

Make a Mini Book

- 1 Cut brochure apart lengthwise along dotted lines.
- 2 Fold on solid lines
- 3 Turn pages over and lay inside each other. They should be in order 1,2,3.
- 4 Staple close to left edges to make booklet.

BUBBLE RECIPE

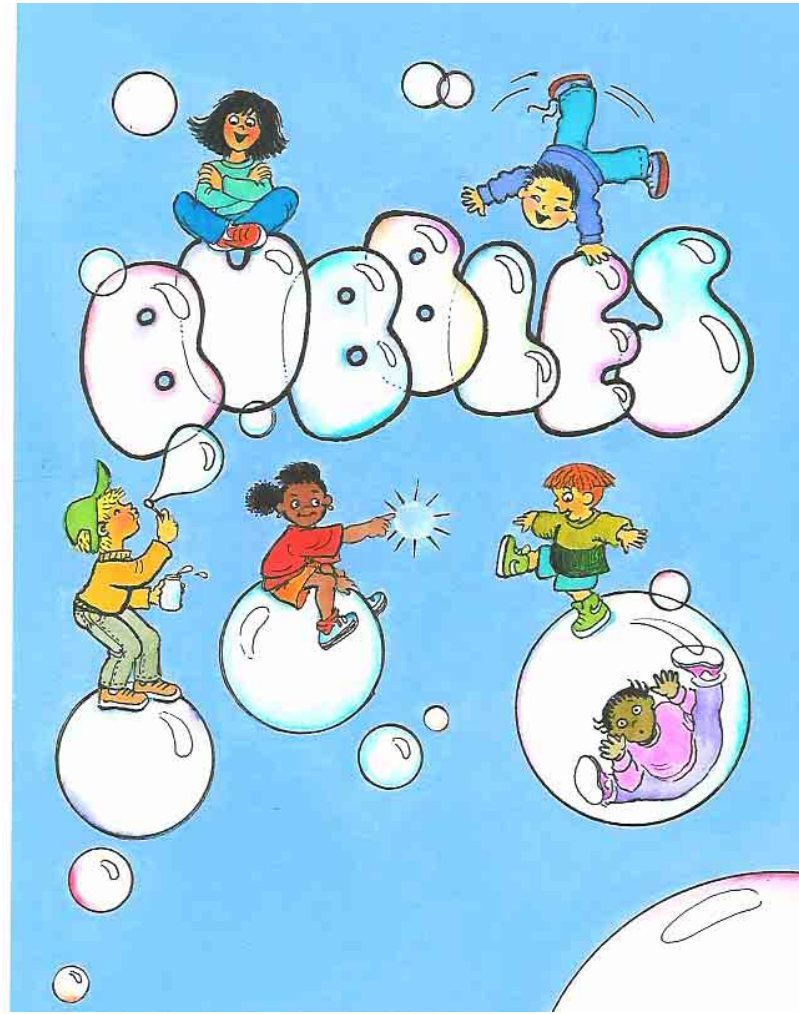
4 ½ cups water
½ cup hand dishwashing detergent

1. Combine water and detergent. Stir well, but do not shake.
2. For stronger bubbles, add ½ cup corn syrup or glycerin, or more detergent.
3. Experiment with different brands of dishwashing detergent until you find the one that works best for you.

NOTE: Playing with bubbles can be messy and slippery! Try blowing bubbles outdoors, near the kitchen sink, or in the bathtub! Watch your step so you don't fall on slippery spills

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Bubble Brainer: Bubble Boosters ... Bubble Blasters

Find five Bubble Boosters; circle in red. Find five Bubble Blasters; circle these in blue.

Bubble Boosters are those things that help make bigger, better bubbles. Bubble Blasters are enemies of bubbles.



Answers:
Bubbleboosters: (1) humidity (the rain shower), (2) early mornings, (5) hand dishwashing detergent, (6) corn syrup, (8) cool, shady areas and trees
Bubbleblasters: (2) dry climate, (4) rough handling, (7) wind, (8) foam or suds, (9) pets



Become a "Bubble Magician!" Amaze your friends and family with these four fun bubble tricks. **Magician's advice:** Be sure to practice them in advance.

