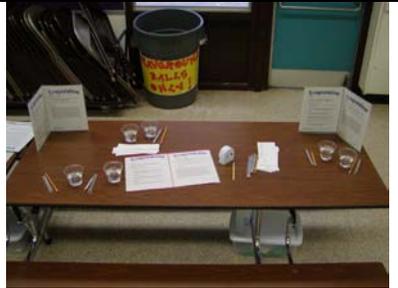
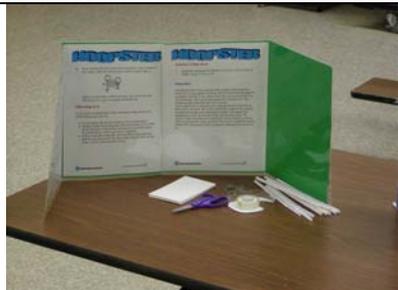


2002-2003 Family Science Night Materials

<p>Attractive – determine which household objects are attracted to a magnet</p> <p>Magnets (Delta 525-130-0320 \$6.95/10); magnet wands and marbles (Delta 525-130-3720 \$22.95/6 plus magnetic supplies); magnetic items (paper clips, washers, batteries, nail, floating magnet rings (Delta 525-110-0439 \$11.95/1)); nonmagnetic items (plastic toy, clothes pin, wood blocks, pennies, corks)</p>	
<p>Chromatography – see how ink in markers are made up of different colors</p> <p>50 3 oz paper cups, water based markers, 50 #2 coffee filters, scissors, paper towels, pitcher of water, newspaper to cover table</p>	
<p>Evaporation – measure how the evaporation of liquid affects temperature</p> <p>4 thermometers (Delta 525-200-1340 \$3.95/1), 8 5 oz plastic cups (reuse) marked “water” and “alcohol”, rubbing alcohol, data sheets, pencils, timer with second hand, paper towels</p>	
<p>Hoopster – make an airplane without wings</p> <p>50-100 lined 3x5 index cards, scissors, scotch tape, 50-100 straws</p>	
<p>Invincible Balloon – study a property of elastic polymers by passing a skewer through an inflated balloon</p> <p>144 balloons (12”, available in packs of 72 at Walmart), Vaseline, 80 #12 skewers, paper towels, newspaper to cover table</p>	

Kitchen Chemistry – compare the reactivity of different liquids

6 cups of baking soda; plastic spoons; orange juice, lemon juice, vinegar, water – 4 bottles of each marked “orange juice”, “lemon juice”, “water”, “vinegar” (Center from Hands on Learning 16 2oz bottles \$.25/bottle, dropper/cap lids \$.20/dropper & cap); wax paper (1 roll), data sheet, pencils, paper towels, 4 laminated sample sheets, newspaper to cover table



Making Plastic – make a plastic material from a chemical reaction by mixing together two solutions of chemicals

96 oz of glue mixture (50% elmers glue all and 50% water), 32 oz of borax solution (1/4 cup borax dissolved in 1 qt of water, 8 flip top dispensing bottles (Fisher Scientific 02-926-2 16oz \$16.25/24) – 6 for glue mixture and 2 for borax mixture, medicine measuring cups (Delta Education 525-030-8087 \$2.95/30), 100 3 oz paper cups, 100 craft sticks, 100 sandwich bags, paper towels, newspaper to cover table. Option: Mix in bag and eliminate cups and craft sticks.



