**Teaching Science as Inquiry (TSI) Lesson Plan**

**Module 1: Physical Aquatic Science**

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Activity: Practices of Scientists

Why did you choose to do this activity? My students, most of them in their last science course of High School, do not see themselves as scientists. I choose this activity to help them identify with the role of scientist

What are your classroom learning goals? Students will increase their awareness of the roles of scientists in society. Students will identify the practices of scientists and apply these practices to their own study of science. Students will connect with the practitioners of science so that they will begin to identify with scientists and view them as real people. Students will consider the career opportunities that science offers.

How does this activity tie into your classroom learning goals? This activity gives students an opportunity to observe science roles. Students will discuss with each other the stereotypes and preconceived ideas about science. Students will explore the opportunities of science as a career

What date do you plan to start this activity? October 15, 2012

*If applicable:* HIDOE standards this lesson will address

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| **Benchmark**[**SC.MS.6.2**](http://165.248.30.40/hcpsv3/imr/report_by_code.jsp?code=SC.MS.6.2) | Describe the relationship between the ocean and human cultural development |
| **Benchmark**[**CTE.9-12.2.2**](http://165.248.30.40/hcpsv3/imr/report_by_code.jsp?code=CTE.9-12.2.2) | Evaluate potential career choices in relation to personal interests, strengths, and values |

**Ocean**

1. Describe how you will connect this activity to the ocean: Students will see that scientists are found in all aspects of study and research, including the marine environment.
2. Select the Ocean Literacy Principle(s) that you anticipate this activity will address. (check all that apply)

□ 1. The Earth has one big ocean with many features.

□ 2. The ocean and life in the ocean shape the features of the Earth.

□ 3. The ocean is a major influence on weather and climate.

□ 4. The ocean makes earth habitable

□ 5. The ocean supports a great diversity of life and ecosystems.

X 6. The ocean and humans are inextricably interconnected

□ 7. The ocean is largely unexplored

**Preparation**

1. How will you prepare your students for this activity? (For example, review of prior knowledge.) As a whole class we will review and summarize prior knowledge and preconceived images through discussion
2. Explain any instructional struggles that you foresee and how you will address these issues. (For example, student misconceptions, classroom discussion, aspects most difficult for students to grasp, etc.) Students may be reluctant to create their drawings and then share them. I will encourage them to use their imagination and stress the point that all drawings will be evaluated on their ideas, not on their drawing capabilities. I will help them with vocabulary in describing the drawings.
3. Select the TSI Mode(s) of Inquiry that you will focus on for this activity. (check all that apply)

x Curiosity

x Description

x Authoritative knowledge

□ Experimentation

□ Product evaluation

□ Technology

□ Replication

□ Induction

□ Deduction

□ Transitive Knowledge

**Questioning and Assessment Strategies**

1. What *questioning strategies* will you use to help your students meet your learning goals? Students will be asked to think about scientist roles they have come into contact with personally and the scientists they have observed on TV and movies.
2. What *assessment strategies* will you use to help your students meet your learning goals and monitor their progress? Students will work as a group to describe in a list the disciplines and demeanors of scientists. Students will invidiually analyze scientific demeanors and how they relate personally

Please provide any additional comments that will help you prepare to teach this activity or help the TSI facilitators understand how you plan to teach this activity. I will begin by making a powerpoint presentation consisting of pictures of scientists. This includes the “traditional” images of scientists and contemporary images of scientists in varied career roles. This will be shown after the students create their own images of scientists.