

# Materials

## Module 1: The Natural Water Cycle

### 💧 Activity 1: Where in the World is Water?

#### **Materials Needed for each Group**

- 12-inch inflatable globe outlining continents and oceans (Can be obtained at most toy stores; also available online.)
- Flip chart paper
- Writing implements (e.g., markers)
- Calculator

### 💧 Activity 2: H<sub>2</sub>O by the Numbers

#### **Materials Needed for each Group**

- One five-gallon container (e.g., aquarium; bucket; bottle)
- Writing instrument, preferably markers
- One piece of flip chart paper
- Basic calculator
- Measuring cup
- 5 paper cups
- One set of measuring spoons (1 TBSP; 1 TSP; ¾ TSP; ½ TSP; ¼ TSP)

### 💧 Activity 3: Can You Make it Rain?

#### **Materials Needed for Each Group**

##### *\*Materials provided*

- Measuring cup (microwave safe)
- 1 hard plastic or ceramic plate
- One sheet of plastic cling wrap, approximately 12-inches square (30.5 cm square)
- One rubber band
- 3 separate cups with water (1 cup of hot water; one cup of cold water; and one cup of room temperature water)
- Flip chart paper and markers
- \*Water Cycle Handout (per each youth)

### 💧 Activity 4: Where Water Flows: An Introduction to Watersheds

#### **Materials Needed for Each Group**

- Square piece of aluminum foil, approximately 12" x 12" (30.5 cm x 30.5 cm)
- Permanent marker
- Spray bottle with water (**Note:** Groups may share spray bottles)
- One piece of flip chart paper and writing implements

## Module 2: Human Interventions in the Water Cycle

### 💧 Activity: From the Storm Clouds to the Ocean: Chance Encounters of Wandering Water

#### *\*Materials provided*

- 1/2 gallon of water for a group of 10 youth or 1 gallon of water for a group of 20 youth
- 2 clear gallon buckets/containers to hold the resulting waste water
- For each group: 3-5, 12 oz. plastic or paper cups (**Note:** Groups use a new cup each time through the water cycle)
- 7, six-sided dice
- 4 fl oz. of dishwashing detergent
- 1.75 oz. container of chocolate sprinkles
- 1/4 cup salt
- 1 roll of toilet paper
- Small bottle of maple syrup
- 3-4 cups of either cereal or crackers (crushed)
- 4 tablespoons
- 1 teaspoon
- 2 white coffee filters
- 2 funnels
- 1/2 cup of vegetable oil
- 1 cup of paper waste (e.g. shredded paper, shredded wrappers)
- Cup of grass or other plant matter (e.g. cut green grass, leaves, etc.)
- 1/2 cup of soy sauce
- Yellow food dye (0.25 fl oz.)
- Red food dye (0.25 fl oz.)
- Green food dye (0.25 fl oz.)
- Blue food dye (0.25 fl oz.)
- 1 cup of soil
- Flip chart paper and writing implements
- 1 calculator
- \*Learning Station Set-Up Map (Appendix A on page 40)
- \*Learning Station Action Directives (Appendices B-L on pages 41-53)

## Module 3: Water as an Available Resource: The Urban/Rural Interface

### 💧 Activity 1: Watersheds and the Urban/Rural Interface

#### **Materials Needed for Each Group**

- Flip chart paper and writing implements
- One (1) roll of aluminum foil (18-inch width)
- One spray bottle per group
- At least two water-soluble markers per group (watercolor markers work well)

- 💧 Activity 2: Population Growth and the Changing Face of the Urban/Rural Interface: 2010 → 2025  
 (\*Materials provided in the curriculum)
  - Flip chart paper and writing implements for each group
  - Two clear 1-2 gallon “source” containers. Both filled with the same volume of water
  - Four clear containers to be used as holding “tanks” (at least ½ gallon each)
  - 1 set of measuring cups (should contain 1 cup, 3/4 cup, 1/2 cup, 1/4 cup) for each group (may be shared)
  - One calculator for each group (optional; may be shared)
  - \*Room set-up diagram (See Appendix A on page 67)
  - \*Urban and rural water use scenarios for 2010 and 2025 (See Appendices B-E on pages 68-71)

## Module 4: Mapping Natural Watersheds

- 💧 Activity 1: Water Flows Downhill: An Introduction to Topographical Maps
  - Materials Needed for each Pair/Small Group**
  - \*Materials provided*
    - \*Topographic map templates A and B – Appendix A
    - Flip chart paper
    - Writing implements
- 💧 Activity 2: Mapping Locations of Point and Nonpoint Source Pollutants in Watersheds: Predicting Impacts; Identifying Solutions
  - \*Materials provided*
    - \*1 map of the United States with UTM zones (pre-activity) (Appendix B)
    - \*1 map that includes UTM zone 15N and (pre-activity) (Appendix B)
    - \*4 topographical maps from different regions of the U.S. (Appendix C)
    - \*List of locations (points) for each topographical map (Appendix D)
    - \*Summary instructions for using a hand-held GPS device (Appendix E)
    - Flip chart paper
    - Writing implements

## Module 5: Service Learning Projects in your Watershed

- 💧 Step 1: Identifying Needs in Your Community
  - Materials Needed for Each Group**
  - Ideally, each groups needs Internet access and other resources, such as local newspapers, a phone book, and book sources
  - Flip chart paper
  - Writing instrument (e.g., markers)
  - One copy of Appendix A

💧 Step 2: Preparing the Project

**Materials Needed for Each Group**

- Flip chart paper
- Writing instrument (e.g., markers)

💧 Step 3: Experiencing Service

- Materials required by planned service projects developed during Step 2
- Camera or camcorder - in order to record the youth experiencing their service project

💧 Step 4: Evaluating the Project

**Materials Needed for Each Group**

- Flip chart paper
- Writing instrument (e.g., pen or pencil)
- 1 copy of Appendix B per individual

💧 Step 5: Sharing the Project

**Materials Needed for Each Group**

- Flip chart paper or poster board
- Computer access, if possible
- Other technology needs (will vary by group)
- Photographs or video footage of their project

## Module 6:

### Teens Teaching Younger Youth

💧 Activity 1: Where is Water?

**Materials Needed for Each Group**

- Appendix A: "Water and the World" distribution cut-outs
- Scissors
- Paper bag or other container to hold the cutouts
- Writing implements (e.g., markers)
- Calculator
- One piece of flip chart paper

💧 Activity 2: How Much Water Do We Use?

**Materials Needed for Each Group**

- Writing implements (e.g., markers)
- One sheet of flip chart paper
- One copy of each Appendix A and Appendix C per individual
- Optional:** Copies of Appendix B
- Optional:** Calculator to be used with Appendix B

💧 Activity 3: What Goes Down Your Drain?

**Materials Needed for Each Group**

- Pen/Pencil
- Paper
- One copy of Appendix A, "Product Chart" for each participant.
- Several copies of Appendix B, "Product Labels"