Activity 1

What You Need

For the whole class:
- 2 water misters
- 2 sponges

For each team of four students:
- 1 cup of garden soil
- 1 or 2 plastic sandwich bags (to contain soil)
- 4 pieces of white scratch paper (to use as soil observation mats)
- 4 pencils
- 2 magnifying lenses
- 4 plastic spoons
- newspapers
- 4 journals or blank booklets for recording observations throughout the unit
- Optional: 1 tray for organizing team materials

Soil Profile Test (Optional)
(recommended for 4th–6th grade students)

What You Need

For each team of four students:
- 4 clear plastic vials with lids (approximately 1" in diameter, 3" high)
- 4 plastic spoons
- 1–2 tablespoons of alum (available from a well-stocked grocery store)
- 1 cup or plastic sandwich bag to contain alum
- 1 measuring cup containing 1 cup of water
- newspapers

Activity 2

What You Need
(For each team of four students)

Note: If you would like to make a demonstration terrarium, plan as if you had one extra team.

- 1 small, clear plastic storage box with lid, or a clear plastic salad container
- 1 push pin for making holes in terrarium lids
- enough soil to fill 1/3 of the container when mixed with sand
- sand equal to 1/4 the amount of soil
- 1 teaspoon of birdseed or grass seed
- 1 handful of dry leaves from fruit, oak, birch, maple or leaves from other deciduous trees
- 1 small plant such as strawberry, sweet alyssum, violets, or other small garden plants
- 1–2 twigs or pieces of bark
- 2–3 plastic spoons for mixing soil
- 1 spray bottle for water
- 1 piece of black construction paper large enough to cover one side of the box
- 1 white self-adhesive label or strip of masking tape to stick on piece of black construction paper
- 1 roll of transparent tape for attaching black paper to terrariums
- 4 journals or blank booklets for recording observations throughout the unit
Activity 3

What You Need
For the whole class:
- 2 water misters
- 1 tray or piece of cardboard for sorting earthworms
- 1 push pin for making holes in lids of worm containers
- Optional: 2 sponges or newspaper to cover tables

For each pair of students:
- 2 earthworms (redworms or bait worms)
- 1 half-gallon milk carton tray or other small tray with sides (see Getting Ready for how to make milk carton trays)
- 2 clear plastic cups
- 2 pencils
- 1 magnifying lens
- 1 or 2 damp dried leaves or moist 2" x 2" paper towel pieces
- 2 journals or blank booklets for recording observations throughout the unit
- Optional: 2 earthworm student sheets for older students (master on page 31)
- Optional: 1 plastic spoon
- Optional: 1 small plastic ruler
- Optional: 1 nightcrawler earthworm

Activity 4

What You Need
For the whole class:
- 2 water misters
- 1 push pin for making holes in lids of isopod containers
- Optional: 2 sponges or newspaper to cover tables

For each pair of students:
- 4 isopods: 2 sowbugs and 2 pillbugs (See Getting Ready for where to get isopods.)
- 1 half-gallon milk carton tray or other small tray with sides (see Getting Ready for how to make milk carton trays)
- 1 clear plastic cup with lid
- 2 pencils
- 1 chunk of raw potato at least the size of a large marble
- 2" x 2" damp paper towel or 2 damp dried leaves of about the same size
- 1/4 of a cardboard tube from a roll of toilet paper
- 2 journals or blank booklets for recording observations throughout the unit
Optional: 2 isopod student sheets for older students (master on page 41)
Optional: 1 plastic spoon
Optional: 1 small plastic ruler

Activity 5

What You Need

- small animals collected by students such as: garden snails, slugs, beetles, garden crickets, garden spiders, millipedes, etc.
- food items brought in by students such as: potato, carrot, apple, corn, eggshells, lettuce, dried beans
- inanimate objects brought in by students such as: rocks, shells, sand more dried twigs, wood, leaves, plants (even weeds), bird and grass seed.
- time for your students to observe and describe (orally or in their journals) their new discoveries!!