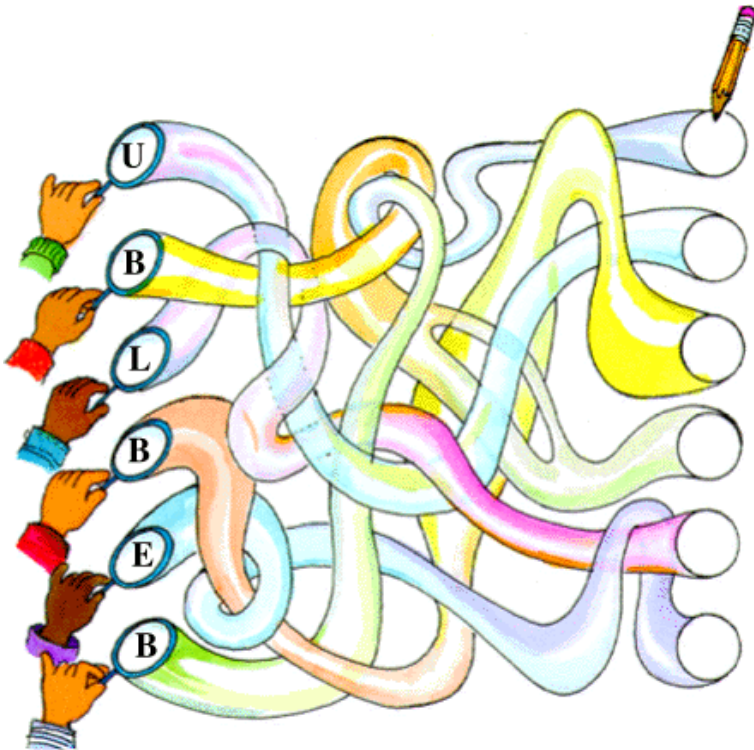
The Disappearing Color

1. Add a small amount of yellow and red poster paint or tempera paint to your bubble solution.
2. Ask your audience what color the bubbles will be. They will probably guess "orange!"
3. Now blow bubbles, and watch the multi-colored results. **Magician's advice:** Have a white or light-colored wall behind you for best results.

Behind the magic: All bubbles are multi-colored because they reflect the light that hits them just like a prism. The thicker the bubble solution, the thicker the bubble wall and, therefore, the more intense the color!

BUBBLE BRAINER

"I am air or gas, trapped in a liquid ball. What am I?"
Follow the path of each letter to discover the answer.



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For Your Parents...

Bubbles are great! But when it comes to your household cleaning products – bubbles are just *part* of the story! Cleaning products come in many forms and formulations – so no matter what your cleaning challenge, there is a product that is perfect for the job. And when it comes to your family's health, good cleanliness practices are *key* to reducing the spread of germs and illness.

Cleaning – and killing germs – is serious business. But for parents, it's important to know that cleaning products are safe for your **family** when used according to label directions – *and* safe for the **environment** when disposed properly!

Here's how.

Helpful Hints

First, try to **use up** the products or **give it away** to someone who can. If that's not possible, dispose of it properly...

- Follow label directions if provided
- Liquid, water-soluble products can be poured **down the drain**
- Most solid products (like bar soaps and towelettes) can be placed **in the trash**
- Other products: call the manufacturer's **toll-free number** for directions
- **Recycle** the empty containers

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The Predictable POP!

Show your friends that you are a "pop predictor"!

1. Blow a bubble and watch the top of the bubble closely. When a black band begins to form on top of the bubble, announce that it is ready to pop!
2. Give another demonstration. Blow several bubbles, and tell your friends which bubble will pop first. Watch their amazement!

Behind the magic:

The bubble wall becomes thinner before it pops. Less light is being reflected, so a black band forms on top of the bubble right before it pops.



The Square Bubble?

1. Cut off both ends of a quart-size milk carton. This will be your bubble wand.
2. Ask your friends what shape your bubble will be. They will probably guess "square!"
3. Dip one end of the carton into the bubble solution, and gently blow into the other end. Watch your friends' surprise when they see a round bubble!

Behind the magic:

All bubbles are round, regardless of the shape of the bubble maker. They try to pull themselves into the shape that has the smallest surface area, which is a sphere.

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BUBBLEOLOGY

Building a Bubblearium

How does temperature affect the life of a bubble?

Materials needed:

Bubble solution	Two clear jars or glasses
Drinking straw	Plastic wrap

1. Make sure the insides of the jar and rim are wet. Place a little bubble solution in the bottom of the jar.
2. With a wet straw just above the bubble solution, blow bubbles until the jar is filled. Cover with plastic wrap and place in the refrigerator or freezer. Time how long your bubbles last.
3. Repeat step 2, but this time put the "Bubblearium" in direct sunlight. Time how long those bubbles last.

What did you discover about the life of a bubble?



Answer: Bubbles last longer in cool temperatures. Heat makes them evaporate faster.

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Bigger Better Bubbles

Do you want bigger, better bubbles? Try these bubble tips:

Blow gently!

If you get a lot of small bubbles instead of one big one, you are probably blowing too hard or you have the bubble wand too close to your mouth.

Twist it!

Finish your bubble with a quick twist of your wrist to seal it.

Mix it ahead!

Prepare your bubble solution two to three days in advance. Save any extra bubble solution to use later.

Wetter is better!

Make sure your bubble maker and anything your bubble may touch is wet.

Easy does it!

Let the bubble maker sit in the bubble solution for a few seconds. Don't slosh it around the solution - this creates suds and foam, which are bubble busters!

Weather helps!

Look for cool humid days, shady areas. Avoid windy days!



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Bubblemania! Bubble Sculpture

For the intermediate bubble blower



Materials needed:

Drinking straws Shallow tray Bubble solution

1. Fill the bottom of the tray with about ¼-inch of bubble solution.

2. Dip one end of the straw in the solution. Hold the straw slightly above the surface and gently blow a bubble.

To blow bubbles within bubbles:

3. Remove your straw from the bubble. Make sure the straw is wet and then gently insert it in the top of the bubble, so it enters at a 45° angle. Blow gently to form another bubble. Repeat to form more bubbles in bubbles!

