

WATER CAREERS

9-12

OBJECTIVES

The student will do the following:

1. Describe the great variety in water-related careers.
2. Compare specific careers regarding education, training, salary, and job description.

SUBJECTS:

Science, Language Arts, Art, Social Studies, Math

TIME:

2 class periods
out -of-class time for research

MATERIALS:

list of careers (teacher sheet)
resource materials and people
checklist (student sheet)

BACKGROUND INFORMATION

Water-related careers abound in science, industry, agriculture, recreation, federal, state, and/or local government, research, transportation, engineering, and the military. With an increasing awareness of environmental concerns, these career options can be expected to multiply. Some require no more than a high school diploma and on-the-job training; some require a Ph.D. in a very specialized area. Too often students have no clear career goals. Many of these careers will be unfamiliar to the students; perhaps some will find their niche!

Terms

career: a chosen pursuit or life's work; job or profession one is trained to do

ADVANCE PREPARATION

- A. Put each career from Student Sheet on Water-Related Careers on slips of paper (one for each student). Cut them apart. Put them in a container so that students can draw them out.
- B. Have students contact any people in the area who are in these careers. If they are willing to be interviewed by the students, list their names and telephone numbers where they can be reached.

PROCEDURE

- I. Setting the stage
 - A. Ask students what their career goals are.
 1. Are any water-related?
 2. What does "water-related" mean?
 3. Ask for examples.
 - B. Tell students you have an expanded list and they are going to investigate these careers by randomly picking one. Students may exchange their careers as long as each student researches a different one.
- II. Activity
 - A. Research one or more water-related careers including all of the information on checklist (education or technical or on-the-job training, where education/training is available and what duration, degree, certification, or bonding is required, possible employers and geographical location of jobs, salary, job description).
 - B. Locate and interview a person following this career including all the information on checklist (how long in profession, where trained, advancement or travel, favorite and least favorite aspects of job).
 - C. Report to class (oral presentation). Turn in completed checklists.
- III. Follow-up
 - A. Invite persons who have the most interesting, in demand, or locally available jobs to speak to class.
 - B. Send for information to some of the colleges, training institutes, or professional Organizations.
 - C. Make a bulletin board with information and pictures of water-related careers.
 - D. Make a file of all reports on the various careers so students can have access for future reference.

IV. Extensions

Have students impersonate a professional and demonstrate some of the activities involved in the job.

RESOURCES

Arms, Karen, Environmental Science, Holt, Rinehart, and Winston, Inc., Austin, TX, 1996.

Chiras, Daniel D., Environmental Science, High School Edition, Addison-Wesley, Menlo Park, CA, 1989.

Current, Volume 12, Number 4, 1994, pp. 31-32.

Earth: The Water Planet, NSTA.

Grades 3-5 Water Sourcebook, pp. 1-88.

Nebel, Bernard J. and Richard T. Wright, Environmental Science: The Way The World Works, 4th Edition, Prentice-Hall, Englewood Cliffs, NJ, 1993.

WATER-RELATED CAREERS

Agricultural Engineer	Marine Salvage Engineer
Aquarium Director	Marine Geophysicist
Archaeologist	Marine Geologist
Aquatic Entomologist	Marine Conservationist
Biologist	Marine Explorer
Biosolids Specialist	Marine Technician
Boat Builder	Merchant Marine
Boater	Meteorologist
Botanist	Motor Sailboater
Bottled Water Company Employee	Navy
Builder	Oceanographer
Chemist	Olympic/Professional Swimmer
Chemical Engineer	Photographer
Civil Engineer	Physical Scientist
Coast Guard	Plant Physiologist
College/University Professor	Plumber
Commercial Fisherman	Potter
Computer Scientist	Professional Tournament Fisherman
Desalination Plant Director	Professional Skier (Water or Snow)
Diver	Rafting Guide
Docks Master	Ranger
Ecologist	Recreation Instructor
Environmental Attorney	Science Teacher
Environmental Chemist	Scuba Instructor
Environmental Engineer	Scuba Diver
Environmental Scientist	Ship Builder
Farmer	Seaman
Fire Fighter	Snow Hydrologist
Fisheries Biologist	Soil Scientist
Forester	Structural Engineer
Geographer	Submariner
Geologist	Sunken Treasure Hunter
Groundwater Contractor	Tugboat Biologist
Health Dept./Environmental Inspector	Underwater Photographer
Hydraulic Engineer	Wastewater Treatment Engineer
Hydrologist	Water Meter Reader
Ice Skater	Water Level Controller
Landscape Artist	Water Resources Engineer
Landscape Architect	Water Quality Control Officer
Limnologist	Well Driller
Malacologist	Yachtsman
Marina Owner/Operator or Employee	Zoologist

Checklist

1. Job title:
2. Education required:
3. Where is this type of education available and how long does it take?
4. What kind of a degree, certification, or bonding is required?
5. Who employs this type of worker?
6. What is the most common geographical location for this type of job?
7. What is the average annual salary range?
8. What are the job prospects/stability of employment?
9. Describe the work that is done on this job.
10. If there is anything else you learned in your research of this job, include it below.
11. Would you be interested in this type of job? Why or why not?