



# Steve Spangler's Workshop Handout

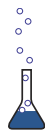
Flying Toilet Paper and Exploding Soda:  
Eye-Catching Demos that Make Science Fun!

**This email handout includes all of the links to the instructions for each of the activities from my presentation. Just click on the highlighted link to go directly to the experiment library in my website for a full description of everything you'll need to do the activity along with a complete explanation. In some instances, you'll also be able to watch a video clip of the activity directly on your computer (if you have a high-speed connection).**



## SODA CAN SHAKE-UP

It's probably the first science experiment a kid ever did... and it was so fun! Just shake-up a can of soda and open it to release a tidal wave of fun. But wait! What if you could shake-up a can of soda and open it without spilling a drop or ruining your shirt? It's easy if you know the science secret.

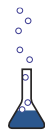


Activity



## MENTOS SODA FOUNTAIN

This will soon become your favorite science demonstration. Just drop an entire roll of Mentos candy mints into a 2-liter bottle of soda and stand back. It's a great chemical reaction that introduces the concept of carbon dioxide... and what it means to clean up your own mess!



Activity

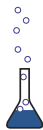


Video  
Clip



## BOUNCING BUBBLE SOLUTION

There's something magical about a bubble. It's just a little puff of air trapped in a thin film of soap and water, but its precise spherical shape and beautiful, swirling colors make it a true wonder of science. A bubble's life expectancy is usually measured in seconds... unless you know how to make a SUPER BUBBLE!



Activity

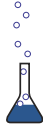


Video  
Clip



## FLOATING WATER

Fill the glass jar with water and cover it with a card. As you turn the whole thing upside down, the audience can hardly contain themselves. The room quiets down as you precariously position the inverted jar and card a few feet above someone's head. Just as they thought, no water spills out because the card magically sticks to the mouth of the upside down jar. But wait. . . there's more.



Activity

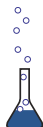


Video  
Clip



## SPINNING PENNY – CENTRIPETAL FORCE IN ACTION

Warning: The spinning penny trick is known to be addictive. Once you start, it's almost impossible to stop. Centripetal force may get the best of you. Proceed with caution! It's an amazing display of centripetal force. Once you get started, it's almost habit forming. Left untreated, you'll be spinning everything in sight!

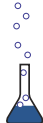


Activity



## WINDBAG WONDERS

This is no ordinary plastic bag. It's 8 feet long, 10 inches wide and holds a ton of air. How many breaths would it take to inflate a bag this big? Try one! The secret is brought to you by the famous scientist Bernoulli and the letter "A" for amazing!

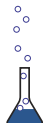


Activity



## FLYING TOILET PAPER and FLOATING BEACH BALLS

Most teachers have done the classic "floating ping-pong ball" trick using a hair dryer and a ping-pong ball. Just place the ball in the stream of fast-moving air and it floats. What happens when you kick it up a notch by trading in the hair dryer for a leaf blower to float a beach ball? It's amazing, of course. Toss a little toilet paper into the mix and you've got an unforgettable demo.



Activity



Video  
Clip



## BABY DIAPER SECRET

Just fill a paper cup with water, wave your hand, say something profoundly magical, turn the cup upside down and the water is gone. That's right... it disappears like magic. Well, the science behind the magic is actually the superabsorbent polymer found in a baby's diaper. Yuck! It's also the answer to some of our most pressing water conservation issues.

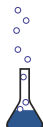


Activity



### INSTA-SNOW

Just add water to the Insta-Snow powder and watch it erupt into snow. This superabsorbent polymer is similar to the non-toxic chemical found in disposable baby diapers, but it fluffs up into the most realistic looking “fake” snow you’ve ever seen.



Activity

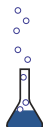


Video  
Clip



### FLOATING BOWLING BALLS

Do bowling balls float? Not so fast... you’ll have to see it to believe it! Plug the drain, fill the sink with water, and take the plunge with Steve floating science challenge. We all know that certain things float in water while other things sink, but why? Do all heavy things sink? Why does a penny sink and an aircraft carrier floats? Think you know the answers? Well, get ready for a few amazing surprises!



Activity



Video  
Clip



### SINKING SODA SURPRISE

We all know that certain things float in water while other things sink, but why? Do all heavy things sink? Why does a penny sink and an aircraft carrier floats? Think you know the answers? Well, get ready for a few amazing surprises!

