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Physics, Period 2

Electric Fleas Notes to the Future

Electric Fleas was an entertaining exhibit that was both fun to make and enjoyable for the kids to see and do. The supplies were easy to find and easy to assemble. We purchased the supplies at OSH on Arden. The downside was that the supplies, which consisted of wood, Plexiglas, and Velcro, were a little on the pricy side. The Plexiglas was the most expensive part of the exhibit which costs \$20.00. For anyone who wants to do this experiment we would recommend that they go to TAP Plastics on Auburn Boulevard because they have cheaper prices for their Plexiglas.

The assembly for Electric Fleas took about two hours to assemble because we had to saw the wood and cut the Plexiglas to fit the dimensions of our box. Once everything was cut we just had to nail the wood together and Velcro the Plexiglas down to the box. The “fleas” were paper hole cutouts that were various colors so that the kids could see them better when they jump. We also painted the box black so that the paper cutouts could be seen really easily because the wood was really lightly colored. When it came down to the experiment working, it worked really well with a wool sock at first when we first assembled the project. But after countless times rubbing the wool sock against the Plexiglas the fleas would jump less and less leading to the fleas not jumping at all during the actual day of ExploratoRio. When this happened we were trying everything we could to get the fleas to jump because we didn’t want to tell the kids what is suppose to happen when the wool sock is rubbed against the Plexiglas, we wanted them to see it for themselves. So we eventually got the fleas to jump up by having the kids rub their hands together with the wool sock and then vigorously rub a piece of paper against the Plexiglas. The fleas would jump up all over the place. We thought the reason for the fleas not jumping was that the Plexiglas was overused creating a wear and tear effect on it. **We strongly recommend that whoever does this project purchases extra Plexiglas pieces** so that this doesn’t happen to them.

The actual ExploratoRio exhibit was really fun once we got our project to work again. It was really easy to get the little kids attention because we were selling our project like a Carney at the state fair. The kids were captivated by the fleas when they jumped up and down and before we knew it we had a crowd of kids surrounding our project. When you’re explaining the project make sure you look up triboelectricity so you know what you’re talking about, especially when the Sac State professor comes by to ask you questions. The parents and older people are a little harder to interest because they don’t want to embarrass themselves. Just keep pressuring them to try the project and they will eventually try it. Electric Fleas is a great project that is fun to do especially when the little kids faces light up with joy when they see the fleas jump up and down.