



**MARINE BIOTECHNOLOGY & BIOINFORMATICS FOR TEACHERS  
MOSS LANDING MARINE LABS NSF ITEST GRANT  
WEBQUEST<sup>1</sup>  
HOW CAN WE FIND A SCIENCE CAREER?**

## **HOW CAN WE FIND A SCIENCE CAREER?**

A WebQuest for 7-10th Grade (Biology, Life Science, Career Counseling, Mathematics)

### **Designed by**

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### **Introduction**

This lesson was developed as part of the Marine Biotechnology and Bioinformatics For Teachers grant sponsored by Moss Landing Marine Labs and funded by the National Science Foundation ITEST Office.

It accesses websites which give a ton of factual information about science and mathematics careers.

### **Learners**

Students need beginning competency in computer operations, including: web searches, word processing, and typing on a keyboard.

### **Curriculum Standards**

By participating in this activity, students will acquire competency in finding information to explore STEM careers and wisely make career decisions based on level of education required, activities, outlook, work context and conditions, skills and abilities necessary for the job.

**State Standards:** This project-based multimedia learning activity fulfills the following State of California Science Standards:

#### **Technology Foundation Standards for Students**

##### **1 Basic operations and concepts**

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

##### **2 Social, ethical, and human issues**

- Students understand the ethical, cultural, and societal issues related to

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<sup>1</sup> WebQuest model adapted with permission from Dr. Bernie Dodge - <http://webquest.sdsu.edu> Marine Biotechnology and Bioinformatics for Teachers - Moss Landing Marine Labs NSF ITEST Grant

technology.

- Students practice responsible use of technology systems, information, and software.

Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

**National Standards:** This project-based multimedia learning activity fulfills the following National Science Standards:

**Standard 7:** Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

### Technology Integration.

In this activity, students use and/or learn the following technologies: Computer applications leading to the following thinking and communications skills : Critical thinking, Inquiry Observation, Categorization and Comparison of careers.

### Process

#### STEM CAREERS WEBQUEST

S .....SCIENCE  
T.....TECHNOLOGY  
E.....ENGINEERING  
M.....MATH

1. Go to: <http://www.thefunworks.org/>

2. Click on multimedia icon



3. Take Quiz.

After taking quiz, choose either the math or science option.

4. Choose one career. What is your career choice? \_\_\_\_\_ ( write here)

5. Browse Resources. Choose an interesting resource and explore it.

6. Write down the name of your resource here \_\_\_\_\_

7. Write information on your career below. Be prepared to report to the class on what you found in your resource.

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8. Now got to : <http://science.education.nih.gov/LifeWorks.nsf/feature/indexhtm>

9. Click on Alphabetical List

10. Browse through careers

11. Find the career which interests you. Write it here \_\_\_\_\_ Click on the career.

12. Fill in the following information about your career:

**Activities** \_\_\_\_\_  
\_\_\_\_\_

**Outlook** \_\_\_\_\_

**Median Income** \_\_\_\_\_

**Work Context & Conditions** \_\_\_\_\_

**Minimum Education Requirements** \_\_\_\_\_

**Skills** \_\_\_\_\_

**Abilities** \_\_\_\_\_

## REPORT TO CLASS

### FOLLOW UP ACTIVITY (FOR EVALUATION)

Students choose another two careers and research them in the same manner, critically looking at the advantages and disadvantages of each job. Create a collage showing the social aspects of working in this career and ask students to explain their collage to the class.

### Notes to Teacher:

Students must have an individual computer. The webquest can be completed in one period. This can be an interdisciplinary lesson combined with a Social Studies topic based on careers, or it can be used by the Guidance department as a way to search for and find information on careers.

This is a straightforward webquest and can be easily handled by Grades 7-10.

A teacher must have computer skills and knowledge of navigating the World Wide Web in order to use lesson. With these requirements, it is easy enough for a novice teacher.

### **Resources Needed**

Here's what's needed to implement this lesson.

- A classroom filled with computers.
- A printer

### **Specific Websites Used**

<http://www.thefunworks.org/>

<http://science.education.nih.gov/LifeWorks.nsf/feature/indexhtm>

One or two teachers are needed to implement the lesson, especially circulate throughout the room and help students keep on task. A field trip to a local facility which incorporates one or several of these careers can become an extra learning activity. In addition, guest speakers can make an appearance in your classroom to answer questions about their math or science career.

### **Evaluation**

#### **FOLLOW UP ACTIVITY (FOR EVALUATION)**

Students choose another two careers and research them in the same manner, critically looking at the advantages and disadvantages of each job. Create a collage showing the social aspects of working in this career and ask students to explain their collage to the class. A two page written report should accompany each career.

A rubric for a presentation mark can be found at

[http://iweb.tntech.edu/mcaprio/presentation\\_rubric.htm](http://iweb.tntech.edu/mcaprio/presentation_rubric.htm)

### **Conclusion**

This lesson is essential if we want students to begin thinking, planning, and discussing STEM careers and their importance in the future.

### **Career Connection**

This entire webquest lesson explores STEM careers.