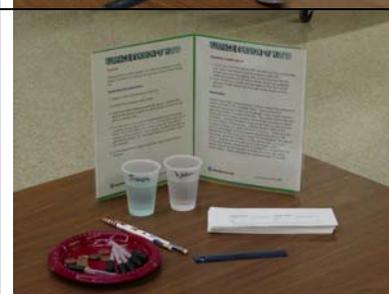
Soda Bottle Symphony – use soda bottles and water to create both percussion and wind instruments and to discover how changing the volume of water in a bottle affects pitch

4 empty glass soda bottles, 50 straws, used straw container (empty pitcher), metal spoon, centimeter ruler



Surface Tension of Water – observe the surface tension of water by placing as many drops of water on a penny as you can without them falling off

4 plastic plates (Solo), pennies, 8 droppers (Delta 525-040-1554 \$4.95/12), 8 5oz plastic cups (reuse) marked “water”, “soapy water”, water, dish soap, centimeter ruler, data sheets, pencils



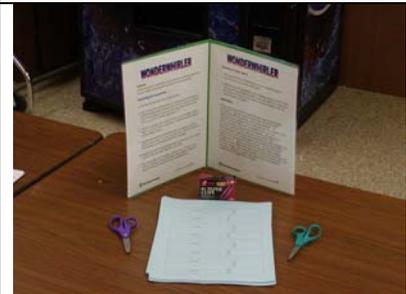
Totally Iron – test for the presence of iron in TOTAL cereal

1 Box Total cereal, 75 3 oz paper cups, 3 4oz wash bottles (Fisher Scientific 03-409-10AA \$13.84/6), 4 5” lengths of 5/16” tygon tubing (Fisher 14-168-68 \$67.41/50ft) – these serve as handles for the magnetic stir bars; 4 5/16” white plastic coated magnetic stir bars (Fisher 14-511-65 \$5.90/1), 4 5/8” wooden dowels cut to about 3” length; newspaper to cover table, paper towels, pitcher of water. Option: Use larger bar magnets painted white and eliminate tygon tubing and plastic coated magnets.



Wonderwhirler – observe some properties of air pressure and aerodynamics as you make and experiment with a Wonderwhirler

Wonderwhirler pattern, scissors, paper clips



Coke Floats? – discover if Coke or Diet Coke (with and without caffeine) sink or float and make a hypothesis why

1 can each – Diet Coke, Diet Coke Caffeine Free, Coke, Coke Caffeine Free, bucket, data sheets, pencils, plastic lid from the 26 gallon tub (to contain spilled water)



Patterns and Hexagons – make geometric shapes, sort by color or shape, make patterns

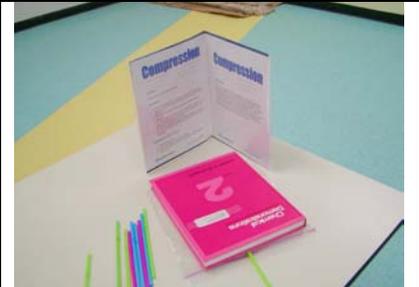
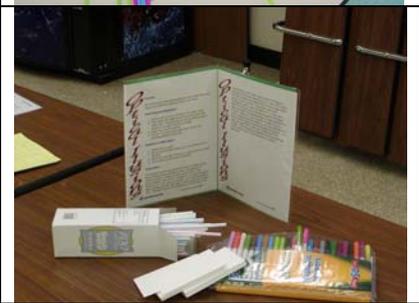
1 bucket of plastic pattern blocks (Center for Hands on Learning ZBM2698 \$20/250 pieces)



Marshmallow Creation –constructing shapes using creativity and ingenuity using marshmallows and toothpicks

2 bags (16 oz) of mini-marshmallows, 800-1000 toothpicks



<p>Compression – see how air compression can lift books</p> <p>Straws, 2 heavy textbooks, container for used straws (empty pitcher), 1 box ziplock gallon bags</p>	
<p>Optical Illusion – understand how optical illusions can manipulate your vision and brain into seeing what is not there</p> <p>100 unlined index cards, CLEAR straws, scotch tape, washable markers</p>	

Packed In:

- 13 15 quart containers
- 2 6.5 gallon containers (Making Plastic, Kitchen Chemistry)
- 1 15 qt bucket (Coke Floats)
- 1 26 gallon tub (paper towels, newspapers, pitchers, giveaway pencils, evaluations)

Suppliers:

- Delta Education 1-800-442-5444
- Fisher Scientific 1-800-766-7000
- Center for Hands on Learning 1-800-894-1492