

Melting Ice

Focus

People say that, with the heating of the earth, the floating ice at the North Pole will melt and the water level of our oceans will rise. Is this true? Could we tow an iceberg to Brisbane and use it to help supplement our water supply? Students will need to use their measuring and analytical skills.

Materials

- 2 beaker (500ml),
- water,
- 1 piece of ice,
- 1 pen
- refrigerator/freezer or esky with ice



a) If the Earth heats up will the North Pole melt and the water level of our oceans rise?

Procedure I

- Fill the beaker halfway with water. Read the water level and mark it. (Take care how you read the scale.)
- Let the piece of ice float in the beaker!
- Q What do you think will happen when the ice has melted? Make a statement that predicts the outcome (Hypothesis)
- Observe the water level until the ice has melted. Read the water level again and write down your observations! Try to explain why this happened.
- The ice at the North Pole is a sheet of ice floating in the Arctic Ocean.
- Q Do you think the melting of the North Pole ice will cause the water level of the oceans to rise?
- The ice at the South Pole lies on top of the land called Antarctica.
- Q Do you think the melting of the ice at the South Pole will cause the water level of the oceans to rise?
- Q How could you investigate this idea?

b) Could we tow an iceberg to Brisbane and use it to help supplement our water supply?

Procedure II

Design a fair test to answer the question.

- Find out what average temperatures the ocean is at Antarctica and Brisbane.
- Take two beakers. Add water to both. What temperature should the water be? Should both beakers have the same water temperature? Why? Why not?
- Into each beaker add an ice cube. Does it matter what size the ice cubes are?
- Where should the beakers be kept during the experiment? Does it matter?
- Record how long each ice cube takes to melt. Does it matter when you start timing?

EXTENSION

Research newspaper articles referring to:

- the iceberg that drifted to New Zealand Nov/Dec 2006
- Climate change, carbon reduction strategies, greenhouse effect of pollution