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

**Module 3: Biological Aquatic Science**

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Activity: Modeling Evolution

1. Why did you choose to do this activity?

 I love evolution and since it is a chemistry class I thought it would be the activity that would result in the least interruption of the chemistry curriculum.

2. What are your classroom learning goals?

 To get back to the chemistry curriculum as quickly as possible.

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

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

 3/14/2013

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

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| **Benchmark** [**SC.BS.5.1**](http://165.248.30.40/hcpsv3/imr/report_by_code.jsp?code=SC.BS.5.1) | Explain the theory of evolution and describe evidence that supports this theory |

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|  | Biological Evolution |
| **Benchmark** [**SC.BS.5.2**](http://165.248.30.40/hcpsv3/imr/report_by_code.jsp?code=SC.BS.5.2) | Explain the theory of natural selection |

These are biology standards.

**Ocean**

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

Not at all.

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

X 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.)

I explained why I chose this activity from the list from TSI.

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.)

I don't anticipate any problems.

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

Clarifying, Extending, Focusing.

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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 | Read answers to activity questions. Interpret graphs. | Teacher | Explain how antibiotic resistance develops. |
| Student | Answer activity questions and draw graph. | Student | Listen to short introduction and read instructions. |
| Assess  | Read answers to activity questions. Interpret graphs. | Assess  | Monitor class progress. |
| **INSTRUCTION** |
| Teacher | Hand out the activity instructions.  |
| Student | Read the instructions. |
| Assess  | Are they following instructions? |
| **INVESTIGATION** | **INVENTION** |
| Teacher | Monitor class progress. | Teacher | None. |
| Student | Do the lab. | Student | None. |
| Assess | Graphs. | Assess | None. |

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).

I will give a short introduction to the topic of antibiotic resistance. Then handout the activity instructions and monitor class progress.

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

Experimentation.

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.