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

**Module 3: Biological Aquatic Science**

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Activity: Modes of Inquiry – Scenario, mystery boxes

1. Why did you choose to do this activity?

The implementation time for the first lesson was short (the due date for lesson 1 and the follow-up session came up quick) and this was a short and simple activity to do in the time allotted. It didn’t require too much prep and clean up also.

2. What are your classroom learning goals?

To get the students to understand and recognize what the modes of inquiry and that the students engage in them regularly and without realizing it, they practice them all the time.

3. How does this activity tie into your classroom learning goals?

It will allow them to understand and recognize what the modes of inquiry are.

4. What date do you plan to start this activity?

2/20/13

*5. If applicable:* HIDOE standards this lesson will address

None

**Ocean**

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

None.

7. 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**

8. How will you prepare your students for this activity? (For example, review of prior knowledge.)

Preview and review of modes, what they are, and what they mean.

9. 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.)

None at the moment.

10. What ***TSI inquiry*** *questioning strategies* will you use to help your students meet your learning goals?

I will try to guide them by asking leading questions which will allow them to begin engaging in the different modes without having to deliberately tell them to, for example, “Use your curiosity to begin to wonder about what is in each box.” The questions will be more likely to covertly allow them to become curious without that deliberate statement.

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| Use the following table to plan your lesson using TSI.  For each phase:   * **Teacher:** Describe what you will be doing * **Student:** Describe what your students will be doing * **Assess:** Describe how you will assess your students in this phase so you can monitor their progress through the activity |

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| **INTERPRETATION** | | **INITIATION** | |
| Teacher | Guiding with questions | Teacher | Present mystery boxes |
| Student | Use the observations to predict what the objects in the mystery box are. | Student | Making observations about mystery boxes. |
| Assess | Predictions of mystery box items | Assess | Predict what will be in the boxes using evidence to back up the predictions |
| **INSTRUCTION** | | | |
| Teacher | Review and preview of the modes of inquiry | | |
| Student | Listening and trying to actively understand what each of the modes are. | | |
| Assess | Determining which modes they were using during the activity. | | |
| **INVESTIGATION** | | **INVENTION** | |
| Teacher | Monitoring | Teacher | Guiding with questions |
| Student | Deducing what the items are based on the method invented. | Student | Trying to figure out a way to figure out what is in each box. |
| Assess | Predictions on what the items are. | Assess | Use the method to make predictions |

11. Briefly describe how you will guide your students through the TSI Phases of Inquiry. (You are the research director of your classroom, and thus guide or facilitate the learning in your classroom, even if an activity is very student-directed).

It will begin by initiating the students by just showing them the mystery boxes. No questions will be asked, just the boxes lain out in front of the class. I will let the students come up with the investigation question, then they will be inventing the way they will answer the question. Next I’ll instruct them on the modes of inquiry and how each is used. Lastly, they will interpret what is in the boxes and make predictions based on what they can come up with in observations.

12. What *overarching* TSI mode(s) will you focus on for this activity? Why?

Modes: Curiosity, Description, Authoritative knowledge, Experimentation, Product evaluation, Technology, Replication, Induction, Deduction, Transitive knowledge

Curiosity, deduction, induction, description.

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.