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Teaching Science as Inquiry (TSI) Lesson Plan
Module 1: Physical Aquatic Science

Name: Karyn Herrmann

Activity: Soda & Scientific Reasoning

Why did you choose to do this activity? I wanted to incorporate the techniques of the workshop so I could learn the material myself before I go on.

What are your classroom learning goals?
Students will conduct a lab with a partner. Follow the directions, collect data record findings, use a Journal.

How does this activity tie into your classroom learning goals?
This will be an interesting way to approach our first lab activity. It aligns with goals for buoyancy & density

What date do you plan to start this activity? September 18, 2012

If applicable: HIDOE standards this lesson will address
Standard 1 Sc. MS 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7

Ocean

1. Describe how you will connect this activity to the ocean: I try to connect their interest level & past knowledge to the new lesson. I begin with what they know about their surf board, canoe paddle, boogie board, etc.
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.
   - ☐ 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.)
   We have a variety of materials in the lab to test buoyancy & density - we also have scales so we check it out.

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.)
   Keep the kids from drinking the soda!

3. 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? I will use the strategy + prompts in the Exploring Our Fluid Earth and allow for their own questions too. We always have a Lab Assistant who checks
2. What *assessment strategies* will you use to help your students meet your understanding learning goals and monitor their progress? Use of charts and data sheets, Lab Journal, Questions from the TSI Practice of Science Module 0

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 usually do a BRAINPOP video + review quiz before we start. The students take Cornell notes & set up the procedures before the experiment begins. If someone says they already know the topic. I let them "Teach it Back" to the class. It is entertaining

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TSI Lesson Reflection – TSI Phase Diagram

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What level did you observe? ☐ Individual ☒ Pair ☐ Small group ☐ Full Class

Why did you observe this level? I wanted to evaluate understanding

Draw arrows indicating your progression through the TSI Phases of Inquiry. Number your arrows.