C

Teaching Science as Inquiry (TSI) Lesson Plan
Module 2: Chemical Aquatic Science

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Activity: Phases and Modes of Scientific Practices - Target 8

1. Why did you choose to do this activity? It is a requirement for Module 2. It teaches the students a different way to track their progression of work. Students →
2. What are your classroom learning goals? The students will be introduced to the vocabulary of Phases and Modes and complete a Phase diagram during the process on large butcher paper in teams. →
3. How does this activity tie into your classroom learning goals? I have created a new goal to accomodate this TSI activity. It will help them know how to use the new Scientific Method.
4. What date do you plan to start this activity? (5th week)
5. *If applicable:* HIDOE standards this lesson will address N/A (private school)

Ocean

6. Describe how you will connect this activity to the ocean: It could be continued in anyway - depending on their use of Modes / Phases for an experiment. I will let them reconstruct any activity or lab →
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

→ will become more aware of the "Why, What, How, "What if" steps and which Modes are in each Phase. They will create a mural using their diagrams.

Result =
to gain their interest. Each team presented it back to the class. We used hand held white boards and then transfered it to paper and put it around the room for each class to see.

(2)

Preparation

8. How will you prepare your students for this activity? (For example, review of prior knowledge.) We will follow the TSI lesson step-by-step. Each team gets a set of cards like Jeopard and we assign points for categories as they define their answers.
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 am very new at using these methods. So I turned it into a game with a timer and I will present it to them as if it is for a reward of a longer recess when done

Questioning and Assessment Strategies

10. What *questioning strategies* will you use to help your students meet your learning goals? Well introduce metacognition and then follow the question prompts. I will let them try it with a partner, and have a variety of question styles. Everyone will play the game.
11. What *assessment strategies* will you use to help your students meet your learning goals and monitor their progress? We will use the table and phase chart. We will learn to move on the multi directional map while conducting a lab experiment. Once you have explained it you can count your tally marks and put the charts on the wall in the science lab. :)

Use the following table to plan your lesson using TSI.

For each phase:

- **Mode(s):** List the Mode(s) of Inquiry you will incorporate
- **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

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

12. Briefly describe how you will direct your students through the Phases of Inquiry.

I am going to follow the guide in the Nature of Science unit. It will probably begin in Instruction, Initiation, Investigation, interpretation and move around.

13. What will be the *overarching* mode(s) of this activity? Why?

Probably Curiosity and description. Because the others wouldn't work very well.

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.