

# Flipping Your Lid

## Summary

Students will measure the rate of chemical change by timing a reaction with Alka Seltzer or baking soda and water or vinegar. They will change a variable to investigate a question they propose.

## Time Frame

1 class periods of 60 minutes each

## Group Size

Small Groups

## Materials

- 10 film cans
- 2 alka seltzer tablets per group or baking soda
- water or vinegar
- timing device (stopwatch or watch with timer)
- safety glasses
- Heat source
- ice
- 10 mL graduated cylinders, spoon for baking soda
- [student worksheet](#)

## Instructional Procedures

Hook activity: Add the solid and liquid you are working with to a latex glove, tie it off and let it react. Ask the students what they think is happening. Ask them whether it appears to be a chemical or physical reaction. The gas formation should be a clue that it is a chemical change. Read the introduction and directions on the student' sheet with students. If materials are limited, do the control with the students as a demonstration. Model good technique by doing it several times and average your results.

Show students the materials that are available and give students time to design their own experiment. They should work in as small a group as possible (no more than 4 is best)

When students have written their procedures and hypothesis, allow them to experiment. If materials allow, let them repeat their experiments.

Have each group report their results to the class.

## Assessment Plan

### Scoring Guide

- :
1. Students design procedures to control one variable.....4
  2. Students make hypothesis.....4
  3. Students perform activity and record data.....4
  4. Students answer analysis questions correctly.....4
  5. Students write thoughtful conclusion.....4

## Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)