Shadows in the Sun

Procedure

1. **Collaborate** Work with a partner. Place a square sheet of paper outdoors in a sunny area. Hold a ruler in the center of the paper while your partner molds the clay around the base, as shown in your book. The clay should keep the ruler standing upright.

2. **Use the chart below to record your data.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Shadow Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. **Measure** Trace the shadow made by the ruler on the paper. Use a metric ruler to measure the length of the shadow. Have your partner record the time of day and the shadow length in the chart.

4. **Observe** Repeat step 3 once each hour for the rest of the school day.

5. **Use Numbers** Use the data you collected to make a bar graph on the next page.
Conclusion

1. **Draw Conclusions** In what ways did the shadow change during the day?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. **Analyze Data** Did the shadow’s length change by the same amount each hour?

________________________________________________________________________

3. **Predict** What do you think the length of the shadow will be two hours after the last time you measured?

________________________________________________________________________

**Experiment**

Take the ruler setup indoors. Use a flashlight to produce the same shadows as the Sun did. **Observe** the position of the “Sun” for each shadow.

Unit Resource Folder
Copyright © Houghton Mifflin Company. All rights reserved.