

**Materials Provided in Kit****Materials used in both Units A and B**

- 16 magnifying lenses (3x/6x)
- 8 metric rulers
- 16 50-mL graduated cylinders with bases
- 8 white plastic number cubes
- 8 samples of granite (painted with light blue dot)
- 8 copper strips
- 8 white ceramic streak plates
- 8 plastic cups
- 8 droppers
- 16 SEPUP trays

**Unit A: Studying Soil Scientifically**

- 8 30-mL graduated cups
- 32 clear tubes with caps
- 8 30-mL pipettes
- 8 white plastic spoons
- 8 red plastic films
- 8 sets of Object Labels
- 1 package of Soil A
- 1 package of Soil B
- 8 Soil Color Charts
- 1 color transparency, “U.S. Soils Map”
- 2 sets of 16 Soil Data Cards
- 16 sets of 5 Plant Puzzles
- 16 sets of 6 Soil Cards
- 16 sets of 3 Nutrient Cards
- 8 120-mL bottles of Organic Matter testing solution (0.1M  $\text{KMnO}_4$ )
- 8 Organic Matter Color Charts

**Unit B: Rocks and Minerals**

- 8 samples of wood
- 16 samples of fluorite
- 16 samples of calcite (painted with a silver dot)
- 8 samples of coal (painted with yellow dot)
- 8 samples of limestone (painted with blue dot)
- 8 samples of sandstone (painted with black dot)
- 8 samples of gabbro (painted with purple dot)
- 8 samples of obsidian (painted with white dot)
- 8 samples of gneiss (painted with red dot)
- 8 samples of phyllite (painted with brown dot)
- 8 samples of garnet schist (painted with green dot)
- 8 glass scratch plates

- 8 30-mL bottles of 0.5M hydrochloric acid
- 1 labeled sample of hematite
- 1 labeled sample of kimberlite
- 1 labeled sample of marble
- 320 dark brown game chips (16 packs of 20)
- 320 light brown game chips (16 packs of 20)
- 8 Rock Cycle game boards
- 8 sets of 30 Igneous Rock cards
- 8 sets of 30 Sedimentary Rock cards
- 8 sets of 30 Metamorphic Rock cards
- 8 sets of 9 Earth Process cards
- 8 sets of 4 game pieces

**Materials used in both Units C and D**

- 32 metric rulers
- 8 30-mL graduated cups

**Unit C: Erosion and Deposition**

- 3 color transparencies, topographical maps (black, green, red)
- 3 color transparencies, street maps (black, green, red)
- 8 landform models
- 8 transparent plastic lids
- 8 dry erase markers
- 8 15-mL bottles of blue food coloring
- 8 river models
- 8 river model stands
- 8 river model catch basins
- 8 rainmakers
- 8 50-mL graduated cylinders with base
- 8 white plastic spoons
- 8 9-oz plastic cups
- 6 packages of sand
- 1 package of clay (bentonite)
- 1 package of peat moss
- 24 plastic basins
- 8 supply of Earth Material A
- 8 supply of Earth Material B
- 8 supply of Earth Material C
- 8 plastic boxes
- 8 plastic retaining walls
- 8 wave makers (2 pieces)
- 16 mesh sleeves of small rocks
- 16 rectangular blocks, long

16 rectangular blocks, short

#### Unit D: Plate Tectonics

- 1 color transparency, “Layers of the Earth”
- 1 color transparency, “Plate Motion Simulation: Screen Shots”
- 1 A Science Odyssey Short Trips video: “I Feel the Earth Move”
- 1 sample of basalt rock
- 1 sample of pumice rock
- 1 box of toothpicks
- 16 9-oz plastic cups
- 8 vials of baking soda
- 8 60-mL bottles of less gassy “magma” (red), containing red food coloring, vinegar, guar gum
- 8 60-mL bottles of more gassy “magma” (colorless), containing vinegar
- 8 30-mL plastic cups
- 8 plastic volcano models with bases
- 8 clear, colorless plastic tubes
- 8 rubber stoppers
- 8 white plastic scoops
- 8 sets of 10 “Events on Earth” cards
- 8 sets of 7 “World Puzzle” pieces
- 8 seismograph models
- 8 black markers
- 8 plastic syringes
- 8 plastic cups with circular depression
- 8 small vials with 2-holed cap
- 8 bottles of red food coloring

#### Unit E: Weather and Atmosphere

- 16 white plastic trays
- 16 clear plastic films
- 16 plastic-backed thermometers
- 16 30-mL graduated cups
- 16 metric rulers
- 16 spoons
- 1 950-mL container of sand
- 8 sets of colored pencils
- 16 SEPUP trays
- 16 stir sticks
- 8 vials of sodium chloride
- 8 vials of calcium chloride
- 8 30-mL dropper bottles for water (shipped empty)
- 8 60-mL dropper bottles of ethanol

