

### Dancing Drops: Notes to the Future

- a. Our design for our Dancing Drops exhibit differed greatly from previous designs. Instead of a soda bottle with a nozzle on it, we used an IV bag and tubing that we were able to obtain from a hospital. The IV comes already pre-made with tubing and a constant, steady dripper so what seemed to be a problem in years past was quickly overcome. We then took the IV bag and hung it from a music stand, but anything tall enough should suffice as a post where the IV could hang (perhaps a wooden structure with a single nail hammered into the top?). Thus, our suggestion would be to locate someone in the medical field, possibly a parent or a friend's parent, and see if they could get hold of an IV for this project. We also used black trash bag material as a backdrop so that water drops could be more clearly seen. Mr. Baird was more than willing to provide both the strobe light and the tuning forks for this exhibit as well.
- b. The only difficulty encountered was refilling the IV bag every so often, but we were able to solve this problem by cutting a corner off of the IV bag and using a funnel to pour more water back into the bag.
- c. Theoretically, aesthetics could *always* be improved, but as far as demonstrating the science behind Dancing Drops, our design functioned marvelously in exhibiting this time-stopping illusion.
- d. Little kids will be completely fascinated by the tuning forks and the water drops. Let the kids play around with everything (though you may need to show them how to hit the tuning fork properly). Also, let them play around with the strobe light. Simple tricks include moving a hand quickly in front of the strobe light or spinning a quarter in front of it. Parents tend to ask more questions about the science behind this cool trick, so you'll want to be prepared with all of the knowledge that comes with designing this exhibit.
- e. Previous exhibitors made use of 2-liter soda bottles (found at any grocery store, 7-Eleven, or gas station) and sprinkler drip valves (found at Emeigh Hardware, OSH and other hardware stores) to create the drips for Dancing Drops. Getting a constant drip rate was the main roadblock for many previous groups, but adjustments, such as putting a stick into the dropper or using contact solution caps, took care of this major problem. Some previous groups also installed pumps to continuously refill their containers, but this seems to be an optional step.
- f. Make sure to take breaks often. The dark room is pretty...well, dark. This aspect plus the constant strobe light can add up to a headache or two and possibly eye pain. Multiply that by four hours of a nonstop flow of elementary school students, and you're in for a wild ride. Be sure to drink plenty of fluids, and more importantly, rotate shifts with your partner every so often!