



Lesson 4:

Dynamic Careers to Clean Up the Environment

Grade Level: 9-12

Time: 55 Minutes

Vocabulary:

Scientist, engineer.

**Great Lakes
Literacy Principles:**

Principle 7

Concept F

Summary:

Students learn about different careers in the environment as well as the teamwork aspect of environmental cleanups. This lesson includes the option to have a project scientist or engineer visit as a guest speaker to discuss careers and their roles in the cleanup.

Objectives:

- Name important classes to take in high school and college in order to pursue an environmental career.
- Describe the variety of careers in environmental science and engineering.
- Describe the teamwork aspect of environmental cleanups.

Materials:

Career PowerPoint. An editable PowerPoint (.ppt) file can be found on www.greatlakesmud.org/education.html.

Procedure:

Prior to Lesson Plan 4, have students write one-minute speeches about the environmental cleanup. Choose five finalists to deliver their speeches to the class. Deliver the PowerPoint on environmental careers, and engage students in a Q&A session about environmental careers. Contact Illinois-Indiana Sea Grant if interested in having a guest speaker, such as a project scientist or engineer, visit the class. The guest speaker can provide personal experiences on careers in environmental science and engineering. An example plan of work for the guest speaker is provided.



Example Plan of Work for Guest Speaker

Purpose and Background:

The objective of this guest speaker visit is to teach students about careers in environmental science and engineering. They will benefit from listening to "real-world scientists" speak about their background and different career options. Twenty-five minutes of time is recommended for the guest speaker, but that can be modified based on the teacher's need.

Agenda:

1. Speeches
 - a) Top five speech finalists chosen by the teacher give their speeches to the guest.
 - b) The teacher works with the guest speaker to determine the best speech.
 - c) The teacher may be able to have his or her student speak at a press event for the environmental clean up. Contact Illinois-Indiana Sea Grant for more information.
2. Career education PowerPoint
 - a) Types of jobs in environmental science with a focus on environmental research scientists (ERS) and environmental engineers (EE).
 - b) Interests of ERS/EE
 - c) Where do they work? (field, lab, etc.)
 - d) What classes should I take in high school?
 - e) College majors
 - f) Summers matter!/internships
3. Introduce guest speakers
 - a) Name, role, why you came to speak to the class
4. Life of a project scientist or engineer
 - a) Role of a scientist or engineer in an environmental cleanup
 - i) Where did you go to school? What jobs did you have before this one?
 - ii) A lot of responsibility comes with this role (problem solving, budgeting, etc.).
 - iii) Is this job what you thought it was going to be?
 - iv) What do you like about this job?
 - v.) Describe the many ways you are a leader.
 - vi.) Walk us through a typical day/week.
 - vii.) How does your job differ from people you work closely with?
 - b) Questions
5. Discussion about water sampling data
 - a) What did you learn about the water?
 - b) Did results vary between locations?
 - c) Are there any parameters we should be concerned about?

Timeframe: 55 minutes