

TEACHERS  
Serving  
TEACHERS!®

## No-Pop Bubbles / UV No-Pop Bubbles

BUB-700 / 710 / 720 / 725



### What are No-Pop Bubbles?

Our No-Pop Bubbles behave like ordinary bubbles when they're first blown from the wand. However, as water evaporates from the bubble's surface, an extremely thin plastic "bubble skeleton" remains. It is this plastic bubble skeleton which has the properties for which these No-Pop Bubbles are named.

### What's the secret?

The secret is in the solution. Our No-Pop Bubble solution begins as a regular soap and water bubble solution. A small amount of a non-toxic, water-soluble polymer is added. While the No-Pop Bubble solution is a bit more viscous than normal bubble solutions, there's nothing unusual about the method for creating No-Pop Bubbles. The small bubble wand inside the tube suspends a film which, when air is blown through it, releases small bubbles into the air.

### Ready, Set, Blow!

Blow No-Pop Bubbles up into the air. Observe the colors (interference patterns) in the bubbles as they float. In approximately 10 seconds—depending on the relative humidity—the colors will begin to disappear. When the bubbles are colorless, they may be caught on your finger without popping!

Blow No-Pop Bubbles outside and watch how they glimmer on the grass of your school field. In a dry environment, No-Pop Bubbles will last for weeks!

### UV No-Pop Bubbles

Under an ultraviolet blacklight (such as our [UV Flashlights](#)) these bubbles glow brilliantly.



# NGSS Correlations

Our No-Pop Bubbles and these lesson ideas will support your students' understanding of these Next Generation Science Standards (NGSS):

## Elementary

### 2-PS1-2

Students can analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.

### 3-PS2-3

Students can use the No-Pop Bubbles in an investigation to ask questions to determine cause and effect relationships of electric interactions between two objects not in contact with each other.

### 5-PS1-3

Students can use the No-Pop Bubbles to make observations and measurements to identify materials based on their properties.

## Suggested Science Idea(s)

### 2-PS1-2

Students can conduct simple tests using the No-Pop Bubbles and regular bubbles to understand polymers. Information gathered can be used as evidence to support or refute student ideas about evidence of chemical reactions.

### 3-PS2-3

Use the No-Pop Bubbles in an investigation between the hardened bubbles and an electrically charged balloon or rod to observe movements of those bubbles without initial contact of those objects.

### MS-PS1-2

Students can analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. Using regular bubbles and the No-Pop bubbles, allow students to compare and contrast.

### MS-PS2-5

The No-Pop Bubbles are a wonderful tool to show the interaction of statically charged objects, without contact of those objects.

### MS-ESS2-5

Students can use the No-Pop bubbles to discover various air currents on campus. Experiment to see how buildings, warm blacktop surfaces or topography affect the bubble flight to provide evidence for how the motions and complex interactions of air masses.

### HS-PS2-6

Students will observe and communicate scientific information about why the substance is able to harden and not pop like ordinary bubbles. Further study of the structure of polymers will help students to understand that the molecular-level structure is important in the functioning of a material.

## Middle School

### MS-PS1-2

Students can analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

### MS-PS2-5

Students can use the No-Pop Bubbles to conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

### MS-ESS2-5

Students can use the No-Pop bubbles in an investigation to collect data to provide evidence for how the motions and complex interactions of air masses.

## High School

### HS-PS2-6

Students will observe and communicate scientific information about why the molecular-level structure is important in the functioning of a material.

### HS-PS3-5

The No-Pop Bubbles can be used to develop and model how two objects interacting through magnetic fields, illustrates the forces between objects and the changes in energy of the objects due to the interaction.

*\* NGSS is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of, and do not endorse, this product.*



# Classroom Activities

There are many ways to use the No Pop Bubbles in your class, depending upon the time available and grade level of your students. Here are some starter ideas:

## ACTIVITY 1: Bubbles and Static Charge

1. Inflate an ordinary latex or rubber balloon.
2. Next, blow a bunch of No-Pop Bubbles into the air.
3. While the bubbles are 'drying', rub the balloon vigorously on your hair in order to develop a static charge.
4. Use the charged balloon to attract the No-Pop Bubbles.
5. Observe how the bubbles behave before and after they are in contact with the charged balloon.
6. Experiment with other static sources, rods, or Van de Graaf generators, etc. The **Fun Fly Stick** is perfect for this activity. After your bubbles have hardened, bring your charged Fun Fly Stick close to your bubbles and watch what happens!



## ACTIVITY 2: Observing Air Currents

1. On a windy day, bring your students outside and blow lots of No-Pop Bubbles outside.
2. Observe how the bubbles float and fly in the air currents as the wind blows around the building.
3. See if you can find mini-tornados of air!

# Take Your Lesson Further

As science teachers ourselves, we know how much effort goes into preparing lessons. For us, “*Teachers Serving Teachers*” isn’t just a slogan—it’s our promise to you!

Please visit our website  
for more lesson ideas:

[www.TeacherSource.com](http://www.TeacherSource.com)

Check our blog for classroom-tested  
teaching plans on dozens of topics:

<http://blog.TeacherSource.com>

To extend your lesson, consider these Educational Innovations products:



## Fortune Fish (BUB-350)

Actually a very thin piece of red cellophane in the shape of a 3.5-inch long fish, this amazing innovation twists and curls when placed in the palm of your hand. It seems to move magically, different for different people. The truth is, it is sensitive to the moisture of your hand. An old favorite of demonstrators. Ask your students to explain what makes the fish move. Includes explanation.



## Bubble Timer (TIM-212)

The Bubble Timer is a beautiful display of physics, surface tension, and geometry! Just turn it over to watch the colored liquid displace the air in the bottom bulb, creating more geometric bubbles every time! Takes approximately one minute. About 20 cm (7.5 inches) tall.



## Large Gro-Beast Dinosaurs (GB-106)



When dry, these six little dinosaurs will all fit easily in the palm of your hand...but when placed in water, they'll absorb many times their own weight in water. Made of a super-absorbent polymer, our green Gro-Beast Dinosaurs start at about 1 inch long and grow to over 4 inches each! Each package contains six different types of dinosaur. A wonderful way to work on variables, measurements, mass, volume, and more. Dinosaurs will shrink back to their original size as they dehydrate.

## Magic Crystal Tree (CRY-200)

Crystal trees like this have been around for decades. Using capillary action and evaporation, you can watch as the branches of this specially treated paper tree bloom with colorful crystals. You'll see your first crystals in just minutes, then watch as they continue to grow for hours. Includes one tree form, growing solution, and base. Each tree measures 10 cm (4") tall. Colors may vary.

