Un-mixing Mixtures

Procedure

1. **Collaborate** Work with a partner. Record your observations in the chart below.

<table>
<thead>
<tr>
<th>Mixture</th>
<th>By Hand</th>
<th>Using a Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>paper clips and toothpicks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beans and rice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **Record Data** Separate a mixture of paper clips and toothpicks by hand. Have your partner time you. Record the time in your chart.

3. **Measure** Mix the toothpicks and paper clips together again. Keep time as your partner uses a magnet to separate the mixture. Record the time in your chart.

4. **Measure** Repeat steps 2 and 3 with a mixture of beans and rice. For step 3, use a strainer instead of the magnet.

5. **Observe** Put two spoonfuls of water in a dish. Mix in one spoonful of salt. Leave the mixture in a sunny spot until the water evaporates. On the line below, record how long it takes for the water to dry up.
Conclusion

Write the answers to the questions below.

1. **Analyze Data** In steps 2–5, which method of separating mixtures was fastest?

2. **Communicate** What property was used to separate the paper clips from the toothpicks in step 3?

3. **Infer** How do you know the properties of the salt and water did not change when they were mixed?

**Investigate More!**

**Design an Experiment** How could you speed up the separation of the salt and water? Plan an experiment and ask your teacher to help you conduct it.