- 8 60-mL dropper bottles of mineral oil
- 1 500-mL container of gravel
- 32 clear plastic tubes (with a hole in the middle of the closed end)
- 16 syringes
- 16 sets of 6 Water Cycle cards
- 16 number cubes
- 8 15-mL dropper bottles of bromthymol blue (BTB) indicator
- 16 sets of 8 Atmosphere cards
- 80 wooden sticks with a pointed end
- 80 thumbtacks
- 8 compasses
- 1 pack of 250 large index cards
- 1 box of 100 paper clips
- 100 large tongue depressors
- 100 popsicle sticks
- 200 plastic straws
- 200 3/4 oz paper cups
- 200 4 oz paper cups
- 80 clear plastic 9 oz cups
- 80 clear plastic 3.25 oz cups
- 4 sticks of modeling clay
- 1 color transparency, “Satellite Weather Map”

#### Materials used in both Units F and G

- 8 sets of 8 colored pencils: red, yellow, orange, green, blue, purple, brown, and black

#### Unit F: The Earth in Space

- 8 compasses
- 16 9-cm wooden dowels
- 16 15-cm wooden dowels
- 16 sun stick bases
- 16 white plastic sheets
- 16 binder clips
- 16 30-cm metric rulers
- 16 white foam balls
- 16 Earth foam balls
- 8 electric motors
- 8 black jumper leads with alligator clips
- 8 red jumper leads with alligator clips
- 8 solar cells
- 1 Earth beach ball
- 1 CD with SEPUP Seasons Interactive

**Unit G: Exploring Space**

- 1 color transparency, “Mystery Planet Surface”
- 8 sets of 15 Space Exploration Date cards
- 8 sets of 15 Space Exploration Event cards
- 8 sets of 8 Classification cards
- 8 sets of 24 Space Object cards
- 8 Planet Surface Mystery Boxes
- 8 landforms
- 8 sets of 4 remote sensing images of Mars
- 8 sets of 4 remote sensing images of Venus
- 8 sets of 4 remote sensing images of Earth
- 16 measuring probes
- 32 metric rulers

**Materials Not Provided in kit****Units A and B**

- 1 overhead projector
- 1 class set of safety goggles
- 1 class set of lab aprons
- supply of water
- paper towels
- large clock (or watches) with a second hand
- index cards
- sticky notes, such as Post-Its® (optional)
- 1 pair of scissors
- masking tape
- chart paper
- 16 pieces of white paper
- 2–3 large containers or tubs
- colored pencils (green, orange, brown, red)
- 16 cafeteria trays (optional)
- 2 soft drink bottles, one colorless and one green (optional)
- paper clips
- newspaper (optional)
- samples of local soil (optional)
- 1 ultraviolet light (optional)
- 3-dimensional geometric solids, such as a cube, octahedron, etc. (optional)
- overhead transparency pens (optional)
- 1 gallon deionized water (optional)
- colored pencils (optional)
- scissors (optional)
- colored paper (optional)
- 16 calculators
- 16 computers with access to the SEPUP Plate Motion Simulation
- 1 class set of light-colored pencils (such as yellow)
- 1 class set of dark markers (such as purple)
- 1 class set of safety goggles
- paper towels and/or a sponge
- plain, unlined paper
- supply of warm and cold water
- 1 television monitor
- 1 videocassette recorder
- 1 apple (optional)
- 1 class set of compasses (optional)
- 1 globe (optional)
- 32 index cards, large (optional)
- meter sticks (optional)
- 1 paring knife (optional)
- 1 red marker (optional)
- sticky notes, such as Post-Its® (optional)

**Unit E****Units C and D**

- 1 overhead projector
- 64 pieces of graph paper
- 3-4 large containers or tubs
- masking tape
- 8 poster board or presentation board
- assorted colored poster pens
- newspapers (optional)
- graph paper
- chart paper
- markers
- 1 class set of computers with Internet access
- 1 class set of calculators
- 2–4 large buckets or plastic tubs
- paper towels (or sponges)
- 8 watches with second hand
- water

- sunlight (or a light source, such as a 40W lamp, grow lamp, or flashlight)
- 1 container of distilled (or tap) water
- 1 container of 3.5% saltwater
- 1 heat source (hot plate, hot pot, or microwave)
- 1 750-mL clear, colorless plastic bottle (with cap)
- 1 large flat board (plastic, glass, or poster board)
- 1 500-mL (or larger) glass beaker
- supply of long wooden matches
- 1–5 sticks of incense
- 1 pair of tongs
- ice
- access to a freezer
- 1 class set of safety goggles
- 1 class set of scissors
- 1 stapler
- glue
- tape
- 2 large electric fans
- 1 heat lamp (optional)
- 1 large sheet of black paper (optional)
- pictures of the water cycle (optional)
- 1 1-L container (optional)
- 1 50-mL graduated cylinder (optional)

### Units F and G

- 1 overhead projector
- 1 class set of safety goggles
- 1 meter stick
- chart paper and/or poster board
- 1 globe on a stand
- 1 lightbulb in a stand or lamp without a shade
- 16 protractors
- 16 sets of colored pens or pencils
- tape or small adhesive page flags
- 1 volleyball or other similar opaque white or light-colored ball
- 16 computers with access to the SEPUP Seasons Interactive Simulation, and to the Internet
- 16 flashlights (optional)
- 8 class sets of colored markers
- graph paper
- 16 calculators
- 9–10 spherical objects of varying sizes
- 32 geometry compasses (for drawing circles)
- 16 tennis balls or other small spheres (optional)
- 32 black pens or pencils
- 32 same-colored pens or pencils