UF-CPET SSI Lesson Plan

Name: James Powell, Robert Fletcher
Lesson Title: Science and Society Lesson Length (class periods): 5
SSI Topic: Dengue Grade Level(s): 8th

Appropriateness for Middle/High School Students
Teaching strategies used:
Think-pair-share, Group Discussion, Lab Activity,

Background

Florida State Standards (NGSSS)
SC.8.N.1.1, SC.8.N.1.2, SC.8.N.1.4, SC.8.N.1.5, SC.8.N.1.6

Performance Objectives

I can explain how science can be used to inform decision making at the community, state, national, and international level.

I can explain how the work of scientists throughout history has affected and been affected by social and economic concerns.

Materials List and Student Handouts

5E Lesson Template

In the left column, list all activities you are planning. Also include information on how the class will be organized (grouping; individual work). The right column contains only probing questions you intend to ask of your students to guide their learning. For each phase, complete a brief (2-3 sentence) overview of what will occur in the space provided.

Consider the following during the Engage:

• Include an interesting attention grabber that focuses students’ interest and attention on the lesson content and activities.
• Introduce a guiding question that students should be able to answer at the end of the lesson.

Probing Questions:

• Elicit prior knowledge and students’ experiences.

<table>
<thead>
<tr>
<th>ENGAGE</th>
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<tbody>
<tr>
<td>Overview: These lessons will be used to introduce the students to general information regarding pathogens and especially the transmission of pathogens.</td>
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</table>

<table>
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<tr>
<th>Activities (Teacher or Student Actions)</th>
<th>Probing Questions</th>
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Adapted from UFTeach
Developing the Next Generation of Florida Math and Science Teachers
Consider the following during the Explore:

- Explain how your students will explore the concept(s), relating specifically to SSI elements when appropriate, including students’ interests shared during the Engage.

Probing Questions:
- Design questions that guide student explorations, evaluate student understanding, and facilitate student interaction and group collaboration.

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<tr>
<td>Student Lab: Dengue Dilemma</td>
<td>How does Science Affect Society?</td>
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Consider the following during the Explain:

- Have students share and explain the results of their investigation. Connect to relevant SSI elements.
- Add additional content, including definitions, explanations, and new vocabulary in the context of concepts explored.

Probing Questions:
- Ask probing questions to deepen students’ conceptual understanding and skills of the concepts that the lesson is based upon.

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Lab Reports will be completed. Students will present their findings to the entire class.  

How does science affect society?

Consider the following during the Elaborate:
- Opportunity to provide students with the chance to transfer and extend (apply) the concepts and skills they have just learned to their interests and new situations.

Probing Questions:
- Connect and apply the lesson to students' interests outside the classroom.

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<td>Research project and written report (one page) on a newly discovered pathogen. This pathogen must have been discovered within the last 10 years.</td>
<td>How does science affect science?</td>
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Consider the following during the Evaluate:
- Utilize the grading rubric you designed for the formative assessment tool to assess the students’ mastery of all benchmarks.

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<td>Power point presentation for research paper</td>
<td>How does science affect science?</td>
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