

THE DEMONSTRATION CORNER

“Demos for Fun”

by

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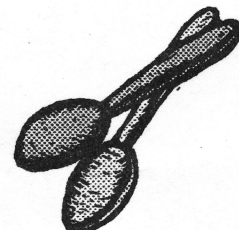
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The three demos described here are, to the best of my knowledge, nowhere in the Ontario curriculum, although I stand to be corrected. Sometimes we need to do things because they are interesting and fun, and not solely because they are “on the course”. ☺

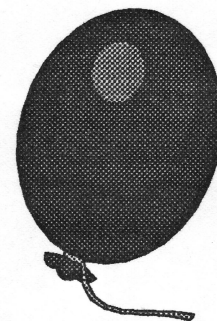
Hang a Spoon From Your Nose:

If you try to hang a spoon from your nose, most of the time it will just fall off. We could use epoxy or other glue to hold it on, but that’s a bit too permanent. It is a little-known fact that a thin layer of water will act as an adhesive, although thicker layers usually act as a lubricant. Before doing this lab, it is important to clean oils from the nose using a towelette or other cleaner. Also ensure that the spoon is clean. Breathe lightly on the spoon to fog it, place the bowl on the bridge of your nose, and press lightly to set the adhesive. If you do it right, the spoon will stick so well that you can even walk around with it. When you get really good at this, you can do it with a ladle.



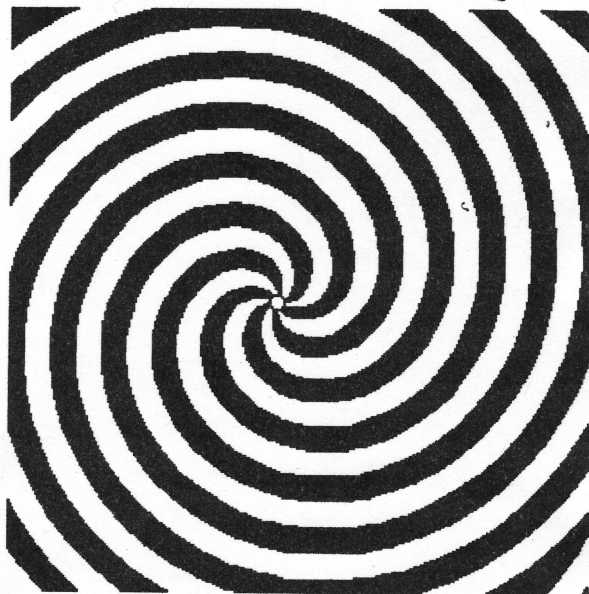
Use a Balloon as an Air Conditioner:

Rubber has a negative coefficient of thermal expansion. If you hang a weight from a rubber band, and then heat the band, you can watch it contract. On the other hand, if you stretch a rubber band, it heats up. You can do this with a balloon. Stretch the balloon, and then touch it to your lip. You should feel a dramatic warming effect. While it is stretched, wave it around to dissipate the heat into the air. Once it’s back to room temperature, let it contract, and press it to your lip again. It should feel quite cool. No doubt you can think of a way to engineer an air conditioner using this effect. Please send me 10% of the gross as a fee for giving you the idea.



Make Your Face “Explode” or “Shrink”:

Make a spiral design as shown on this handout, and find a way to spin it, but not too fast. A few hertz will do. Watch the spinning spiral for thirty seconds, and then immediately look at someone’s nose. Spin the spiral the other way, and repeat the experiment. One direction will cause an “exploding” (actually an exfoliating) effect, while the other will cause a “shrinking” effect. A computer version of this demo can be found at:
<http://msr.bmr.com.au/fun.html>.

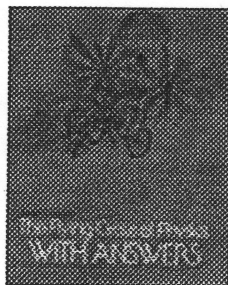


More Fun Stuff:

There are many sources for fun demos like these. Two that I have found particularly useful are:

The Flying Circus of Physics by Jearl Walker
Invitations to Science Inquiry by Tik Liem

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Submissions describing demonstrations will be gladly received by the column editor.