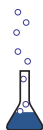


Activity



## COLOR-CHANGING BEADS

Not all sun screen lotions are the same... as evidence by Steve's lobster-like appearance after a day of working outside. Sometimes SPF 15 sun block just doesn't do the trick. Instead of using your skin as detector of ultra-violet light (UV), try experimenting with Energy Beads or UV Beads. These indicator beads change color when exposed to UV light. It's an amazing way to test the effectiveness of sun screen or to see if UV light is really blocked out by filters in sun glasses.

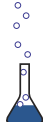


Activity



## EATING NAILS FOR BREAKFAST

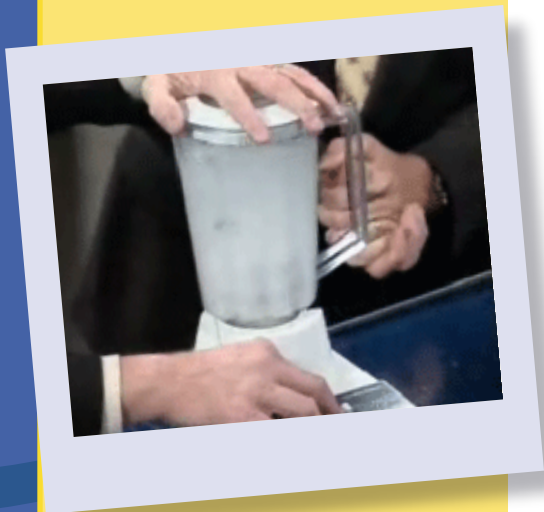
The next time you're eating a big bowl of breakfast cereal, take a closer look at the ingredients. You'll find that your cereal contains more than just wheat and corn. Look closely and you might find iron... you know, the metal... the stuff used to make nails. Here's an experiment to see if there is really metallic iron in your breakfast cereal.



Activity

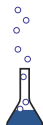


Video  
Clip



## MONEY IN A BLENDER – A MONEY SMOOTHIE

U.S. dollar bills are printed with special inks that contain traces of iron and other magnetic material in an effort to prevent counterfeiting. So, the only logical question that follows is, "Can you get the iron out of a dollar bill?"



Activity

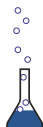


Video  
Clip



## GROWING ALLIGATORS

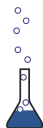
When Zack soaks his new alligator key chain in water, it grows into a full-sized alligator. Students use a popular science toy called a "Growing Alligator" to make predictions and observations as it expands many times its original size.



Activity

## SHARPIE PEN T-SHIRT

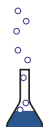
It's a new tie-dye technique without the mess... and the results are amazing! This activity combines chemistry and art to create a designer t-shirt that is sure to get lots of attention whenever you wear it.



Activity

## GIANT TEST TUBES – THE BABY SODA BOTTLE SECRET

These clear, unbreakable test tubes are used for safe science experiments in classrooms everywhere. Unlike ordinary glass test tubes, these thick-walled plastic tubes can be thrown in the dishwasher, dropped, tapped, or stepped on and they just won't break! Steve Spangler coined the name Baby Soda Bottle when he introduced them to teachers everywhere as the world's great test tube for kids. Steve popularized the use of these special tubes as test tubes during his 1999 lecture tour and for more than a dozen toys he created for some of the biggest toy stores in the country.



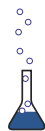
Activity





## DRY ICE MYSTERIES – THE AMAZING CRYSTAL BUBBLE

Who would have guessed that you could have this much fun with soapy water and a chunk of dry ice? Fill a tall glass or plastic cylinder with warm water and add a squirt of liquid dish soap like Dawn or Joy. Use gloves or the tongs to place a piece of dry ice into the soapy water. Get ready for a room full of ooohs & ahhs!



Activity

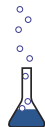


Video  
Clip



## THE TABLE CLOTH TRICK – WHIP IT!

The classic whip-off the tablecloth trick is a must for any aspiring science demonstrator who wants to be amazing! It's time for the classic "whip off" the tablecloth trick – guaranteed to either bring down the house or to get you into a lot of hot water.



Activity



Video  
Clip

### SEE MORE VIDEOS!

Now you can watch Steve Spangler's erupting science experiments from his weekly television segments on your computer! Thanks to our partnership with NBC affiliate KUSA-TV and 9NEWS.COM, you now have access to the science experiment video library. Each week Steve Spangler presents a new experiment on-air and now you have access to this streaming video. All you need is a high-speed internet connection and Windows Media Player.

Video Library:

<http://www.9news.com/spangler>

If you have any questions, please email me at [info@stevespanglerscience.com](mailto:info@stevespanglerscience.com) or call me at (800) 223-9080. Keep making science fun!

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