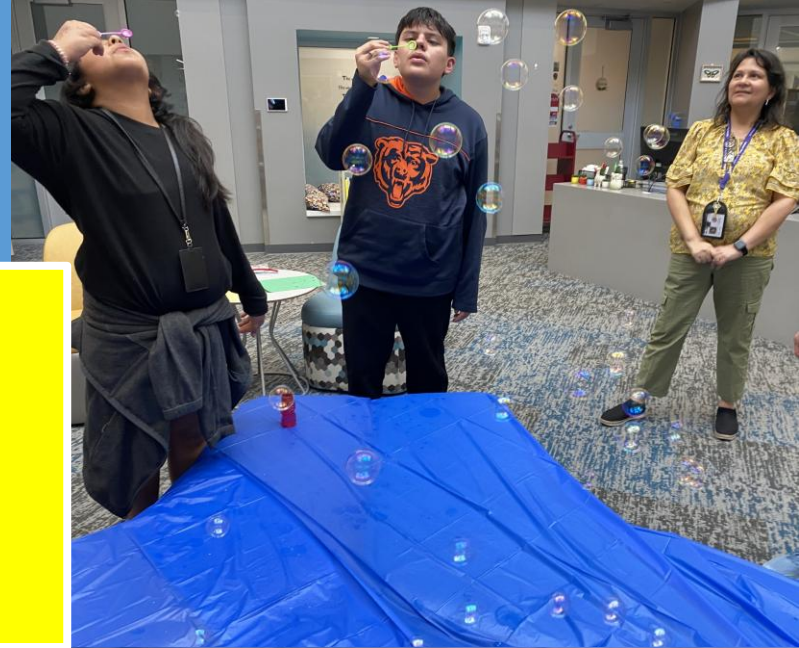


# Students blew these bubbles at an after-school STEM club meeting.



**Look at all of the pictures.**  
**\*Why are soap bubbles round? \*When and why do bubbles stick together?**

**\*Can you explain the pattern on each bubble?**  
**\*Note white shapes in the picture to the left. What is causing them to appear?**



**\*Why are soap bubbles round?** A sphere is the most efficient geometric shape for holding a volume of gas (air) with the least surface area. In nature, efficiency means low energy and that is the favored state.

**\*When and why do bubbles stick together?** Bubbles stick together when they touch. The water & soap particles (molecules) at the surface form weak electrical attractions (bonds) to each other. This surface tension results in the molecules bonding to each other to minimize their surface area.



**\*Can you explain the pattern on each bubble?** Reflection from the lights & windows on the room ceiling

**\*Note white shapes in the picture to the left. What is causing them to appear?** Reflection of the lights on the room ceiling. *Blow bubbles yourself!*

