## Materials at a Glance

Experiment	Experiment	Experiment	Experiment	Experiment
1	3	4	5	6
2 tennis balls other objects such as: apple orange rubber ball cotton ball or feather <b>Experiment</b> 2 clock or stopwatch	large marshmallow tennis ball objects such as: rubber ball lemon or lime rock banana pliers	toy car stiff cardboard or board (approximately .3 meter wide x 1 meter long [1 foot x 3 feet]) several marshmallows <b>Optional</b> pennies tape	2 marbles 3 playing cards shallow jar top vinegar baking soda measuring spoons <b>Suggested</b> dominoes blocks electric car electric train marshmallow tongue depressor steel ball other objects chosen by the student	1 small glass marble 1 large glass marble

Experiment	Experiment	Experiment	Experiment	Experiment
7	8	9	10	11
stopwatch or clock an area to run in items for marking the beginning and ending of the running distance	4 plastic or Styrofoam cups with the mouth larger than the base 2 long poles (dowels work well or any two long sticks that are the same thickness from end to end) tape a cylinder, 10-13 cm long (4-5 inches) [any cylindrical object, such as a pencil, a dowel, a cylindrical block, or a cylindrical drinking glass that is not tapered; a paper towel tube may be used if it is filled with sand and the ends taped] chalk	<ul> <li>3-5 large lemons knife</li> <li>3-5 copper pennies older than 1982</li> <li>3-5 galvanized (zinc coated) nails</li> <li>LED (recommended: 20mA 2 pin LED bulb, any color)*</li> <li>4-6 pairs alligator clips [duct tape can be substituted for alligator clips]</li> <li>plastic coated copper wire, 6-1.2 m (2-4 feet)</li> <li>wire clippers small Phillips screwdriver</li> </ul>	2-3 rubber balloons string or thread, at least 2 meters (6 feet) cut in half scissors different materials to rub the balloon on, such as: cotton clothing silk clothing wool clothing wooden surface plaster wall metal surface leather surface	lemon battery supplies (see Lemon Energy experiment) suggested test materials: Styrofoam plastic block cotton ball nickel coin metal paperclip plastic paperclip glass of water table salt, 15 ml (1 Tbsp.) <b>Experiment</b> 12 two bar magnets with the poles labeled "N" and "S"

\* A browser search can be used to look for an electronic parts store in your area. Or you can search on "20mA LED bulb 2 pin" to find an online supplier. An LED with flexible pins may be easier to use.

It should look something like this:

## Materials: Quantities Needed for All Experiments

Equipment	Materials	Foods
alligator clips, 4-6 pairs [duct tape can be substituted for alligator clips] ball, rubber balls, tennis, 2 clock or stopwatch cylinder, 10-13 cm long (4-5 inches) [such as a pencil, a dowel, a cylindrical block, or a cylindrical drinking glass that is not tapered; a paper towel tube may be used if it is filled with sand and the ends taped] jar top, shallow knife magnets, bar, 2, with the poles labeled "N" and "S" marble, glass, small marble, glass, large marbles, 2 measuring spoons pennies, 3-5 copper, older than 1982 playing cards, 3 pliers poles, 2 long (dowels or any two long sticks that are the same thickness from end to end)	balloons, 2-3 rubber cardboard, stiff, or board (approx .3 meter wide x 1 meter long [1 foot x 3 feet]) chalk cotton balls cups, 4 plastic or Styrofoam with the mouth larger than the base feather items for marking the beginning and ending of a running distance LED (recommended: 20mA 2 pin LED bulb, any color)* materials, misc., to rub a balloon on, such as: cotton clothing silk clothing wood clothing wooden surface plaster wall metal surface leather surface nails, 3-5 galvanized (zinc coated) objects, misc.	apple baking soda banana lemon, 6-10 large lemon or lime marshmallow, large, several orange vinegar
scissors screwdriver, small Phillips	string or thread, at least 2 meters (6 feet) cut in half	Other
screwdriver, small Phillips toy car wire clippers <b>Optional</b> pennies <b>Suggested</b> ball, steel blocks car, electric coin, nickel dominoes train, electric	2 meters (6 reet) cut in nair tape wire, copper, plastic coated, .6-1.2 m (2-4 feet) or more <b>Suggested Test Materials</b> : paperclip, metal paperclip, plastic Styrofoam, 1 piece table salt, 15 ml (1 Tbsp.) tongue depressor	an area to run in

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