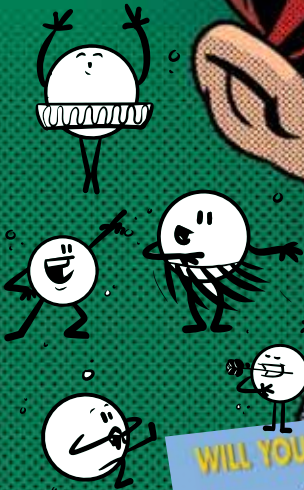




# TOTALLY THRILLING SCIENCE



RAISE

**"LIVE"**  
Dancing  
Bubbles!

**10-MINUTE**  
for **SCIENCE**  
**10 CLUB**  
MEETINGS



# TOTALLY THRILLING SCIENCE

[ohio4h.org/10-minute-science](http://ohio4h.org/10-minute-science)

The inspiration for this book comes from the graphic ads found in Johnson Smith catalogs and adventure comics of the 50's, 60's, and 70's. My friends and I were fascinated by these ads enticing us to buy some scientific marvel.

*Incredible! Unbelievable! Eyeglasses that let you see through walls. The secrets to super-human strength. Scary seven-foot-tall ghosts that do your bidding.*



*The promise of X-Ray vision. The ability to throw one's voice. Raising frolicking sea monkey pets.*

It took repeated disappointments and a dwindling allowance to open my eyes. The sad fact is that these advertisements didn't always tell the truth.

In 2015, I came across a book by artist and historian Kirk Demarais, who runs the Gen X nostalgia site *Secret Fun Spot*. In his book *Mail-Order Mysteries*, he reveals what you really got when you ordered any one of 150 supposed scientific marvels. Encouraged by his work, I set out to create a comic book that celebrates this graphic style of advertisement while tempting you with some *Totally Thrilling Science* that really does work! The activities in this comic book and corresponding web page are a compilation of science activities that I created or modified over the years. I hope you enjoy them as much as I do!

Dr. Bob

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Illustration: Corby Ortmann and Scott Rolfs**

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*Find more activities online at:*  
[ohio4h.org/10-minute-science](http://ohio4h.org/10-minute-science)

### Disclaimer

The use of brand names in the activity descriptions are merely examples of products that provide consistent and dependable results and is not intended as a product endorsement.

*Additional copies of this book and other Ohio State University Extension, 4-H Youth Development publications are available through local OSU Extension offices and online at [estore.osu-extension.org](http://estore.osu-extension.org). Ohio residents get the best price when they order and pick up their purchases through local Extension offices.*

# Unbelievable!

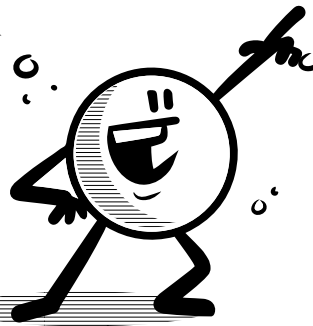
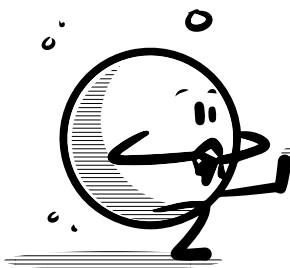
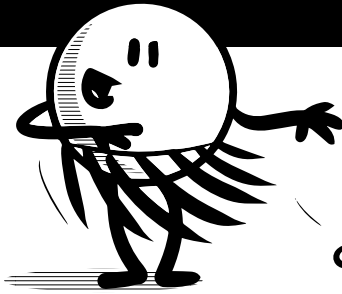
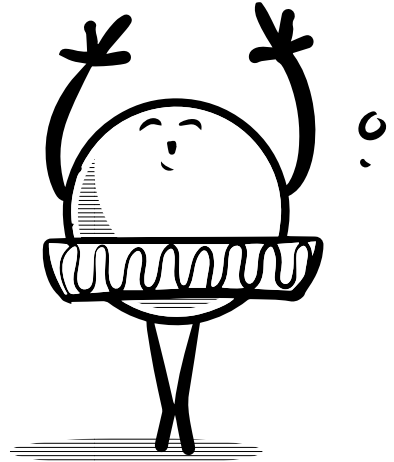
*You too can*  
**PERFORM THE  
REMARKABLE!**

*Step-by-step directions inside!*



# RAISE

# "LIVE" Dancing Bubbles!



## *Teach them:*

WALTZ · BALLET · DISCO  
BREAK DANCE · HULA  
FUNKY · OLD SKOOL  
any dance style you  
can think of!

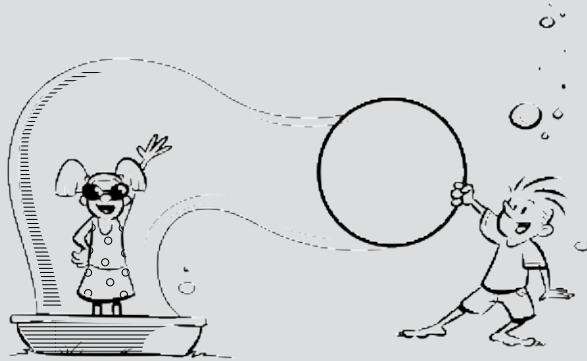


# METHOD

- 1** In a 2-cup container, mix  $\frac{1}{4}$  teaspoon (slightly heaping) powdered Xanthan Gum and 1 teaspoon rubbing alcohol to make a slurry.
- 2** Add 1 cup hot tap water to the slurry and stir well until lumps are gone.
- 3** Pour slurry into 2-quart container with 3 cups hot tap water. Continue to stir well.
- 4** Add  $\frac{1}{4}$  cup Dawn® dishwashing liquid and stir well.
- 5** Add  $\frac{1}{2}$  teaspoon (slightly heaping) baking powder and stir well. Let mixture rest for 15 minutes. Longer resting time = better results.
- 6** Distribute the solution in cups with bubble wands and make the bubbles dance.

*For a bigger dance, use larger wands made from string and straws.*

*These bubbles are known for their ability to stretch into monster dance partners!*



## *You will need...*

- BUBBLE WANDS
- MEASURING CUPS AND SPOONS
- PLASTIC CUPS
- HOT TAP WATER
- $\frac{1}{2}$  TEASPOON BAKING POWDER
- 1 TEASPOON RUBBING ALCOHOL
- $\frac{1}{4}$  TEASPOON BOB'S RED MILL® POWDERED XANTHAN GUM (LOCATED IN BAKING SECTION)  
GUAR GUM CAN ALSO BE SUBSTITUTED FOR XANTHAN GUM
- $\frac{1}{4}$  CUP DAWN® CONCENTRATED DISHWASHING LIQUID