Try This: Bubble Painting

The Corning Museum of Glass is temporarily closed, so we can't bring you live glassblowing demonstrations. But you can still have some bubble-blowing fun at home. This activity, like all of our glassblowing demonstrations, begins with a bubble and ends in a unique work of art you can enjoy forever.

You'll need:

- Washable Tempera Paint
- Bubble Solution
- Paper Straws
- Cups
- Paper

How long it takes:

30 minutes - 1 hour

Who:

The whole family!

What to do:

Step 1 – Add an equal amount of tempera paint and bubble solution to a cup.
Step 2 – Mix the paint and bubble solution together.
Step 3 – Put the straw in the bubble-paint mix and blow until bubbles are overflowing the cup.
Step 4 – Remove the straw and slowly lower the paper onto the bubble-filled cup. Remove the paper.
Step 5 – Repeat Steps 1-4 with different cups and paint colors to create a colorful bubble painting.
Step 6 – Let the paint dry and enjoy your bubble painting!

What's happening?

- A soap bubble is made of three very thin layers: soap, water, and another layer of soap. This soap film "sandwich" is the outside of a bubble, with air on the inside. A bubble pops when the water trapped between the layers of soap evaporates, or the soap film gets broken by touching something else.

- Blowing a glass bubble is much the same as blowing a soap bubble, but instead of a soap film, air is surrounded by molten glass. Even though glass bubbles don't have any water, they can still pop! If you blow a glass bubble too quickly, it will get large and very thin, which causes the glass to cool and harden. Keep blowing and the pressure inside the bubble will cause the thin, brittle glass bubble to burst.

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For more bubble fun, make this do-it-yourself bubble solution recipe!

Ingredients:

1 cup distilled water
3 Tablespoons liquid dish soap
2 teaspoons light corn syrup

What to do:

Add all the ingredients in a large container with a lid. Stir gently with a spoon. Let this mixture sit overnight. In the morning, take your bubble mixture outside and use a bubble wand to blow bubbles.

What's happening:

Adding light corn syrup to soap and water slows evaporation of water in bubbles, making them last longer. Glass is made from melted sand with soda ash and limestone added to it. The soda ash helps lower the sand's melting temperature and limestone helps make the glass stable so it doesn't break down over time. The limestone in glass and the corn syrup in homemade bubble solution are similar because they both make things last longer. These additives to soap bubbles and glass were discovered by people experimenting with different combinations and mixtures to make them better.

Try this experiment:

Make your own bubble solution using the recipe above (see paper with directions for making your own distilled water), and make another version using tap water instead of distilled water. By changing only one variable (the type of water used) you can see how it affects the bubbles and how long they last. Blow bubbles with each version and see which one produces the longest lasting bubbles. Use a timer and collect your data, then compare the numbers. Which bubbles last longer?

Share it!

Share your bubble art on social media and use the hashtag:

#GreatDayForGlass

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If you don't have distilled water at home, you can make it yourself (with an adult's help).

What you need:

- Your stove
- A pot with a lid
- Tap water
- Heat-proof bowl (metal is safest) small enough to fit inside the pot
- Ice
- Oven mitts

How long it takes:

- A couple of hours, depending on how much distilled water you make

Who you need:

- A parent or guardian to help with the stove and hot water

What to do:

Step 1 – Fill the pot about one-quarter full with tap water.
Step 2 – Put the heat-proof metal bowl in the pot. (The distilled water will collect in this heat-proof bowl.)
Step 3 – Turn the heat to medium-high.
Step 4 – Put the lid on the pot upside down.
Step 5 – Put some ice cubes in the upside down lid on the pot.
Step 6 – Periodically pour the melted ice into the sink and add more ice to the lid.
Step 7 – Using oven mitts, carefully remove the heat-proof metal bowl from within the pot and allow the distilled water to cool.
CAUTION: Make sure the pot always has some water in it. If the water level gets too low, add a little more tap water to the pot.

What's happening:

- Tap water has a lot of minerals dissolved in it. Distillation separates the water from the minerals by evaporating the water molecules and then collecting them in a separate container (the heat-proof metal bowl). The minerals are left behind in the pot

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