



Great Lakes, Great Careers

Activity: Students review a selection of career profiles and play a lively classroom game to find out more about marine and aquatic science professionals.

Grade Level: 4-8

Subjects: Science, social studies

Setting: Classroom

Duration: 1 hour

Key terms: Career, Profile

OBJECTIVES

Following this lesson, students will be able to:

- Name at least 5 careers in marine and aquatic science, including both the oceans and Great Lakes.
- Identify several recent contributions people have made in marine and aquatic science fields
- Describe a marine or Great Lakes science career that interests them.

SUMMARY

A variety of people make their living studying the oceans and Great Lakes or educating others about these valuable natural resources. Yet for many students in the U.S., these careers may seem relatively remote or unattainable—until they learn about the actual people who do them. This activity will help students become familiar with possible and exciting careers.

BACKGROUND

“As a child, I became fascinated with the ocean while visiting the New Jersey shore with my family,” says marine ecologist Deborah McArdle. For some young people, that’s all it takes— an early fascination that leads to a lifelong passion. Others, however, may not realize that related careers even exist, much less that they would enjoy the work!

McArdle is one of more than 50 people profiled on web pages created by WHOI and NH Sea Grant programs (see: www.marinecareers.net). The pages provide an excellent introduction to a wide

range of marine career fields and to people working in those fields. The featured men and women tell how they got started in their careers, what they like and dislike, and give advice for young people. Fields covered include marine biology, oceanography, ocean engineering, and related fields such as marine law, education, and economics.

MATERIALS & PREPARATION

- Select approximately 15 career profiles, available online: www.marinecareers.net. It is best to select a wide ranges of careers and a diversity of men and women.
- Make multiple copies, so that each student has a stapled packet of all 15 profiles.
- Create stickers or labels with the name of each person profiled.

Note: Many Great Lakes career profiles are currently available online in a variety of formats.



Example Career Profiles:

1. Extension Educator
(<http://www.miseagrant.umich.edu/about/staff/stewart.html>)
2. Aquatic Ecologist and Artist
(<http://www.miseagrant.umich.edu/pubs/up/oct04/art1.html>)
3. Business Owner
(http://www.msfishcompany.com/our_story.shtml)
4. Marine Policy 1
(<http://www.miseagrant.umich.edu/pubs/up/win02/cimo.html>)
5. Marine Policy 2
(<http://www.miseagrant.umich.edu/pubs/up/spring99/knauss.html>)

PROCEDURE

- 1) Begin by introducing the topic of marine and aquatic science careers. Point out that for each of the prior lessons in project FLOW, people are employed in related fields—as ecologists, wetland biologists, water quality experts, fisheries researchers, natural resource educators, science writers, and a host of others. Ask students if they know of family members or friends who make a living by studying or educating others about the oceans and Great Lakes.
- 2) Distribute the packet of career profiles to each student. Explain that each of the profiles describes a real person whose career involves the oceans or Great Lakes. Explain that they'll be playing a game using these profiles.
- 3) Next, place a sticker on the back of each student, identifying a person in one of the profiles. Students are not allowed to see their own stickers. The goal of the game is for each student to figure out whose name is on their backs, by asking other students questions.
- 4) Start the game. Allow the students to mingle, while carrying the profiles. When two students meet, they should first look at the name on the other person's back and consult the appropriate profile for information. They then ask each other a yes-no question about their own identity (For example: Am I a fisheries biologist? Am I female?). They are only allowed

to ask one question per pairing and then must move on to mingle with others.

- 5) Once they have gathered enough answers to guess their own identity (the name on their back), they can remove the sticker, sit down, and read about that professional. They then become the “expert” on this person. After everyone is sitting and has had a chance to read about their person, ask each student to “introduce” the person to the class. They can talk about what the profiled professional does in relation to the ocean or Great Lakes, what he or she enjoys most, and what skills or education are needed to do this kind of job, etc.

SOURCE

Adapted from an activity by Anna Switzer and Joyce Daniels for Fisheries Learning on the Web, <http://www.miseagrant.umich.edu/flow>, Michigan Sea Grant

EXTENSION

If students have internet access, have them spend 15 minutes reviewing a variety of the profiles on www.marinecareers.net. Ask students if they had to choose a career involving the oceans or Great Lakes, which one most interests them? Students will write a short essay explaining why they like this career, why they would be good at it, what kind of education they would need, and where—if they could choose anywhere in the world—they would like to work.

GLOSSARY

Career: A chosen profession or occupation.

Profile: A biographical essay presenting the subject's most noteworthy characteristics and achievements.

ADDITIONAL CAREER INFORMATION

Sea Grant Network: See www.marinecareers.net

California COSEE: See www.oceancareers.com

ASSESSMENT/EVALUATION

An assessment chart is included in the following pages to allow teachers to create their own assessment.

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Assessment

This assessment chart was designed for teachers to create their own assessment. The recommended points show the relative difficulty of student performance. In creating assessments, the total point value will depend on the number and type of perform-

Learning Objective	Student Performance	Recommended # Points
Name at least five careers in marine and aquatic science, including both the oceans and the Great Lakes.	Name two or three careers which are specific to the oceans.	1 each
	Name two or three careers which are specific to the Great Lakes region	1 each
Identify several contributions people have made in marine and aquatic science fields	Describe the position of one or more marine/aquatic scientists and explain the benefits to the world (physical, animal, or human) of that position.	3 each
Describe a marine or Great Lakes science career that interests them.	Describe the career that most interests you of the ones that were explored in class or on the web.	2 pts.
	Explain what aspects of that career seem interesting.	2 pts.
	Explain how science (which aspect/discipline) plays a role in that career.	2 pts.

Great Lakes, Great Careers Standards and Benchmarks

For PDF summaries of the Elementary and Middle school standards listed here, see:

Elementary: www.miseagrant.umich.edu/flow/pdf/FLOW_Elementary_Standards.pdf

Middle: www.miseagrant.umich.edu/flow/pdf/FLOW_Middle_Standards.pdf

State of Michigan

Science	
Elementary	Middle
II.1.3 II.1.5	II.1.3 II.1.5

Social Studies	
Elementary	Middle
N/A	N/A

National

NSES	
Elementary	Middle
E1.3 E1.4 E1.5 F5.1 G1.2 G1.4	E1.2 E1.3 F5.2 F5.4 F5.5 G1.1 G1.2
NAAEE	
Elementary	Middle
N/A	N/A

AAAS	
Elementary	Middle
1C.1 1C.3	1C.1 1C.3
NCSS	
Elementary	Middle
VIII.b	N/A

Notes:

NSES = National Science Education Standards

AAAS = American Association for the Advancement of Science (Benchmarks)

NAAEE = North American Association of Environmental Education (Guidelines for Excellence)

NCSS = National Council for the Social Studies (Standards)