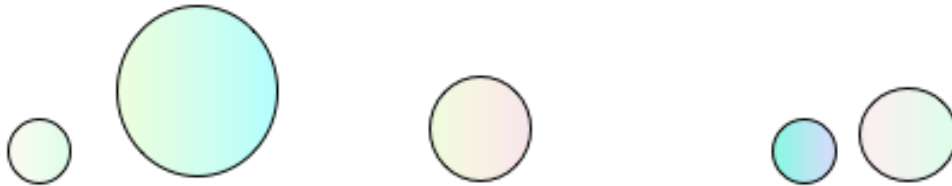


THE HOMEWORK FILES: BUBBLES!



INTRODUCTION & Bubble Poems:

What is it about bubbles? They sure do fascinate us, don't they, no matter what age we are! And bubbles make a wonderful topic for summer learning, as you will find in these Homework Files. Try all of the recipes for bubbles, invent your own, and see what works best for you. Did you know you can freeze a bubble? It's true, and you can try it out for yourself in Bubble Science, below. You can also try out several bubble experiments, or paint with some bubble art. But first, how about trying to define a bubble? How would you describe it? Is it simply a thin sphere of liquid filled with liquid or gas, or is it more than that to you? Try writing a short poem about bubbles, defining a bubble and its magical nature. Start out with, "A bubble is..." and end your poem with "Pop!" Find a student worksheet and template for your Bubble Poems here:

<http://www.everydayteaching.com/Worksheets/Bubble.Poem.pdf>



GROUP BUBBLE PROJECTS:

1. Create your own bubble machine, after trying several of the examples below. Make it colorful and wonderful, and demonstrate how your design works for the class.
2. Test several of the formulas below to find the strongest, longest-lasting bubbles. Record your results on a colorful chart, and then challenge other student teams in a bubble competition.
3. Create a bubble story to share with other classes. Write it out on bubble stationery – instructions below.
4. Plan and hold a Bubble Fair! Plan ahead to display some wonderful exhibits, and be sure to include some hands-on, interactive displays for your visitors.
5. Create a poster display of Bubble Science, explaining the physics behind bubbles, soap, surface tension, light, color bands, and the visible spectrum.

BUBBLE RECIPES . . .



BUBBLE RECIPES:

http://www.bubbleinc.co.uk/pages/bubble_solution_recipes.htm

<http://bubbles.org/html/solutions/formulae.htm>
http://www.creativekidsathome.com/activities/activity_5a.html
<http://www.cleaning101.com/sdakids/bubbles/page02.cfm>
<http://www.sdahq.org/new1198/kids/bubbles/page02.htm>
http://www.dragonsaretooseldom.com/craft_bubbles.html
<http://www.zurqui.co.cr/crinfocus/bubble/form.html>
<http://members.ozemail.com.au/~macinnis/scifun/bubbles.htm#mix>
<http://www.exploratorium.edu/ronh/bubbles/formulae.html>
<http://www.ed.gov/pubs/parents/Science/bubbles.html>
<http://www.kidsdomain.com/craft/bubbles1.html>
<http://www.pioneerthinking.com/soapbubbles.html>

Which bubble recipe works best for you, from the collection above? Or perhaps you have your own favorite concoction. Make them all, then conduct tests to see how long each bubble lasts, or how big you can get it, recording your results as a scientific survey.

BUBBLE MAKERS . . .



BUBBLE WANDS:

<http://www.zurqui.co.cr/crinfocus/bubble/tube.html>
<http://www.zurqui.co.cr/crinfocus/bubble/eng.html>
<http://www.kidsdomain.com/craft/bubbles1.html>
<http://www.sdahq.org/new1198/kids/bubbles/page08.htm>
<http://www.geocities.com/davidwilliamson/bubble.html>
<http://www.ildkids.com/kids/projects/bubble.html>
<http://content.scholastic.com/browse/article.jsp?id=3746626>
<http://homepage.mac.com/keithmjohnson/soapbubblor.com/page2/page7/page7.html>

From straws, to six pack soda pack plastic rings, to paper cones, milk jugs, paper towel rolls, coat hangers, or even your own hands, you'll find loads of ideas here to creating that magical tool, the bubble blower.

MAKE YOUR OWN BUBBLE MACHINES:

<http://pbskids.org/zoom/activities/sci/bubbleblowingmachine.html>

Here are some more ideas for making your own bubble blowing machines, by cutting an opening into a clean and empty milk carton, securing a straw with clay in the middle, and following directions to start blowing bubbles.

MAKE A BUBBLE MILL:

<http://jas.familyfun.go.com/arts-and-crafts?page=CraftDisplay&craftid=10823>

How cool is this? Using a plastic milk jug, corks, pencils, and empty soda bottles, you can create your own wonderfully inventive bubble mill. Have fun with this hands-on summer art and science project!

