**Spreading Loop**

Have you ever wanted to choreograph a dance? Well, here's your chance. Your dancer, however, won't be made of flesh and bones. Instead, it will be made of cotton.

**Materials**

<table>
<thead>
<tr>
<th>Thread</th>
<th>A pair of scissors</th>
<th>A large pie pan</th>
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<tbody>
<tr>
<td>Water</td>
<td>Dishwashing liquid</td>
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**To Do**

Clean a large round pie pan. Make sure that all soap has been rinsed from its surface. Fill the pan about half full with cold water. Let the water stand until it is perfectly still.

Cut a piece of thread 6 inches (15 cm) long. Tie the thread into a loop. Bunch up the thread so that the loop has an irregular shape. Place this "squished" loop onto the surface of the water. Add a drop of dishwashing liquid to the center of the shape. What happens?

**The Science**

When dropped onto the surface, the thread floated atop a layer of surface tension. Adding soap to the water broke the surface tension. Since the surface tension was still active around the rim of the pan, this force "stuck" to the string and pulled it out from the center. Equal tugs to all sides pulled the loop into a perfect circle.

**Check It Out!** Repeat this experiment but this time replace the thread loop with an arrangement of toothpick halves.

*Soap and detergent molecules have two ends which act as a bridge between water molecules and grease (fat) molecules. This allows the soap or detergent to grab onto the grease from a dirty dish and use the other end of the detergent molecule to latch on to water to be washed away. Detergent molecules' two ends make it able to break through the surface tension of water.*