



## South Carolina Academic/Career Development Integration Activity (DRAFT)

**Title**                **The Water Connection (S-4)**  
**Subject**           **Science**

**Grade Level(s)**    **7**

**SC Content Standard** – The Biotic and Abiotic Environment – Grade 7. Standard 7-4. The student will demonstrate an understanding of how organisms interact with and respond to the biotic and abiotic components of their environment. (Earth Science, Life Science)

7-4.5. Summarize how the location and movement of water on the Earth's surface through groundwater zones and surface-water drainage basins, called watersheds, are important to ecosystems and to human activities.

### **National Career Development Guidelines Goal/Indicator**

Career Management GOAL CM5. Integrate changing employment trends, societal needs, and economic conditions into your career plans.

Indicator CM5.K1. Identify societal needs that can affect career plans.

Indicator CM5.K2. Identify economic conditions that can affect career plans.

### **Career Development Objectives**

1. Students will understand some of the ways that industry, farming, businesses, households, and communities affect the quality of water. They will understand that those effects, in turn, impact on the economy and on occupations.
2. Students will expand awareness of occupations that are connected to the water supply and/or water quality.

### **Assessment**

1. Students will create a display that shows how one aspect of society (e.g., farms, or households, or industry) impacts on the quality of water. Students are to identify potential problems and possible solutions.
2. Students will identify at least five occupations that are connected to the water supply and/or water quality.
3. Students will complete the *Think About It! Reflection* worksheet.

### **Preparation**

- Prior Learning—Instruction on water systems and water sheds
- Handouts/Worksheets—*Think About It! Reflection* worksheet, *Water Quality Research Project Outline* handout
- Resources/Materials—textbook, resource books, newspapers, magazines, access to the Internet and the library, Optional: SCOIS or some other career information system
- Time Required—2-3 class periods and homework

## **Procedures**

### **Part One**

- Through this activity, students will explore how industry, farming, businesses, households, and communities affect the quality of water. They will understand that those effects, in turn, impact on the economy and on occupations.
- Review with students the major sources of water (e.g., oceans, glaciers, rivers, groundwater, and the atmosphere).
- Have students brainstorm the different uses of water (e.g., drinking, washing, irrigation, leisure, and industrial processes).
- Engage students in a discussion of how industry, farming, businesses, households, and communities affect the quality of the major sources of water. How have a growing population and lifestyle demands affected the quality of water?
- Have students review newspapers, magazines, and the Internet for articles dealing with threats to our water supply and quality.
- Tell students they are to create a display that shows how one aspect of society (e.g., farms, or households, or industry) impacts on the quality of water. Students are to identify potential problems and possible solutions. Have students include the names of at least five occupations that are connected to the water supply and/or water quality. Encourage them to be creative with their displays.
- Have students give a brief oral presentation of their findings to the class.
- Optional: Showcase the student displays in the school's entrance lobby or hallways.

### **Part Two—Career Development Connections**

- Have students brainstorm the names of occupations that involve working with water in some way. You might divide the class into teams and hold a “competition” to see what team can list the most occupations.
- Have students think about the future needs of society for good water quality and the potential problems they discovered through their project research. What kinds of new occupations might be created as a result of the “water needs vs. water problems” issue? What might be the effects on existing occupations?
- Optional: Invite a guest speaker who works in the field of water quality control or environmental protection to visit your class.
- Have students complete the *Think About It! Reflection* worksheet.

## **Crosswalks**

### **SC Career Guidance Standard/Competency**

Learning to Work Standard 5. Students will understand how community awareness relates to work.

Competency 5.2. Relate how economic development influences employment.

### **Key Employability Skills**

Thinking Skills—Critical thinking

Information Management—Acquires, interprets, and communicates information

\* Adapted from *Career Development Tool Kit Grades 6-8*, Linda Kobylarz & Associates, 2000. Used with permission.

# *Water Quality Research Project Outline*

Name \_\_\_\_\_

Date \_\_\_\_\_

Directions: Use this outline to create a display that shows how one aspect of society (e.g., farms, or households, or industry) impacts on the quality of water. Include information on each of the topics below in your display. Use at least three resources to research your information. Be creative in your display!

1. Research Topic (check one)

- \_\_\_\_\_ Farms and water quality
- \_\_\_\_\_ Households and water quality
- \_\_\_\_\_ Industry and water quality

2. Impact on the quality of water—potential problems.

List the problems. In your display, use statistics, pictures, drawings, newspaper articles, etc. to show potential impact.

3. Impact on the quality of water—solutions to potential problems.

List the solutions. In your display, use statistics, quotes, research findings, etc. to support the possible solutions.

4. Cite your research resources below. Use at least three resources.

5. List at least five occupations that are connected to the water supply and/or water quality in some way.