

MATERIALS AND EQUIPMENT

The unit, like all hands-on science, requires a large variety of materials to support various ways of learning (including doing, discussing, listening, watching, reading, and writing). Prepare in advance by collecting the materials and equipment needed for all the demonstrations and hands-on investigations.

- Roll paper, poster board, or a bulletin board should be dedicated at the beginning of the unit to serve as a question board to cumulatively document and return to student questions. The question board is referred to in the materials for lesson segments in which it is used but is not repeated in the materials listed here.
- Internet access and the means to project images/videos for whole-class viewing is also required in many lesson segments but is not repeated below.

Unit Opener

- animal cards (1 set per group)
- plant cards (1 set per group)
- human cards (1 set per group)
- note cards (1 for each card)
- scissors
- glue
- plastic baggies (1 per group)
- ducklings or chicks (optional)
- animal pen or coop (optional)

Lesson 1 Structure and Function in Plants and Animals

Lesson 1.1

- dog plastic figurine
- turtle plastic figurine
- bird plastic figurine
- assorted animal plastic figurines (8; e.g., zebras, elephants, cats, lions, tigers, horses, bears, giraffes, rabbits, alligators, lizards, or snakes; 1 of each)
- pencils (1 per student)
- timer

Lesson 1.2

- color images of macaw, penguin, roadrunner (1 per group)
- color images of poodle, husky, dachshund (1 per group)
- color images of snapping turtle, box turtle, sea turtle (1 per group)
- stapler
- poster paper (3 sheets)
- assorted colored markers

Lesson 1.3

- black marker
- 3 x 5-inch index card (or card stock)
- glue
- scissors
- plastic baggies (1 per group)

Lesson 1.4

- fabric zippers (1 per group)

Lesson 1.5

- poster boards (1 per group)
- markers (assorted colors per group)
- scrap paper (3–5 sheets per group)
- pencils (1 per student)

Lesson 1.5, continued

- glue (1 bottle per group)
- scissors
- envelopes (7)

Lesson 2 Information Processing: Plant and Animal Stimulus and Response

Lesson 2.1

- small nontransparent containers with lids (9)
- marble
- paper clip
- uncooked rice (half cup)
- water (1 cup)
- playground sand (half cup)
- cotton balls (6)
- vinegar (2 tablespoons)
- orange juice (2 tablespoons)
- vanilla extract (or cinnamon) (1 tablespoon)
- crushed garlic cloves (5, peeled)
- paper plates (3)
- crackers (1 per student)
- lemon drop candies (1 per student)
- peppermint candies (1 per student)
- brown paper bags (4)
- chenille stem
- smooth rock (river rock works well)
- craft pom-poms (3–4)
- craft feather
- timer
- scissors
- black marker (or other dark color)

Lesson 2.2

- paper plates (1 per student)
- plastic baggies (1 per student)
- assorted dry beans (or uncooked rice) (2–3 pounds)
- stapler

Lesson 2.2, continued

- yardsticks (1 per group)
- wooden spoons (1 per group)

Lesson 2.3

- mustard seeds (1 teaspoon)
- petri dishes (3)
- cotton balls (3)
- water
- large cardboard box
- scissors or knife
- packing tape

Lesson 2.5

- poster boards (1 per group)
- markers (assorted colors per group)
- scrap paper (3–5 sheets per group)
- pencils (1 per student)
- glue (1 bottle per group)
- scissors
- envelopes (7)

Lesson 3 Parents and Offspring: Traits and Inheritance

Lesson 3.1

- color pictures of different-looking cats (2)
- envelopes (1 per group)
- scissors
- assorted animal parent and animal baby plastic figurines (8–10, e.g., lion and lion cub, bear and bear cub, horse and foal, chicken and chick, cow and calf, pig and piglet, dog and puppy, cat and kitten, duck and duckling, rabbit and bunny)
- timer

Lesson 3.4

- images of different types of animals (6–10 animals)

Lesson 3.5

- scrap paper (3–5 sheets per group)
- pencils (1 per student)
- poster boards (1 per group)
- markers (assorted colors per group)

Lesson 4 Growth and Development

Lesson 4.2

- computer stations (12)
- timer

Lesson 4.3

- 25 x 30-inch sheets of paper (1 per group, plus 1 for the demonstration)
- markers (assorted colors per group)
- tacks or other tools for hanging paper (1 per group, plus 1 for the demonstration)

Unit Capstone

- poster boards (5–7)
- masking tape

Unit Supplement

- construction paper (2 sheets per group)
- drawing utensils (assortment per group)