

Bubbles for Teens

Teens can have lots of fun with bubbles, too! And there's much STEM learning possible for teens as well. Encouraging them to explore some of these activities involves creativity, science, math, technology, and more.

- Bubble machine engineering: We really wanted to demonstrate engineering through bubbles by making a homemade bubble machine. We tried to make one ourselves; we really did. But it just didn't come together. So we're issuing a challenge to Colorado teens: Create a bubble machine that works well and reliably, and can be reproduced by other teens and librarians alike. The machine can be battery or solar powered, blow big or small bubbles—we're not particular about the details. Type up a materials list and easy to follow, step by step instructions; include photos (or a video!) to help those following your directions. We're trying to conjure up some prizes and more details on the process, so stay tuned.



- Bubble wands: Teens can get a kick out of designing their own bubble wands too. Suggest some materials for them to use, but let them try out their own ideas too. Low-tech (chenille stems, yarn with straws) to high-tech (wands printed on a 3D printer), teens are using technology to create these tools to blow bubbles. There will also probably be some art involved!
- Boba (bubble) tea: Boba tea, sometimes called bubble tea, is a fun drink that originated in Taiwan. Often either a fruity or milk tea, what makes it unique are the boba—large tapioca



pearls that are in the bottom of the drink that you suck through an extra-wide straw (which doubles as an excellent bubble blower!). At your library, you could have a program for teens (though tweens and adults would love it too!) that involves the history of the drink, recipes, and tastings. To bring in STEM, discuss food science: the boba come from cassava root, a hard root vegetable that's bark-like on the outside and white on the inside. It gets dried and powdered to become tapioca. To make the boba balls, molasses is often added for the brown color, then it's rolled into the large pearls and dried. If possible, have on hand a cassava, regular pearl tapioca, tapioca pudding, and uncooked boba to show how different

they all look, even though they're all from the same plant! If you're really adventurous, demonstrate how to make boba from tapioca powder!

- Giant bubbles: Creating giant bubbles is a popular activity in some libraries for teens. Teens can find recipes online—there are dozens of sites that claim their recipe makes the biggest bubbles!—and then experiment with solutions. They can research how ingredients like glycerin, baking soda, and corn syrup change the chemistry of the formula to make stronger soap mixture that can hold up in huge bubble sizes without popping. Have a contest for the biggest bubble.
- Bubble flash mob: Teens can organize a bubble blowing flash mob to celebrate your Summer Reading Program (what a great way to advertise it to teens!).
- Bubble therapy and bubble bath programs: See the handout on adult programs for these events that teens would love, too. Teens also need stress relief!

