

Post Show Hand-Out From The Science Show

BubbleMania: Science, Art & Comedy!

Created and Performed by Casey Carle, Bubble-ologist, Artist & Comedian

www.bubblemania.com www.Casey-Carle.com

SCHOOLS: please share this information with your students as a follow up to the assembly.

TEACHERS: For additional classroom activities and discussions find a Study Guide co-written by The Smithsonian Institute at bubblemania.com/science/studygd

PARENTS: Any references to websites are safe for all ages. Assistance with bubble art advised for kids under 7.

BUBBLEMANIA'S "SECRET" BUBBLE FORMULA! (Shhhhhhhh)

1/2 gallon Distilled water (Found in most grocery stores and pharmacies) (Tap water can be OK but no promises)

1 Tablespoons Glycerin

(Found at most pharmacies as either skincare or first-aid. Not required on days with high humidity of 50% or higher)

6 ounces "Non-Ultra" Dawn/Joy **OR** 8-10 ounces "Ultra" Dawn/Joy Products*

* Alternate Soap Choice: "Ajax" Dish Detergent. Avoid the really cheap stuff.

Helpful: For even stronger, longer lasting bubbles add 8-10 ounces of quality commercial bubble mix.

Mixing: Use a bucket or container that has been cleaned very thoroughly with the same dish soap you are using for bubbling. Warm water is best. Mix well but avoid making a lot of foam. When not in use, keep it covered so evaporation doesn't thicken the mix. It can be helpful to let the mix sit for 24 hours before using. Do not store below 50 degrees for long periods.

Bubbles Do Not Like: Humidity under 20%. Direct, hot sunlight. Dusty air. Strong wind. Foamy build-up (skim it off). Bar style soap (it will ruin your mix!). Oils, grass or dirt getting into the mix. Kids that only want to pop them instead of do neat things with them!

GOOD Bubbling Conditions: Humidity 30%-60%. Cloudy days. Shady places. Gentle wind.

GREAT Bubbling Conditions: Humidity 60% & higher. Right after it rains (bubbles will land on anything wet). Foggy or muggy days. Little to no breeze. Kids who do amazing things with them using SCIENCE!

FUN Bubbling Times: Near a pond, lake or a big puddle to float bubbles! (Be environmentally friendly: limit the amount of soap in the water.) Near a warm house on a cool fall or spring day (the bubbles will rise up with warmer air!) Below 10 degrees Fahrenheit (to freeze the tennis ball-size bubbles!). Colors on the bubble can be more amazing when the sunlight is not direct (diffused). Like when clouds block the sun, or just before sunrise, or just after sunset. BEAUTIFUL!

Important Bubbling Notes:

- * Distilled water is better for this home-made mix because water from the sink (tap water) is often "hard water" and doesn't work as well.
- * Warning: Soap solution will sting your eyes. Too much can damage grass/bushes/flowers (rinse with hose). Soap is VERY slippery. Avoid smooth surfaces, stone walkways, etc.
- * Dry things pop a bubble by absorbing water from the bubble and putting a hole in the soap film. Wet things can usually touch or go inside a bubble without popping them.

Remember: SAFETY FIRST!

Don't Be THAT Guy!

CAUTION



**WET
FLOOR**

H A V E F U N & K E E P O N B U B B L I N G !

Learn more about school and family shows at **BubbleMania.com**

Learn all about Casey at **Casey-Carle.com**