Build a Charge

Procedure

1. **Collaborate** Work with a partner. Blow up two balloons. Knot the neck of each balloon and tie with a string. Make a chart like the one shown.

2. **Observe** Hold one string. Have your partner hold the other string so the two balloons hang about 10 cm apart. Observe and record any movement they make.

3. **Record Data** Rub each balloon with a wool cloth. Again hold the balloons so that they hang about 10 cm apart. Observe and record any movements they make.

4. **Record Data** Let the balloons touch. Then let them hang next to each other. Record your observations.

5. **Experiment** Repeat steps 3 and 4, but this time rub one balloon with plastic wrap and one with the wool cloth.

<table>
<thead>
<tr>
<th>Balloon Setup</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>No treatment</td>
<td></td>
</tr>
<tr>
<td>Each balloon rubbed with wool</td>
<td></td>
</tr>
<tr>
<td>Each balloon rubbed with plastic wrap</td>
<td></td>
</tr>
<tr>
<td>One balloon rubbed with wool, the other with plastic wrap</td>
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</tbody>
</table>
Conclusion
Write the answers to the questions below.

1. **Infer** Rubbing a balloon with wool or plastic wrap gives the balloon an electric charge. Based on your data, infer whether there is more than one kind of electric charge. How do your observations support your inference?

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2. **Infer** Based on your data, did the charges attract, repel, or not interact at all? What can you conclude about like charges?

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**Experiment**

Rub one balloon with wool. Rub another balloon with other materials. **Infer** which materials produce the same kind of charge that wool produces.

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