

## Diving Bells

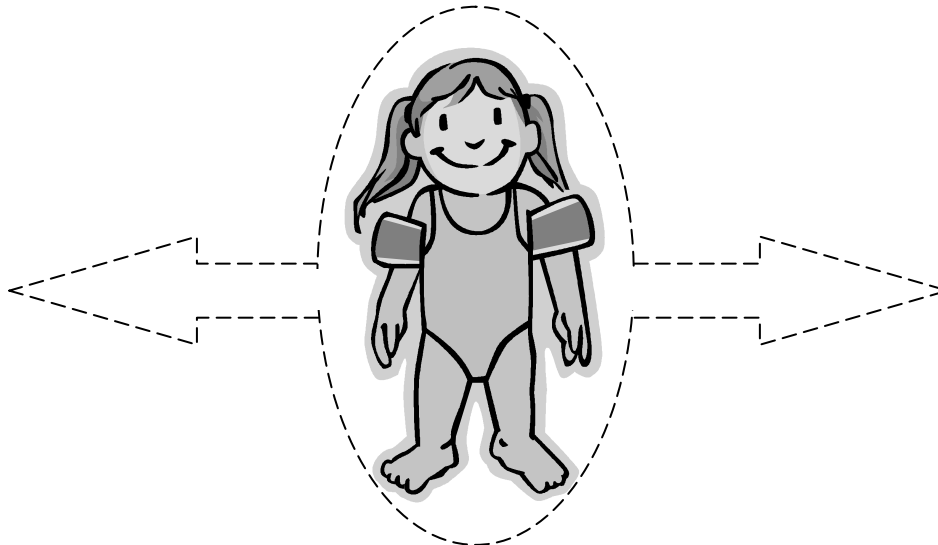
In this project you will make your own diving bell and find out how they work.

### Materials

- Clear Plastic Cup
- Paper Diver
- Tape
- Scissors

### Process

1. Grab all your supplies.
2. Cut out your Diver. Cut along the Dotted Line.



3. Put tape at the end of each tab and tape your diver to the inside of your cup.
4. Lower your Diving Bell straight into the water. How wet did your Diver get? What needs to happen for the bell to flood?

## So What's Happening?

"The impenetrability of air is shown by the *Diving-Bell*, ... shaped somewhat like an inverted tumbler... As the vessel descends, the air in it is condensed by the upward pressure of the liquid, and water enters. The lower it gets, the more the air is compressed, and the greater the amount of water admitted. The impenetrability of the air, however, keeps the greater part of the bell clear of water, so that several persons may descend in it to the bottom of the sea." From G. P. Quackenbos, *A Natural Philosophy* (D. Appleton and Company, New York, 1866), pp 166-167.

The diving bell is one of the earliest types of equipment for underwater work and exploration. When a bell or cup shaped object is lowered into the water, air is trapped inside. Early divers could swim back to the bell to take a breath instead of swimming all the way back to the surface for air. Today in the Navy, divers use equipment like SCUBA gear, snorkels, and a lot of other high tech diving suits to work underwater.

## Vocabulary

- **Diving Bell** – a bell or cup shaped object lowered into the water trapping air inside
- **SCUBA** – an acronym for “Self Contained Underwater Breathing Apparatus,” is a form of underwater diving in which a diver uses a scuba set to breathe underwater

## For More Information

Diving. “Diving Bell Chronology.” Last Modified 2011.  
<http://library.thinkquest.org/28170/221.html>

Historical Diving and Equipment. “Diving Bells and Observation Chambers.” Last Modified 9 August 2006. <http://www.divingheritage.com/chambers.htm>

HowStuffWorks.com. “What’s a Diving Bell?” Last Modified 2011.  
<http://adventure.howstuffworks.com/outdoor-activities/water-sports/diving-bell.htm/printable>