BUBBLE ART . . .

BUBBLE ART:

<http://www.sdahq.org/new1198/kids/bubbles/page06.htm>

Color your bubble mixtures with tempera paint, then work with a partner to blow the bubbles and "catch" them on paper, or use straws on a tray of bubble solution to make a Bubble Sculpture.

BUBBLE STATIONERY:

<http://pbskids.org/zoom/activities/do/bubblestationeryandh.html>

What a cool idea, to make bubble art stationery. The results look great; make sure you write a letter to a friend or relative on your new stationery.



ONLINE BUBBLE FUN:

ONLINE BUBBLE GAMES:

<http://www.bubbles.org/html/games/tictactoe.htm>

<http://www.bubbles.org/html/games/bubblechase.htm>

<http://www.bubbles.org/html/games/bubwrap.htm>

Play against computer bubbles with an online tic-tac-toe game, pop as many bubbles as you can in 20 seconds, or chase a bubble through a gate.

BUBBLE MAGIC . . .

BUBBLE MAGIC:

<http://www.sdahq.org/new1198/kids/bubbles/page04.htm#mid>

<http://www.sdahq.org/new1198/kids/bubbles/page05.htm#mid>

Learn what poster paint does in bubble solutions, try making a square or a pop-proof bubble, and predict just when a bubble is going to pop and amaze your audience, with these suggestions for some summer bubble fun.

BOUNCING BUBBLES:

http://www.bubbleinc.co.uk/pages/bubble_tips.htm

<http://members.ozemail.com.au/~macinnis/scifun/bubbles.htm#mix>

When you have practiced blowing your bubbles and have found your perfect solution, it's

time to finesse your art with some of these tips, including blowing bubbles inside of bubbles, or bouncing bubbles. (All)

TOWER OF BUBBLES, TINY BUBBLES, & GIANT BUBBLES:

<http://pbskids.org/zoom/activities/do/morebubbles.html>

Find different ways to create different sizes of bubbles, and try your hand at making a Tower of Bubbles as well. (All)



BUBBLE SCIENCE . . .



BUBBLE SCIENCE:

<http://www.zurqui.co.cr/crinfocus/bubble/skil.html>

Find out here how to keep a bubble aloft, how to measure a bubble, or how to freeze a bubble, and learn some very important techniques for blowing HUGE bubbles!

MAKE A BUBBLE WALL:

http://www.exploratorium.edu/ronh/bubbles/bubble_meets_bubble.html

You'll need two sheets of plastic for this wonderful experiment to create a spectacular beehive effect in your bubble walls, where bubble meets bubble meets bubble meets bubble...

FLOATING SOAP BUBBLES:

<http://scifun.chem.wisc.edu/HOMEEXPTS/SOAPBUBL.html>

Ready for a fun science experiment with your bubbles? From simple observation, to a

explanation of color, reflection, and light, to light wave interference, you'll find lots of bubble science here, along with a hands-on experiment with carbon dioxide made with vinegar and baking soda.

STICKY WATER!

http://www.exploratorium.edu/ronh/bubbles/sticky_water.html

Stretchy skin and surface tension... look here for the role these elements play in bubble creation, with examples from water striders and a simple experiment with a paper clip.

UNDERSTANDING SOAP:

<http://www.exploratorium.edu/ronh/bubbles/soap.html>

Why is it that plain water won't hold a bubble, while soapy water will? Learn the science behind soap bubbles by understanding soap molecules, surface tension, solutions, and how they work.

SOAP BUBBLE FILMS:

<http://www.phys.vt.edu/%7Edemo/demos/f30.html>

Use the instructions here to build your own super giant bubble maker, then demonstrate the effects of surface tension with bubbles.

BUBBLE GEOMETRY:

<http://www.thinkingfountain.org/b/bubblegeometry/bubblegeometry.html>
<http://members.ozemail.com.au/~macinnis/scifun/bubbles.htm>

Find tips, tricks, and explanations to make your own bubble wands for geometric bubbles, and experiment to see how to catch a bubble and make it last as long as possible.

ANTI-BUBBLES:

<http://www.antibubble.org/>

Now that you have tried all of these experiments with bubbles and you can easily recount bubble science, it's time to move on to the opposite of bubbles – anti-bubbles! Learn more here, with anti-bubble tricks and science projects included.



*Please note: The links above have been carefully selected for student-friendly learning pages on bubbles, and for the content on those selected pages only. Please do not click on any links on these pages or go off site without first getting permission to do so. We are not responsible for any changing content or links on these pages; please report any inappropriate content to: everydayteaching@gmail.com

