

Ice Breakers (Excerpt)

A Lab Experience About the Effects of Global Warming on Icecaps

<http://www.nytimes.com/learning/>

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Grades: 6-8

Subjects: Geography, Science

Overview of Lesson Plan: Through participating in a number of in-class experiments using ice, students understand the effects of global warming on icecaps and the worldwide consequences that may result.

Review the Academic Content Standards related to this lesson.

Suggested Time Allowance: 45 minutes (for whole activity)

Materials: pan, hammer, cloth, cup and 3 ice cubes

Procedures:

Explain to students that they will be experimenting with ice in this lesson to better understand the dangers that icecaps pose when the global temperature rises, as it is doing now due to trends in global warming.

1. Wrap one ice cube in your piece of cloth, and place the wrapped cube in the middle of your desk.
2. Use the hammer to carefully break apart the ice cube into small pieces. Open the cloth, and empty the ice pieces into the cup.
3. Hypothesize what you think will happen to the ice pieces after a few minutes.
4. After two or three minutes, observe what has happened to the ice pieces.
5. Answer these questions: What happened when pieces of ice were allowed to touch for a short amount of time in the cup? How might this relate to what happens to icecaps? What do you suppose these holes between the ice pieces will allow water to do?
6. Look at what has happened to your other two ice cubes that are still in the pan, and answer the following: Why have they melted at the same rate? What would you expect to happen if a heat lamp were shone upon them, and how would that represent the global warming trend? What would you expect to happen if you placed the pan on a stove, and how would that represent what happens on Earth?

California Science Standards: Grades 3-8

<u>Grade</u>	<u>Standards</u>
3	1e,f
4	5a,c;
5	1g; 3a,c; 6d
6	3a;7a
7	7a-e
8	5d; 8a-d