

Materials at a Glance

Experiment 1	Experiment 3	Experiment 4	Experiment 5	Experiment 6
colored pencils	small shovel or garden trowel	baseball or similar hard-centered ball	2 liters (8 cups) or more of dirt for mud pies	a toy, small music box, or toy car that can be taken apart
Experiment 2	small pail or plastic container	balloon	1.75 liters (7 cups) or more of water	a second similar item that can be taken apart
plastic hammer regular metal hammer 3 pieces of banana 3 hardboiled eggs in the shell 3 raw potato halves 3 rocks of the same type and size (students can collect these) safety glasses Optional 8 pieces of paper marking pen	measuring cup dirt that contains rocks (.25 liter [1 cup]) 1 tall clear glass container (approx. size: .5 liter [2 cups]) flour (60 ml [1/4 cup]) water cake mix and items needed to make the cake nuts, gumdrops, chocolate chips, and/or M&Ms	piece of string to tie balloon closed colored pencils Optional funnel	15 milliliters (1 Tbsp.) baking soda 15 milliliters (1 Tbsp.) vinegar measuring cup measuring spoon 3 containers (about 1.75 liter [7 cups] size) spoon garden trowel bucket paper marking pen pencil colored pencils	screwdriver small hammer other tools as needed
Experiment 7	Experiment 8	Experiment 9	Experiment 10	Experiment 12
2 clear, tall glasses (drinking or parfait glasses) spoon (1 or more) 3-6 student-chosen food items for parfait model of Earth's layers (such as: graham crackers, peanut brittle, cookies, hot fudge, Jell-O, pudding, ice cream, cream cheese, cherry, nut, jelly bean, etc.) student-chosen inedible items that can be used to build a parfait model of Earth's layers (such as: rocks, mud, dirt, clay, dog or cat food, Legos, etc.) colored pencils	outdoor thermometer helium-filled balloon string	3 Styrofoam cups: 355 ml (12 oz.) size about 240 ml (1 cup) each: sand pebbles small rocks 3 containers for collecting sand, pebbles, and small rocks garden trowel or small shovel pencil 1-2 measuring cups water enough dirt, pebbles, rocks, water, etc. to make a mud city Optional stopwatch or clock with second hand	pencil colored pencils Experiment 11 2 bar magnets (narrow magnets work best) small, flat-bottomed, clear plastic box (big enough for 2 magnets to fit underneath with some space around them) corn syrup iron filings, about 5 ml (1 teaspoon)** Optional tape 2 plastic bags for collecting iron filings	seeds (student selected) a garden bed or containers and potting soil tools for tending plants herb seeds or small herb plants (student selected)

* Student-collected or purchased from a place that sells aquarium supplies

** See *Experiment* section for how students can collect iron filings — or iron filings may be purchased at www.hometrainingtools.com

Materials: Quantities Needed for All Experiments

Equipment	Materials	Foods
baseball or similar hard-centered ball box, small, flat-bottomed, clear plastic (big enough for 2 magnets to fit underneath with some space around them) bucket containers (about 1.75 liter [7 cups] size), 3 containers for collecting sand, pebbles, and small rocks, 3 garden bed, or containers and potting soil garden trowel glass container, clear, tall (approx. size: .5 liter [2 cups]) glasses (drinking or parfait glasses), clear, tall, 2 hammer, metal hammer, plastic hammer, small magnets, bar, 2 (narrow magnets work best) measuring cup, 1-2 measuring spoons pail, small, or plastic container safety glasses screwdriver shovel, small, or garden trowel spoon thermometer, outdoor tools, misc. as needed tools for tending plants toy, small music box, or toy car that can be taken apart, 2 Optional bags, plastic, for collecting iron filings, 2 funnel stopwatch or clock with second hand	balloon balloon, helium-filled cups, Styrofoam, 355 ml (12 oz.) size, 3 dirt for mud pies, 2 liters (8 cups) or more dirt that contains rocks (.25 liter [1 cup]) dirt, pebbles, rocks, water, etc. to make a mud city inedible items, student-chosen, that can be used to build a parfait model of Earth's layers (such as: rocks, mud, dirt, clay, dog or cat food, Legos, etc.) iron filings, about 5 ml (1 teaspoon) [see <i>Experiment</i> section for how students can collect iron filings. Or iron filings may be purchased: www.hometrainingtools.com] paper pebbles, about 240 ml (1 cup)* pen, marking pencil pencils, colored rocks, 3 of the same type and size (students can collect these) rocks, small, about 240 ml (1 cup)* sand, about 240 ml (1 cup)* seeds (student selected) seeds, herb, or small herb plants (student selected) string water Optional paper, 8 pieces pen, marking tape	baking soda, 15 milliliters (1 Tbsp.) banana, 3 pieces cake mix and items needed to make the cake corn syrup eggs, hardboiled in the shell, 3 flour (60 ml [1/4 cup]) food items, student-chosen, such as: graham crackers, peanut brittle, cookies, hot fudge, Jell-O, pudding, ice cream, cream cheese, cherry, nut, jelly bean, etc. foods, assorted, such as nuts, gumdrops, chocolate chips, and/or M&Ms potato halves, raw, 3 vinegar, 15 milliliters (1 Tbsp.)

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