

# BUBBLE ENGINEERING

AN EXPERIMENT FOR KIDS FROM  
THE ARDSLEY PUBLIC LIBRARY

**DIFFICULTY:**  
**ADVANCED**

**ESTIMATED TIME:**  
**20 MINUTES**

**PROJECT EXTENSIONS:**

For even bigger bubbles, try hula hoops, hangers, string attached to garden stakes, or bundles of straws.

**HOW DOES IT WORK?**

Bubbles are formed by the surface tension of water. When you stretch bubbles across your wand, the bubbles cling to the sides as you dip the solution. This allows the bubbles to be all sorts of shapes. Adding soap to your bubble solution reduces the surface tension and slows down the evaporation process, which gives you a long lasting bubble!

**MATERIALS**

- 6 cups water
- 1/2 cup dish detergent
- 1/2 cup corn starch
- 1 tbsp baking powder
- 1 tbsp glycerine
- Container to hold solution
- Straws
- string

**INSTRUCTIONS**

1. The day before you plan to do this activity, create your big bubble solution. Start by mixing the water and cornstarch together until the cornstarch is dissolved. Then, add in the other ingredients slowly. Finally, let the mixture thicken until you are ready to create your bubbles.
2. Encourage children to use straws and string to create a bubble wand. There are many ways children can create bubble wands. One simple strategy is to use two straws that are the same length. String your string through the two straws and tie the ends together until you have a square.
3. It is fun to challenge your children to experiment with the number of straws, the length of the string, and the size of the straws.