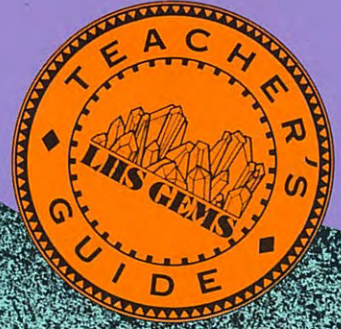


RIVER

Cutters



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 dripper systems. See pages 13–15 and choose **either** the Rain Cloud dripper system **or** the Siphon dripper system. Collect the materials you will need for one dripper per team:

Either For each Rain Cloud dripper 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 dripper 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 dripper system:

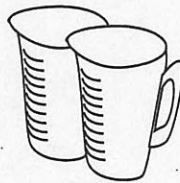
- 1 wide-mouthed, tapered, 9 oz. soft plastic cup (270 ml) with notch cut on edge
- 1 plastic stir stick with two small holes (commonly used as coffee stirrers)
- 1 piece of wire, 4" (10 cm) long (20 gauge or .035" in diam.), small enough to go through one hole in the stir stick
- 1 small squeeze bottle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



dust mask



measuring cup



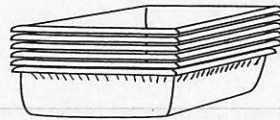
pitchers



bucket



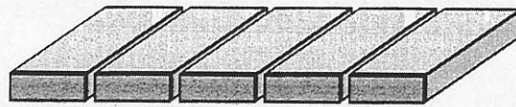
spray bottle



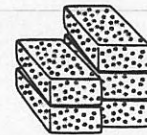
large plastic tubs



aluminum pie pans



wood blocks



sponges

Materials needed for *each* Rain Cloud dripper system



caulk



cigarette lighter



aquarium control valve



"T" valve (optional)



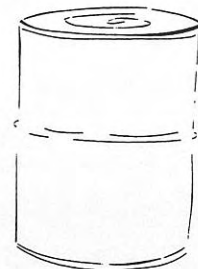
Phillips screwdriver



aquarium air hose



plastic water bottle

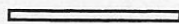


sturdy container

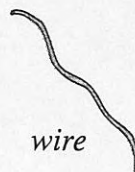
Materials needed for *each* Siphon dripper system



plastic cup with notch



stir stick



wire



liquid detergent

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)

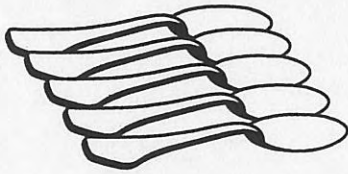
Optional:

- 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

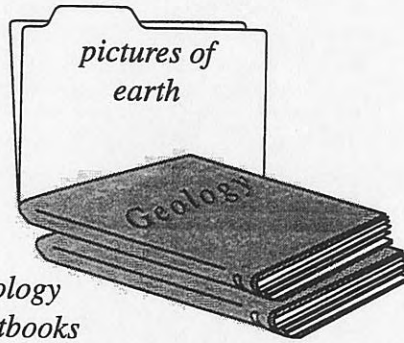
General Supplies

- 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



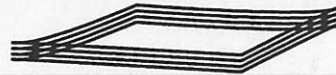
diatomaceous earth



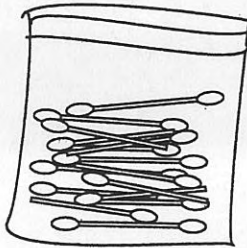
blue food color



yellow or red food color



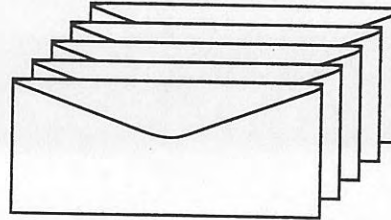
transparencies



cotton swabs



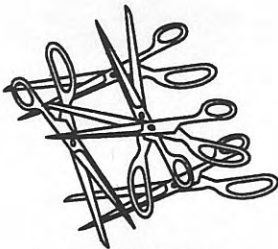
index cards



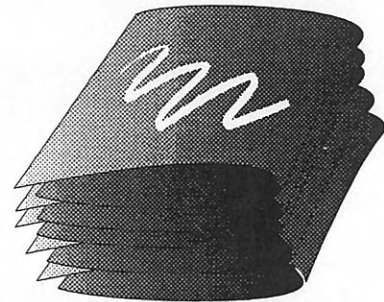
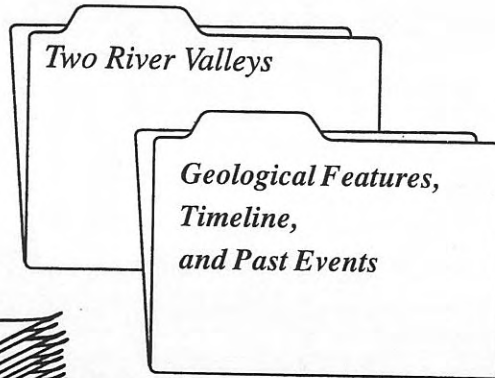
envelopes



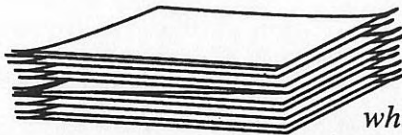
clear plastic straws



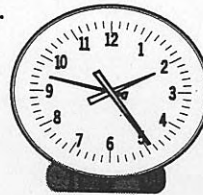
scissors



garbage bags



white paper



clock

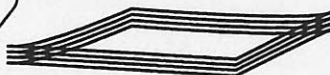
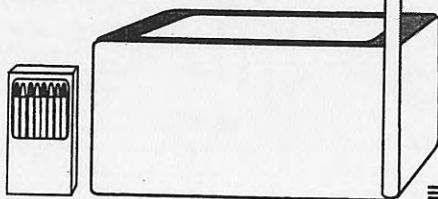


water



paper towels

overhead projector, transparencies, and markers or chalkboard



pencils