





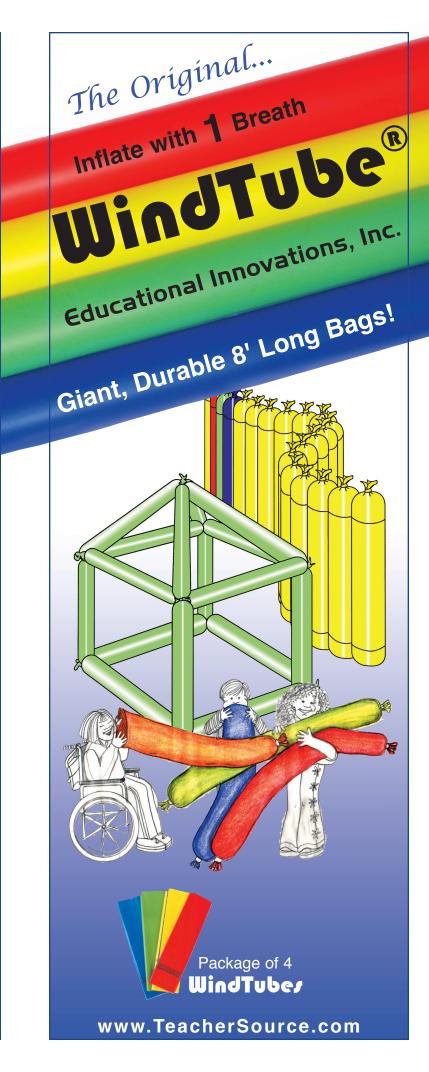


A Windtube can be filled by running while holding the untied end open wide. Or, wave the open end up and down to "scoop" air into it. You can also hold a Windtube still, and see whether the wind can fill it.

# History of the **WindTube**...

This is the original Windtube. It is an 8-foot long, 10-inch wide plastic bag that can be inflated like a balloon. Unlike Latex balloons, Windtubes do not have to stretch to inflate, so they are very easy to fill with air and, because they are NOT made from Latex, they don't pop unexpectedly. Doron Gazit first invented Windtubes in 1979 while a college student in Israel. He originally called them "Wind Bags", but quickly changed to the more descriptive "Windtube" name. In 1981, Doron introduced them to hundreds of children in New York City's Central Park. Educational Innovations, Inc. is pleased to now carry the original Windtube. They are twice as thick as similar reproductions and have been manufactured with a special additive that makes them even stronger.

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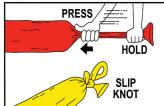


### Our favorite WindTube Demonstrations!

Tie off one end of your Windtube. Ask students to estimate how many breaths it takes to blow up the 8 foot tube... 15?... 20?... 40? Ask a student to inflate the tube. Count the number of breaths required. Next show your students that, using Bernoulli's Principle, you can inflate the tube with only a single breath!

**HERE'S HOW:** Have an assistant hold the closed end of your Windtube so it extends out horizontally. Hold the other end wide open. Keeping your mouth about 10" away from the opening, blow a fast stream of air into the center of the tube for a few seconds. As soon as your tube is full, close it tightly with your hand and twist it tight. With a little practice, you'll be an expert!



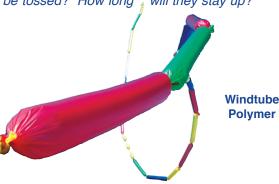


Once your Windtube is filled, you can tie it closed or deflate it to store until the next use.

HERE'S WHY: In 1738, Swiss physicist and mathematician, Daniel Bernoulli stated that as the velocity of a fluid (any gas or liquid that flows) increases, the pressure it exerts decreases. Fast moving air has a lower pressure than air that is not moving. The faster the air moves, the lower the pressure. Likewise, the fast stream of air moving from your mouth flowing into the Windtube has a lower pressure than the air outside the tube. Air from the room rushes into this low-pressure area within the windtube and helps to fill the Windtube.

Firefighters use Bernoulli's Principle to clear smoke by placing exhaust fans back from doorways, leaving a space. This draws more air (and smoke) from the room. Hot Air balloons are filled more quickly using the same technique.

Inflated Windtubes make great indoor and outdoor games. Make up your own challenges. How far can they be tossed? How long , will they stay up?

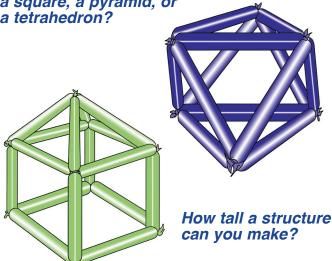


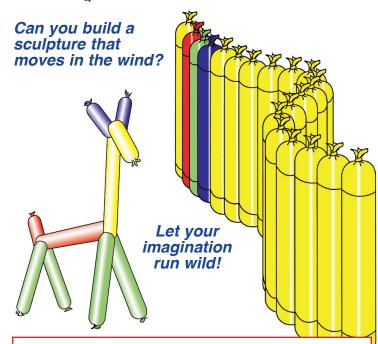
Windtubes are also available in rolls of 250 from Educational Innovations. Please visit www.TeacherSource.com for details.

## Windtubes make great Art, Geometry, and **Engineering Projects**

Windtubes can be made into sculptures, structures, or even moving works of art. Doron Gazit calls it Windtube "architecture". We call it fun and educational. Just attach two #33 rubber bands together, and slip them over the ends of two Windtubes to connect them together. Then challenge your students...

Which structure is more stable. a square, a pyramid, or a tetrahedron?





### CLASSROOM SAFETY PRECAUTIONS

Please keep Windtubes, and all plastic bags, away from babies and young children as they are a suffocation hazard. Do not use Windtubes anywhere small children might gain unsupervised access to them. Windtubes are not a flotation device.

#### TEACHERS PLEASE NOTE:

Demonstrations involving Windtubes placed between the tops of two tables in order to lift one is dangerous and, in our opinion, should not be attempted in the classroom environment. If one of the Windtubes should burst or otherwise deflate, the tables can slam together with great force, crushing the fingers of the individuals inflating the tubes. Furthermore, the tubes are round and, once inflated, can act as rollers allowing the top table to slide and crash to the floor unexpectedly.