Toothpick Turgor Pressure

**TEKS 7.7B:** Demonstrate and illustrate forces that affect motion in organisms such as emergence of seedlings, turgor pressure, geotropism and circulation of blood.

**Purpose:** Observe how bent toothpicks react when water is added to the center of them and compare how this reaction relates to turgor pressure in plant cells.

**Using a sentence describe what you think will happen to the toothpicks.**

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**Test it out:**

1. Bend 5 toothpicks in the middle, making them into a V shape. Be careful to not break them in half completely.
2. Arrange the toothpicks in a shallow dish so that they are all touching with the bends in the middle. It should look similar to this.
3. Use a water filled dropper to put a few drops of water in the center where all the bends meet.
4. Watch the toothpicks for a few minutes to see what happens. Draw the results below.

**Record your observations:**

<table>
<thead>
<tr>
<th>Before Water</th>
<th>After Water</th>
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**Questions:**

1. Describe what happened after the water was added.
2. Why do you think the toothpicks reacted the way that they did?
3. What is turgor pressure?
4. How is this reaction related to turgor pressure in plants?
5. Where is the water stored in a plant?