

Materials at a Glance

Experiment 1	Experiment 3	Experiment 5	Experiment 6	Experiment 7
clear night sky colored pencils	basketball ping-pong ball flashlight empty toilet paper tube glue or tape scissors marking pen a dark room	8 Styrofoam balls: Recommended (1) 10 cm (4 in) (1) 7.5 cm (3 in) (2) 5 cm (2 in) (2) 4 cm (1.5 in) (2) 2.5 cm (1 in) water-based craft paint: red, blue, green, orange, brown paintbrush water in a container misc. objects to represent planets (such as fruits, vegetables, candies, baking mixes) for <i>Just For Fun</i> section	colored pencils night sky daytime sky or textured surface Optional book or online information about constellations globe or basketball	Styrofoam ball pick, awl, or other thin, sharp object to poke a hole through the center of the ball nylon string scissors 2 or more marbles of different sizes cups that are different sizes
Experiment 2	Experiment 4			
colored pencils clear night sky basketball or other large object(s) Telescope materials empty cardboard paper towel tube 1-2 sheets of card stock or 1 manila file folder cut in half tape 2 lenses with different focal lengths*	colored pencils night sky			

Experiment 8	Experiment 9	Experiment 10	Experiment 11	Experiment 12
flashlight with new batteries glow sticks in assorted colors: may be found in places such as Walmart, toy stores, and online	student-selected materials to make a model of a galaxy, such as colored modeling clay, Styrofoam balls, tennis balls, marbles, sand, candies, etc. cardboard or poster board, .3-1 meter (1'-3') on each side Optional colored pencils or markers camera and printer	colored pencils a dark, moonless night sky far away from city lights Optional computer with internet access pictures of cities	2 bar magnets iron filings, purchased** or student collected shallow, flat-bottomed plastic container (or a plastic box top or large plastic jar lid) corn syrup plastic wrap Jell-O or other gelatin and items to make it assorted fruit cut in pieces and/or berries Optional cardboard box	small plastic pail that will fit in freezer water dirt small stones dry ice (available at most grocery stores) heavy gloves or oven mitts freezer If dry ice is in a block: safety goggles, mallet or hammer, grocery bag (cloth or paper)

* As of this writing, available from Home Science Tools: <http://www.hometrainingtools.com> Item# OP-LEN4x15 and Item# OP-LEN4x50
Or: Look online for a telescope kit

** As of this writing, available from Home Science Tools: <http://www.hometrainingtools.com> Item #CH-IRON

Materials

Quantities Needed for All Experiments

Equipment	Foods	Materials	Materials (cont.)
basketball basketball or other large object(s) cups, several - different sizes flashlight with new batteries freezer gloves, heavy, or oven mitts lenses (2) with different focal lengths* magnets, bar (2) marbles, 2 or more of different sizes pail, small plastic that will fit in freezer paintbrush pick, awl, or other thin, sharp object to poke a hole through the center of a Styrofoam ball ping-pong ball scissors Optional camera and printer computer with internet access globe plastic container, shallow, flat-bottomed (or a plastic box top or large plastic jar lid)	corn syrup fruit, assorted, cut in pieces, and/or berries Jell-O or other gelatin and items to make it objects, misc. to represent planets (such as fruits, vegetables, candies, baking mixes) for Just For Fun section	ball, Styrofoam (1) balls, 8 Styrofoam: Recommended (1) 10 cm (4 in) (1) 7.5 cm (3 in) (2) 5 cm (2 in) (2) 4 cm (1.5 in) (2) 2.5 cm (1 in) card stock, 1-2 sheets or 1 manila file folder cardboard or poster board, .3-1 meter (1'-3') on each side dirt dry ice (available at most grocery stores) If dry ice is in a block: safety goggles, mallet or hammer, bag, grocery (cloth or paper) glow sticks in assorted colors: may be found in places such as Walmart, toy stores, and online glue or tape iron filings, purchased** or student collected materials, misc student-selected to make a model of a galaxy, such as colored modeling clay, Styrofoam balls, tennis balls, marbles, sand, candies, etc.	paint, water-based craft: red, blue, green, orange, brown paper towel cardboard tube, empty pen, marking pencils, colored string, nylon stones, small tape toilet paper tube, empty water in a container Optional box, cardboard markers, colored pictures of cities plastic wrap <div style="text-align: center;">Other</div> room, darkened sky, dark, moonless, far away from city lights sky, daytime. or textured surface sky, night, clear Optional book or online information about constellations

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