Some things work better than others — The Lung Model

The instructions to make these models are available from many sources, but here are a few tips to make your model work a little bit better:

Materials

- Plastic beverage bottles. Carbonated drink bottles work better. The walls are thicker and the bottle holds its shape better.
- Boba straws, if you can get them, are easier to bond the “lungs” to. Regular plastic soda straws work well too, but the rubber bunches up and is difficult to seal
- Amazing GOOP® Contact adhesive and Sealant.
- Fiberglass reinforced strapping tape
- Latex examination glove

Procedure

1. Empty bottle contents and dry the bottle.
2. Puncture the bottom of the bottle with a hobby knife to allow the student to finish cutting the hole with scissors. Leave an edge of about 11mm to keep the bottle cylinder from collapsing under the vacuum you will be creating.
3. Drill the cap with a hobby knife, check the fit frequently to avoid making the hole too small.
4. Cut the cuff off the glove and tie a knot in it. Saliva helps make a tight knot.
5. Run a thin bead of GOOP® Contact adhesive and Sealant around the outside cylinder of your bottle near the bottom.
6. Pull the glove up on the bottle and seal with a length of strapping tape.
7. Stretch the fingers to relax the latex and using scissor cut off a couple of glove fingers.
8. Spread a bead of GOOP® Contact adhesive and Sealant onto the straw and secure your lungs onto the straw, secure with a length of strapping tape.
9. Assemble the lungs and straw through the cap and seal with a small amount of GOOP® Contact adhesive and Sealant.
10. Push your diaphragm up into the bottle and screw the cap down sealing the bottle. When the “diaphragm” relaxes back to its natural position the lungs should be partially inflated.
11. Manipulate the diaphragm and observe the results.