What You Need (for all sessions)

Non-Consumables

- 1 River Cutters Teacher’s Guide
- 1 disposable dust mask
- 1 measuring cup, 1 qt. (1 liter) capacity
- 2 pitchers, about 2 qts. (2 liters) each
- 1 bucket
- 5–8 sturdy plastic tubs, 5"–7" (12–18 cm) deep, at least 20" (50 cm) long, and 15" (38 cm) wide. We recommend restaurant dish bussing tubs.
- 5–8 sponges, about 1" x 3" x 5" (2 cm x 8 cm x 13 cm)
- 5–8 aluminum pie pans, 9" (23 cm) diam.
- 5–8 pieces of wood, 8" lengths of two-by-four or children’s large wooden blocks
- 5–8 driper systems. See pages 13–15 and choose either the Rain Cloud driper system or the Siphon driper system. Collect the materials you will need for one driper per team:

Either

For each Rain Cloud driper system:

- 1 plastic water bottle with cap, 1 pt. to 1 qt. size
- silicone caulk (the type that remains flexible when dry) or hot glue gun
- 1 3"–5" piece of flexible aquarium air hose
- 1 adjustable plastic aquarium control valve
- 1 Phillips screwdriver, medium to large size (slightly smaller than the diameter of the aquarium hose), one for all driper systems
- 1 cigarette lighter, candle, or gas stove for heating screwdriver to melt a hole in plastic bottle
- 1 metal coffee can, sturdy box, or plastic container to support the plastic bottle 8"–10" (20 cm x 25 cm) above the table (the piece of wood used to slope the diatomaceous earth can also be used)

Optional:

- 1 “T” valve that fits inside the air hose, as an additional valve, to run two rivers at the same time
- 1 additional adjustable plastic aquarium control valve
- 1 spray bottle of water—to simulate rain over an entire watershed

Or

For each Siphon driper system:

- 1 wide-mouthed, tapered, 9 oz. soft plastic cup (270 ml) with notch cut on edge
- 1 plastic stir stick with two small holes (commonly used as coffee stirrers)
- 1 piece of wire, 4" (10 cm) long (20 gauge or .035" in diam.), small enough to go through one hole in the stir stick
- 1 small squeeze bottle of liquid detergent

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Materials needed for each Rain Cloud dripper system

- caulk
- cigarette lighter
- Phillips screwdriver
- aquarium control valve
- "T" valve (optional)
- aquarium air hose
- plastic water bottle
- sturdy container

Materials needed for each Siphon dripper system

- plastic cup with notch
- stir stick
- wire
- liquid detergent

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What You Need (for all sessions)
(List continued from page 8.)

Non-Consumables (continued)

☐ 5–8 trowels, sturdy spoons, or plastic putty knives
☐ collection of magazine pictures of the earth, and geology textbooks with photos of river features and geological landscapes
☐ 10 small containers or boxes (to hold event slips needed in Session 3)
☐ 1 overhead transparency of Earth today and 12,500 years ago (master on page 44)

Consumables

☐ 20 lbs. (9 kg) diatomaceous earth purchased from a swimming pool supply store or donated from a local high school or swim center
☐ 3+ bottles of blue food color, 1 oz. (30 ml), preferably in dropper bottles
☐ 1 bottle of red food color, 1 oz. (30 ml), in a dropper bottle
☐ 4 flexible plastic overlays or overhead transparencies, 8” x 10” (20 cm x 25 cm), for making dams (used or scratched transparencies work well)
☐ 32+ 3” x 5” (8 cm x 13 cm) index cards for river feature flags
☐ 10–16 clear plastic straws
☐ 35 cotton swabs

Copies of the following:

☐ 32 copies of the Geological Features handout (master on pages 32–33)
☐ 32 copies of the Two River Valleys handout (master on page 65)
☐ 8 copies of Past Events data sheet (master on page 46)
☐ 32 copies of Timeline data sheet (master on page 45)

Optional:

☐ 1 bottle of yellow food color, 1 oz. (30 ml), in a dropper bottle
☐ 5–8 large garbage bags for covering the surfaces of the stacked tubs
☐ 5–8 envelopes or plastic bags to hold river feature flags

General Supplies

☐ plenty of water
☐ paper towels
☐ 1 watch/clock with second hand, clock preferred for Session 3
☐ overhead projector, transparencies, and markers (if no chalkboard is available)
☐ access to cooler or refrigerator (to store ice cubes for Session 3)
☐ a world map
☐ 5–8 pairs of scissors
☐ 160+ pieces of white paper
☐ 32 pencils

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- sturdy spoons
- geology textbooks
- diatomaceous earth
- blue food color
- yellow or red food color
- transparencies
- envelopes
- clear plastic straws
- cotton swabs
- index cards
- scissors
- garbage bags
- white paper
- Two River Valleys
- Geological Features, Timeline, and Past Events
- overhead projector, transparencies, and markers or chalkboard
- clock
- water
- paper towels
- pencils