

Activity: Build a Better Bubble Blower



INTRODUCE THIS:

What makes something the best bubble blower? Is it because it allows you to blow a big bubble, or would you want to make the most bubbles?

Let's pretend that we are engineers who work at a bubble wand factory. Engineers are people who solve problems. Our problem is that we want to make the best bubble blower possible.

First we have to decide what make something the "best" bubble blower. Do we want to make the biggest bubble or the most bubbles?



MATERIALS:

- Shallow bowls or trays
- Scissors
- Towels
- Bubble Solution*—you can purchase bubble solution but it's easy to make your own. Mix 1/4 cup dish soap and 3/4 cup water. Add 2 teaspoons of sugar or corn syrup or glycerin (found at the pharmacy). You're done!
- Miscellaneous things with holes, or bendable items that can make a hole: CDs, cookie cutters, buttons, plastic mesh, berry baskets, pipe cleaners, yarn, cups, straws, tape



DO THIS

Pour bubble solution into a shallow bowl or tray.

Use materials around the house to construct the "best" bubble blower. Remember to decide if you are going for big bubbles or lots of them!

Test!



TALK ABOUT THIS

Did the blower produce bubbles?

Did the blower produce the type of bubbles you intended?

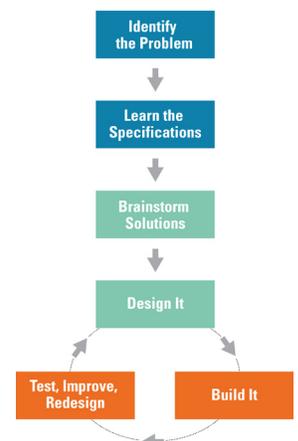
Can you think of a way to make it better?

Engineers use the Engineering Design Process to test and improve their designs.



WANT MORE CHALLENGE?

The size of the bubbles is not only controlled by the bubble wand, but also by the bubble solution. Compare different brands of dish soap or compare the difference between adding sugar versus glycerin or corn syrup. The sugar (glycerin and corn syrup both contain sugar) keeps the bubble from drying out which is what causes it to pop.





GRADE LEVEL:
ELEMENTARY

Everyday Engineering: STEM@Home



WANT TO GO FURTHER?

This activity and over 65 others were developed in support of the award-winning documentary *Dream Big: Engineering Our World*. This version has been adapted to showcase how to do it at home.

For more in-depth coverage download the “Build a Better Bubble Blower” activity from the *Dream Big: Engineering Our World* website: <http://discovere.org/dreambig/activities>. There you will find discussion questions for younger as well as older children, relevant vocabulary, and more.

Dream Big: Engineering Our World is available on Netflix and Vimeo.

The free library of over 65 activities and webisodes can be found at discovere.org/dreambig.

You can find **Everyday Engineering: STEM@Home** activities, videos, and other links at asce.org/pre-college_outreach. The YouTube playlist of supporting videos can be found at <https://www.youtube.com/playlist?list=PLA61bxD8Jg-0V3ExN9sHkUYIrdKqSgfXJ>.

