALYSIS/CONCLUSIONS:** (Record in your journal.)

1. What evidence do you have that there is a chemical reaction?
2. According to the Law of Conservation of Mass the initial (beginning) mass should be equal to the final mass. Did your results support the law of conservation of mass? Support your answer with evidence.
3. If mass was not conserved, explain what could have happened to the mass. What changes were made or could be made to increase the accuracy of your results?
4. How does this investigation relate to balancing chemical equations?

