**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?

I chose to do this activity as a way to begin 2nd quarter. It felt weird shoving it in during 1st quarter so I waited until now. It seemed to really engage my students- especially because we were reviewing the scientific method the day before. A lot of my students mentioned that scientists are people who use the sci. method all the time.

What are your classroom learning goals?

That the students will go be creative and realize that THEY are scientists and there is no specific mold for a scientist. Also for them to learn that science is fun.

How does this activity tie into your classroom learning goals?

Helped students to think about science and scientists and how it relates to them. It also promoted group work, I had each table draw before and after pictures of their scientist.

What date do you plan to start this activity? 10/11

*If applicable:* HIDOE standards this lesson will address

Benchmark 8.2.1- *Describe significant relationships among society, science, and technology and how one impacts the other*

**Ocean**

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

I don’t know how I will connect this to the ocean- I am thinking about talking about jobs that scientists have and somehow connecting the ocean to it that way.

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.

X 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.)

There wasn’t too much to review before starting this activity. I think this would be a great beginning of the year activity to get students to think about their role as scientists in class.

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.)

I think it will be interesting to see what students initially think scientists look like. I think there will some confusion or hang-ups on the fact that students have a “concrete” idea of what a scientist looks like. They might also have some problems thinking “outside the box” and seeing that doctors or gardeners may use science in their jobs.

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

X Curiosity

X Description

X Authoritative knowledge

Experimentation

□ Product evaluation

X Technology

X Replication

X Induction

□ Deduction

X Transitive Knowledge

**Questioning and Assessment Strategies**

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

Plan to talk about different jobs and what they use in their jobs. Do you do this in science? What part of their job includes science? Referring to our class definition, how can we say that \_\_\_\_\_\_ uses science in their fields?

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

Walk around and talk to the groups. Students will also make a group before scientist and after scientist so they can share and see how their thinking has changed.

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.

Will be using Anne’s graphic organizer to help guide students. Students will be given 3 minutes to come up with their own definition and then partner def. We will discuss a definition as a class and write that down. Then students will move onto naming scientists they know and begin drawing and labeling their picture. After drawing they will comment on their partners picture. Once everyone has commented, they will create a group scientist- working together to draw what they all agree a scientist looks like.

Then students will move to different tables and comment on what they see- this will be used to create a list of words for part 5. Then we will talk about TV shows and then what a discipline and demeanor is. Lastly we will come up with a list of what demeanors we should portray while in science.

Additional Notes:

Activity took longer than anticipated- Will have to continue the parts about disciplines and demeanors on 10/12.

10/11- Also showed some pictures of movie character scientists and TV shows to talk about misconceptions and we discussed whether those were fair and if that was always the case. We also discussed if we went into a restaurant if we could pick out any scientists- to which all my students said no, because they aren’t at work. So we discussed if that meant they were no longer scientists because they weren’t at work and my students said no because it’s not just their job. We then discussed how they conduct little science experiments everyday- deciding which soda brand they like- they can only be sure that they prefer a brand over the other if they have tried both brands and then concluded which they prefer. That seemed to help them see that science isn’t always with beakers and chemicals, but that it happens every day. This was a good tie in to our class definition of what science is: “Science is the study and explanation of theories about life, the universe and behaviors.”

10/12- Finished the activity and focused more on demeanors and explaining the modes. Did the activity with a prior class and found that disciplines were hard and we had to go over notes today too so I cut that part out. After our discussion, groups drew their after scientist.