## Losing Water

### Procedure

1. **Collaborate** Work in a small group. Record your observations in the chart below.

<table>
<thead>
<tr>
<th>Time</th>
<th>Uncoated</th>
<th>Coated on Top</th>
<th>Coated on Underside</th>
<th>Coated on Both Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **Experiment** Carefully smear petroleum jelly on the top and underside of one of the plant leaves. Coat another leaf on the top surface only. Coat a third leaf on the underside only.

3. **Experiment** Slide a bag over each of the coated leaves and close it with a twist tie. Cover a fourth, uncoated leaf with a bag, to serve as a control. Place the plant in a sunny window and, if needed, water it.

4. **Predict** Based on what you have learned about leaf structure, predict what will happen inside each bag. Record your predictions on the lines below.
5. **Record Data** Check the leaves every hour for three hours. Use the chart to record your observations.

**Conclusion**

**Write the answers to the questions.**

1. **Analyze Data** With others in your group, discuss your results. Consider different explanations.

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2. **Predict** Based on your results, discuss with your group what will happen if you leave the bags on the leaves for two more days. Give reasons for your prediction.

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3. **Experiment** Continue the experiment for two days or longer. See if your prediction holds true.

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**Investigate More!**

**Design an Experiment** Plan a similar experiment with a different kind of plant. For example, you might choose a cactus or an evergreen plant.