

BUBBLE TROUBLE

Extending “Bubble Trouble” In Your Classroom

This study guide is meant to build on the enthusiasm and curiosity of your students about bubbles after watching or participating in the “Bubble Trouble” presentation.

These activities are fun and engaging and can act as an introduction to the scientific principles they demonstrate.

Meets
Next Generation
Science
Standards

**CHOOSE
BUBBLE
MUSIC TO
ACCOMPANY
CLASS AS
THEY BLOW
BUBBLES AND
EXPERIMENT...**



Some suggestions for music:

- Waltzes
- Rock songs such as “Rock the World” by the Bubbles
- Or wistful, slow-moving songs such as: “I’m Forever Blowing Bubbles”



Bubble Trouble

Teach Kids How To Make Bubbles Using Bubble Trouble's Bubble Mix Recipe

PROCESS: Stir the mixture. Dip straw into mixture and demonstrate how to blow slowly through the straw to make a bubble. Let students take turns practicing blowing bubbles. Bubble music can accompany this activity to boost the fun quotient.

1) What Shape Is a Bubble?

Demonstrate that bubbles have a sphere shape no matter what they look like to begin with. Have students blow bubbles through different shape wands to observe bubbles change from wand shape to sphere shape. Have students identify other objects that are also spheres for a class list. Students can create a poster of "Spheres We See Every Day."

2) Can We Make Bubbles Using Everyday Objects?

Materials: Any object that contains a closed shape with open space inside. Some examples include: extra-large rubber bands, thick string tied into a circle, a plastic or metal picture frame, a toy trumpet, eyeglass frames, a bracelet, or whatever your imagination suggests.

PROCESS: Form small groups to make bubbles with a few objects. Have students take notes comparing the bubbles created with each object. Lead students to make a generalization about what shape of object is needed to make bubbles.

Bubble Mix Recipe

Plastic container that holds about 30 ounces

4 six-ounce cups of water:
can use six ounce plastic drink cups to measure

$\frac{1}{2}$ cup of dish soap

1 tsp. of glycerin

Plastic spoon

Drinking straws

Bubble wands in different shapes: square, star, etc.



For best results, make bubble mix hours in advance, so it can settle.

Tell students that glycerin will help keep the bubbles from popping. Glycerin can be purchased at many pharmacies. An alternative is corn syrup.

Bubble Trouble

3) How Do Bubbles get Bigger?

Demonstrate blowing air into a bubble to make it larger. Point out that a bubble has an outer skin that can stretch. Ask why the bubble gets bigger as you blow air into it. Remind students that air is a gas. We can't see it, but it takes up space inside the bubble.

ON THE BOARD, WRITE...

Bubble Rule 1: We know air is in the bubble because the bubble skin stretches to contain it.



4) Why Do Bubbles Break When We Touch Them?

Demonstrate that bubbles like wet things and don't like dry things. Make a bubble and touch it with a dry finger. It will immediately burst. Then, touch the bubble with a wet straw to show it doesn't break. Put the wet straw inside a new bubble and very slowly blow a bubble inside it. Repeat to show that inner bubbles stretch the skin of the outer bubble and make it bigger and bigger. Demonstrate that you can pick up a bubble with a wet hand and it won't break.



ON THE BOARD, WRITE...

Bubble Rule 2: Bubbles will break if you touch them with a dry hand or object. They won't break if the hand or object is wet.

5) The Colors of a Bubble (Art Project)

Have students observe the colors of bubbles and use markers, crayons, watercolors and/or colored paper to make illustrations or collages of their impressions of bubbles.

These activities support the following standards: Arts Standards for NY Schools:

- *K-4 Elementary standards: identify and use, in individual and group experiences, some of the roles and actions used in performing music or art.*
- *Next Generation Science Core Ideas*
- *PSJ: Matter and Its Interactions;*
- *PSJA Structure and Properties of Matter*