

Magic Suitcase

Demonstration Procedures and Supplies

Demonstration #1 – Selective Dyeing

Supplies: White fabric samples (3 different fabrics sewn together)

Silk

Cotton

Acetate

Quart bottle or jar for dye solution

Small 200 ml Pyrex beaker or 8 oz. glass for dye

Dark color dye

2 quart jars or beakers for water

Metal tongs

Paper towels

Gloves

Preparation of Materials:

1. Arrange white fabric sample where it is readily available in top of suitcase so you can pick it up quickly
2. Pour dye solution from container in which you store it into small beaker or glass, about 2-3" deep
3. Fill quart jars about 2/3 full with clear water

Demonstration Technique:

1. Wear your gloves!
2. Hold up fabric sample and show it to the audience
3. Using the tongs, dip fabric into water
4. Dip fabric into dye solution and swish around with tongs. Pick the cloth out of the dye and put in first jar of water
5. Pick the fabric out of the water and rinse again in the 2nd water jar
6. Lift cloth out of water, squeeze out excess water, blot with paper towel
7. Hold fabric up for audience to see red, white and blue (or pink, purple and yellow for newest dye)

Repacking of Materials:

1. REMEMBER TO PUT THE DYE BACK INTO THE DYE CONTAINER! DO NOT PUT DOWN THE DRAIN AS IT WILL LAST FOR YEARS AND CAN BE RE-USED!! IF YOU HAVE A HELPER, REMIND THEM NOT TO THROW IT OUT!
2. Rinse out dye container after you have poured dye back into the storage bottle.
3. Pour out rinse water and rinse containers

Demonstration #2 – Making Rubber Ball

Supplies: Large plastic beaker

50 ml beaker for SBR latex

50 ml beaker for vinegar/water mixture

50 ml beaker for salt/water mixture

Small metal cake spatula

Vinegar

Table salt

Hot water

Styrene-Butadiene-Resin (SBR) Latex

Paper towels

Gloves

Preparation of Materials:

1. Fill 50 ml beaker with SBR latex
2. Pour 20 ml of household vinegar into 50 ml beaker and add 30 ml of water and shake
3. Pour 20 ml of table salt into 50 ml beaker, add hot water to 50 ml line and shake

Demonstration Technique:

1. Wear your gloves!
2. Pour SBR latex into large plastic beaker
3. Add salt/water mixture and vinegar/water mixture
4. Stir with spatula until rubber forms & separates from water
5. Squeeze water from rubber and form ball with your hands

6. Blot rubber ball with paper towels and bounce ball on table.

Repacking of Materials:

1. Dispose of liquid in beaker in sink and wash beaker with water
2. Wash any remaining rubber off spatula
3. Rinse out all bottles with water

Demonstration #3 – Bending Light with Acrylic Rod

Supplies: $\frac{3}{4}$ " x 16" clear acrylic rod with polished ends, tied into overhand knot with ends at 90° to each other (similar to pretzel bend)
Pencil flashlight or laser pointer

Demonstration Technique:

1. After speaker asks about if you've heard that light travels in a straight line and you agree with her, hold flashlight up and show the audience how the light travels in a straight line from you to them. (May turn out lights if you like)
2. Hold up the acrylic rod and shine the flashlight or laser pointer in one end to that the audience can see how the light bends through the rod and shines out the other end
3. Switch ends and demonstrate how it works with either end of the rod

Demonstration #4 – Making Instant Snow

Supplies: Instant Snow

Water

Glass

Container to play with snow

Preparation of Materials:

1. Measure out 2 scoops of snow powder
2. Measure out $\frac{1}{2}$ cup of water in separate glass

Demonstration Technique:

1. Very quickly and at one time dump all the water into the glass with the snow powder
2. Watch the powder erupt into snow

Repackaging of Materials:

1. Dispose of snow – NOTE: If left to dry for several days, the water will evaporate and it will return to its normal size
2. Rinse containers