

Notes to the Future

Dancing Drops

This exhibit is both one of the most difficult to set up, and (upon proper set-up) one of the most entertaining that you will find at ExploratoRio. The most difficult part of this entire exhibit is getting a constant rate of dripping water at just the right frequency. We believe we overcame this difficulty, and we will show you how.

A. Supplies

- a. 1 - small pump such as the one used in an aquarium or small fountain (these can be found at your local OSH, Home Depot, or fish supply store)
- b. 1 – empty, 16 FL. OZ. bottle of Bausch & Lomb ReNu MultiPlus Solution
- c. Basin in which water is pumped from
- d. Length of tubing (about 2 meters)
- e. Teflon tape
- f. Wood, plastic, etc. to construct base and neck
- g. Duct tape
- h. Zip-ties

B. Difficulties

- a. As mentioned before, the hardest part of this exhibit is maintaining a constant rate of drippage. We overcame this via two mechanisms.
 - i. The nozzle of the contact solution bottle
 - ii. Tubing which kept the water level in the bottle constant by running water back into the basin when it reached a specific level in the bottle
- b. Because this is a VISUAL exhibit, it is paramount that both exhibitors and viewers are able to clearly discern the drops from whatever background you choose to use. We overcame this by dyeing our water a deep, deep purple with conventional food coloring. Against a white background, the drops are easily perceptible

C. Improvements

- a. When it comes to technical aspects, our exhibit was beautifully done. The use of the pump both regulated the amount of water in the container, and allowed us to worry only about displaying the exhibit without the added concern of refilling the bottle every five minutes

- b. However, our contraption was not very aesthetically pleasing, and could have used some sort of removable skin to cover its ungainly skeleton.
- D. Tips for Mini-Munchkins/Parents
- a. Mini-Munchkins – The elementary students are THERE to see exhibits. Not to visit all of their children’s classrooms within a forty-five minute block. They WILL come to your exhibit if you only ask them to “Come here and check this out!” Because this exhibit is...
 - i. In the dark room
 - ii. Uses a strobe light...kids are drawn to it like bugs to a halogen lantern.
 - b. Parents – Unfortunately, most parents passing through B-8 are squeezing it in between visits to your English and History classes. You have to catch them and reel them in. This is partly made easier because Dancing Drops is one of the more interesting exhibits, but nevertheless if you want them to come spend time at your exhibit you need to act fast.
- E. Previous Advice
- a. The most helpful advice we found was to use the electric pump to automate the refilling of your bottle
- F. Extra! Extra!
- a. Your exhibit does not have to be solely about the stroboscopic effects of light on drops of water. Ask Mr. Baird for a low-frequency tuning fork (one of the big ones) and he will be happy to show you how to use it with your exhibit. Also, if you have one of those old-fashioned CD players, rig it to play while it’s open and write a secret message on a CD that can only be read if it’s placed in front of the strobe light.