**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? This activity was required and although late in the quarter, was a good introduction for the foundation of the course/unit. It is always advantageous to see where the students’ views are prior to teaching science as a discipline so the teacher can see where they are coming from. The “image” they see of a scientist was eye opening to some extent for the teacher.

What are your classroom learning goals?

Ultimately, the goal is to cover the 7th grade life science standards, then to develop the students’ interest into becoming life long learners with a curiosity to learn about the world around them using an investigative, problem solving strategy. I would also like to see the student evolve through maturation in working independently so they are self-reliant while able to get along with others who are different from themselves. To accomplish this, the class is taught using differentiation so all students get varied modes of instruction so all can succeed. I use standardized grading so students learn to turn in quality work the first time and learn to revise work that is does not meet their/parents’ standard.

How does this activity tie into your classroom learning goals?

Students use their right brain to draw their image of a scientist and share their input/knowledge on what scientists do in their job and their characteristics. Students work in groups so they can contribute together so they succeed in the activity in case they are unsure of the answer. This activity used tapped on their background of shows they watch about problem or investigative shows and encouraged them to share science topics.

What date do you plan to start this activity? Sept. 14, 2012, Sept. 17, 2012

*If applicable:* HIDOE standards this lesson will address

**Ocean**

1. Describe how you will connect this activity to the ocean:

This lesson lays the foundation for students to understand how scientists think as well as describe who scientists are. It gets students to share what background they have on where scientists work and hopefully, lead to ocean related careers as a beginning to this unit.

1. 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.

□ 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.)

Tell students ahead of time that this is a brainstorming activity with no one correct answer. Everyone has something to share based on their background and that participation is encouraged and required. Also, one extra point is given to the group with the most practices and demeanors listed.

1. 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.)

Vocabulary of the term “practices” and “demeanors” seemed to be the most challenging struggle for teaching this lesson. I defined “practices” as “what scientists do” in their job and “demeanors” as “characteristics” or “values” of scientists. That adjustment helped students to formulate lists of words that were needed for the lesson. At the end of the lesson, the drawings were quickly shared with the class which allowed students to enjoy the activity more as students got to see what others had drawn and viewed as how they see scientists.

1. Select the TSI Mode(s) of Inquiry that you will focus on for this activity. (check all that apply)

□ Curiosity

□ Description

□ 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?

Answering a question with a question so students think about their own question. Ask further probing questions of scientists in their environment, community, or surroundings who use the skills used in “investigating.”

1. What *assessment strategies* will you use to help your students meet your learning goals and monitor their progress?

More formative assessment like exit passes, buddy checks, or hand/fist raises would be used.

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.

None