

# **BASIC WATER CHEMISTRY MODULE CONTENTS**

## **EQUIPMENT AND MATERIALS**

- ❑ 2 Low Cost Water Monitoring Kits (white cylinders) & directions
  - ❑ Bag of Potting Soil (in sealable bag)
  
  - ❑ Mini-Box 3 (extra Glassware)
    - \_\_ 4 plastic measuring tubes (not test tubes) \_\_ 4 square mixing bottles \_\_ 8 test tubes with caps
    - \_\_ 4 Dissolved Oxygen Bottles \_\_ 3 eye droppers (1 mL) \_\_ Nitrates Cadmium Waste Container
  
  - ❑ 10 plastic bottles of various liquids (STOCK containers)
    - \_\_ lemon juice \_\_ lemonade \_\_ bleach \_\_ ammonia \_\_ cider vinegar \_\_ clear vinegar
    - \_\_ distilled water \_\_ 2 spring water \_\_ Seltzer water
  
  - ❑ Box of baking soda
  - ❑ Bag of Roloids and other acid relief products
  - ❑ Lemonade drink mix packets
  - ❑ Instant coffee packets
  - ❑ Sheet of labels with various names of liquids printed on them
  
  - ❑ Stack of small, clear plastic cups (approx. 35)
  - ❑ 2 pH paper rolls (pH 1-12 and pH 6-9)
  - ❑ 2 funnels (one blue, large and one clear, small)
  - ❑ Clear Wrap (Plastic Wrap)
  
  - ❑ Sulfate Test Kit (Hach) – blue case
  - ❑ Ferrous Iron Test Kit (Hach) – blue case
  - ❑ Hardness Test Kit (Hach) – blue case
  - ❑ pH (Wide Range) Test Kit (Hach) – blue case
  - ❑ 6 square plastic containers (1 pint size)
  - ❑ 9 blue plastic lids that fit the containers (holes in center)
  - ❑ 1 plastic measuring cup with measuring spoons inside
  
  - ❑ Secchi Disk and Calibrated Rope and Wrap
  - ❑ Bailer (with rope wrap)
  - ❑ 2 Distilled Water squeeze Bottles (2 total for module)
  - ❑ 4 empty water sampling bottles (250mL)
  - ❑ Interactive pH Scale Poster (rolled up)
  - ❑ Bag with Interactive pH Scale Poster materials
  - ❑ 40 large, clear plastic cups (2 stacks)
  - ❑ 3 square plastic containers (2 pint size)
  
  - ❑ 3 *Handbook of Water Quality Analysis for W. PA Waterways*
  - ❑ 1 *Field Manual for Water Quality Monitoring* (by Mitchell and Stapp)
  - ❑ 1 *The Monitor's Handbook* (by LaMotte)
  - ❑ Water Chemistry Bingo – Large Envelope with Game Pieces / Boards inside
  
  - ❑ Turbidity Tube (large plastic tube)
  - ❑ ACTIVITY ENVELOPES:
    - ❑ *Temperature: Air vs. Water vs. More Water*
    - ❑ *pH People*
    - ❑ *pH Test #4 Acidic Snow Melt*
    - ❑ *pH Test #5 pH Affects Living Things*
    - ❑ *Parts per Million*
    - ❑ *Nutrients: Nutrition or Nuisance*
    - ❑ *Nitrates in Our Water*
    - ❑ *Turbid Vision; Measuring Turbidity with Filters*
    - ❑ *A Soily N & P*
    - ❑ *Plants, Fish & pH*
    - ❑ *Dirty Water*
- (for contents of Activity Envelopes – see each envelope)