Ice Melt

Procedure

1. **Collaborate**  Work with a partner.

2. **Measure**  Use a balance to find the mass of each of two cups. Half fill each cup with ice, then measure the masses of the half-filled cups. Add ice to one cup so that both cups hold about the same masses of ice.

3. **Experiment**  Place one cup directly under a lamp, which will serve as a heat source. Place the second cup in a shaded area. Begin timing the activity.

4. **Observe**  Every minute, carefully observe each sample and record what you see. Be sure to note the time when all of the ice has melted in each cup.

<table>
<thead>
<tr>
<th>Time</th>
<th>Cup (lamp)</th>
<th>Cup (shade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 min.</td>
<td></td>
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<td>2 min.</td>
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<td>3 min.</td>
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<td>4 min.</td>
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<td>5 min.</td>
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<tr>
<td>6 min.</td>
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</table>
5. **Record Data**  Continue to observe the cup over the course of the day as the water evaporates. Use the ruler to measure the depth of liquid water in each cup. Fill in the chart with your observations.

### Conclusion

1. **Use Variables**  Why is it important that the two ice samples have close to the same mass?

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2. **Compare**  How did the times of melting and evaporation of the two ice samples compare?

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3. **Infer**  How is energy related to change of state?

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**Experiment**

Would the results be the same if you changed one independent variable, such as the size of the pieces of ice? Repeat the activity using larger or smaller ice pieces. **Analyze data**, then write a report.