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Bubble solutions go down the drain...into the wastewater treatment plant where they are broken apart...and then go safely back into the environment.

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Bubblemania!

Bubble Art

For the beginner bubble blower

Materials needed:

- Tempera or poster paint in 3 or 4 colors
- White or light-colored construction paper
- Bubble solution
- Bubble wand or drinking straw
- 3 or 4 small containers
- A teaspoon and cup

This art project works best when two people are working together.

1. This is fun, but can be messy! Spread newspaper around the area and wear an old T-shirt.
2. Pour about one cup of bubble solution in each container. Add one teaspoon of paint to each container. Stir gently until mixed.
3. Take turns blowing bubbles while your partner “catches” them on paper. As they break, you’ll get a design of brightly colored splotches! For darker colors, add more paint.



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The Pop-proof Bubble !

1. Place some bubble solution into a saucer. Have a glass of water nearby.
2. Place the end of a drinking straw into the solution, and blow a big bubble.
3. Now brag to your friends that you can stick your straw into the bubble without popping it! **Magician’s secret:** While you are talking, dip your straw in the water, without letting your friends see
4. Carefully poke your wet straw into the center of the bubble. It won’t pop!
5. Now ask for a friend to try the magic. Blow another big bubble, but give your friend a dry straw. The bubble will break immediately!

Behind the magic: The straw must be wet. Dry objects pop bubbles!

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The Telescope

For the beginner bubble blower

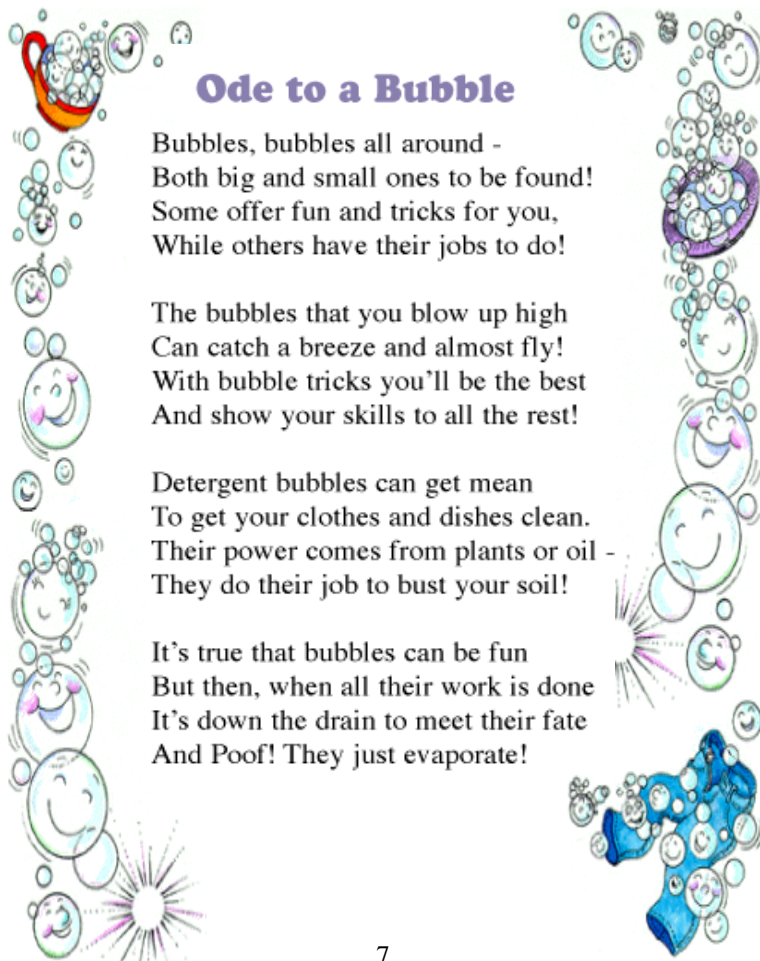
Materials needed:

- 2 to 4 6-oz. frozen juice containers,
- Masking tape, 1 inch or wider, Bubble solution

1. Remove both ends of the juice containers.
2. Tape containers together end-to-end to make a “telescope.”
3. Dip one end into the bubble solution. Gently blow into other end until a bubble forms.
4. Twist the can gently to close off the bubble, and watch it float away!

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Ode to a Bubble

Bubbles, bubbles all around -
Both big and small ones to be found!
Some offer fun and tricks for you,
While others have their jobs to do!

The bubbles that you blow up high
Can catch a breeze and almost fly!
With bubble tricks you’ll be the best
And show your skills to all the rest!

Detergent bubbles can get mean
To get your clothes and dishes clean.
Their power comes from plants or oil -
They do their job to bust your soil!

It’s true that bubbles can be fun
But then, when all their work is done
It’s down the drain to meet their fate
And Poof! They just evaporate!

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