

GREENHOUSE GAS LAB

Time: Two 45 minute periods.

Standards:

CA state standards ENERGY set 4. c. *Students know the different atmospheric gases that absorb the Earth's thermal radiation and the mechanism and significance of the greenhouse effect.*

Topical Objectives:

- Observe the change in temperatures.
- Graph their measurements.
- Compare the results from the two flasks.
- Compare their results with the rest of the class.

Safety Rules:

See classroom lab safety rules.

Materials:

Per group:

- Two flasks
- One Alka-Seltzer tablet
- Water
- Two thermometers
- Heat source: high watt light bulb
- Graph paper, per student

Procedure:

1. Students fill one flask with water and one Alka-Seltzer tablet.
2. Fill another flask with air.
3. Insert thermometers into each flask.
4. Place each flask under a heat lamp.
5. Observe the temperature of each flask at each minute.
6. Make a chart with AIR FLASK, CO₂ FLASK at the top, and minutes down the side.
7. Record the temperatures.
8. Graph the temperatures.
9. Compare temperatures around the room and conclude.

Sources: <http://www.letus.nwu.edu/projects/gw/activities.html#partII>

