

Hands-on lab

Investigate a Change of State

NAME: _____

DATE: _____

Instructions

Predict the best ways by which you can speed up the change of state that occurs when an ice cube melts. Then plan and carry out an investigation to test your predictions.

Materials

- clear plastic cups
- ice cubes, small (4)
- paper towels

Procedure

STEP 1 Work with a partner or small group to list ways that you might make an ice cube melt faster than it would melt if you left it sitting in a cup on your desk. You may only use items in your classroom.

STEP 2 For your investigation, choose three of the methods your group discussed. Write each method in the table on the next page.

STEP 3 Gather the ice cubes. Place one ice cube in a cup on your desk. Use the methods you chose in Step 2 to melt the other three ice cubes.

STEP 4 Observe the ice cubes until one of them melts completely.

STEP 5 Record your observations in the table.

What did you do?	What were the results?
<i>ice cube in a cup, on desk</i>	

Analysis

STEP 6 Circle the best word to complete each sentence.

In this activity, energy was **added / removed** to make the ice cube melt faster. The ice cube that received the **most / least** energy melted fastest.

STEP 7 Describe two actions that are different from what you did in this activity that might make the ice melt even more quickly. Explain your reasoning.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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Hands-on lab: Teacher

Investigate a Change of State

NAME: _____

DATE: _____

Instructions

Predict the best ways by which you can speed up the change of state that occurs when an ice cube melts. Then plan and carry out an investigation to test your predictions.

Materials

- clear plastic cups
- ice cubes, small (4)
- paper towels

Procedure

STEP 1 Work with a partner or small group to list ways that you might make an ice cube melt faster than it would melt if you left it sitting in a cup on your desk. You may only use items in your classroom.

Students should discuss several methods of making an ice cube melt faster.

For example, students might consider placing a desk lamp above the ice or placing the ice in sunlight.

STEP 2 For your investigation, choose three of the methods your group discussed. Write each method in the table on the next page.

STEP 3 Gather the ice cubes. Place one ice cube in a cup on your desk. Use the methods you chose in Step 2 to melt the other three ice cubes.

STEP 4 Observe the ice cubes until one of them melts completely.

STEP 5 Record your observations in the table.

What did you do?	What were the results?
<i>ice cube in a cup, on desk</i>	

STEP 6 Circle the best word to complete each sentence.

- STEP 7** Describe two actions that are different from what you did in this activity that might make the ice melt even more quickly. Explain your reasoning.

Sample answers: Place the ice in a heated oven. Place the ice on a sunny windowsill.

Both would provide energy to the ice cube.

[illegible]

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