

Experiment Script

Demonstration #1 – Selective Dyeing

(Put on gloves & glasses) Remember -- always safety first. These gloves and glasses are also made from petrochemical products. Here we have a strip of 3 different fabrics sewn together. One is made of SILK, one is COTTON, and one is ACETATE. Silk comes from worms (Hold up picture of silkworm) and cotton we grow (Hold up picture of cotton plant) so we call them natural fibers. The ACETATE is a manmade fiber. Yes, you guessed it – a petrochemical.

Now I'm going to put the strip of fabrics into a jar of water. What do you think is happening? Getting wet, right? Now I will transfer the strip of fabric into this jar of dye. What do you think is happening? Let's rinse it off and see. (Squeeze it out & hold it up for audience to see). The COTTON turned red from the dye, the SILK turned blue and the ACETATE, which is our petrochemical didn't change much at all. So you can see how, by using different fibers, both manmade and natural, we can produce all kinds of designs. Back to you, Lynda!

Demonstration #2 – Making Rubber Ball

The first thing we have is ACEDIC ACID. Does anyone know what that is? You can probably find it in your kitchen. You might use it in your salad dressing. It is VINEGAR WATER. Next we have SODIUM CHLORIDE. Any idea what that is? It can also be found in your kitchen and you might put it on your French fries. This is SALT mixed with water. The last thing we have is STYRENE-BUTADIENE-RESIN LATEX. This is our petrochemical product. We are going to pour our ACEDIC ACID and SODIUM CHLORIDE into our bowl and mix together. Now we will add the petrochemical LATEX and mix. What do you see happening? Look! We made a rubber ball! We took 3 liquids and made a solid! (Bounce old ball) This is what this one will look like once it has dried. Back to you Lynda!

Demonstration #3 – Bending Light with Acrylic Rod

You learned in science class that light travels in a straight line. Well, with LUCITE we can bend the truth.

(Use flashlight and Lucite rod to show how light bends through the Lucite. Show light in a single straight path and then hold flashlight up to end of Lucite rod to show how it travels around the bends and comes out at the end) The light is bent as it goes around the rod! Back to you Lynda!

Demonstration #4 – Making Instant Snow

(Spread table cloth on floor in front of the experiment table. Have kids gather around it.)

Put Instant Snow in glass bowl and show class the tiny beads. Add water and stir and you have instant snow. Spread snow on table cloth and invite the kids to touch it and feel it's coldness. I'm going to put this snow in a plastic bag and leave you're your teacher so that you can examine it or play with it more later. The instant snow is made of tiny super absorbent polymers, a petrochemical, which are long chains of molecules linked together. It's similar to the substance found in baby diapers. However, there is a difference. Instant snow not only absorbs the added water like a diaper but also expands to 100 times its normal size! Back to you Lynda!