


Lesson Title: Water Quality Testing

Teacher/Collab Teacher	Maria Brewer	Course/Grade	STEM-7 th / 8 th	Date of Lesson		Block	
Specific SOL	<p>MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.</p> <p>RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).</p>						
Learning Target	I will be able to use a water quality kit to understand the purpose for analyzing water chemistry. I will know I'm successful when I have completed all 4 stations and submitted the Stream Study Form.						
Success Criteria	Completion of the Stream Study Form						
Unit & Lesson	Unit: Watershed Solution Project Lesson 2 & 3: Water quality and Site Visit						
Essential Questions	How are Ahupua'a and watersheds similar and different? How does land use affect the watershed and the populations in it? Is our watershed healthy? Why is learning about water important?						
Today's Reading and/or Writing Strategy(ies) (specific to this lesson)	Graphic organizer, Sentence Frames, Read aloud			English Language Development Standard: The language of... SCIENCE.			
Materials & Resources							

Lesson Title: Water Quality Testing

	The Teacher Facilitates	Differentiation Strategies	With Student Engaged Learning
Engage & Hook	<p>Teacher will greet students, take attendance, and monitor students. The teacher will address any misconceptions as they arise and read the essential questions to review/gear up for today's lesson.</p> <p><u>Teacher reviews learning target with students.</u></p> <p>Teacher will set up a live game of Kahoot. Kahoot- 5-3 Impact on Water</p>	<p>ESL: Teacher will explicitly explain directions.</p>	<p>Students will engage in a water Kahoot game to review and discuss water conservation.</p>
Explain & Model WEEK 5-6	<p>Lab: Teacher will explain how studying water chemistry can help scientists determine water quality and show how to use the water kits.</p> <p>NOAA Water quality sheet</p> <p>Water chemistry</p> <p>Teacher will set up 4 water quality test stations: Turbidity Dissolved Oxygen PH Temperature</p>	<p>ESL: Teacher will provide Tier 2 vocabulary and images needed for comprehension.</p>  <p><small>This Photo by Unknown Author is licensed under CC BY-SA-NC</small></p>	<p>Students will form groups to test the water samples.</p>

Lesson Title: Water Quality Testing

Explore & Apply	<p>Research: Teacher provides research links and Stream Study forms</p> <p>NOAA Water quality sheet</p> <p>Water chemistry</p> <p>Stream Study Form</p>	<p>Water Chemistry Video-Temperature</p> <p>Water Chemistry Video-Dissolved Oxygen</p> <p>Water Chemistry Video-PH</p> <p>Water Chemistry Video-Phosphate/Nitrates</p> <p>Water Chemistry Video-Turbidity</p>	<p>Students will understand what each test is for and how to perform the test, they will apply their skills and run a test using the provided water sample.</p> <p>Graphic Organizer: Students will use the links provided to determine the quality of their sample and fill in the Stream Study Form.</p>
Evaluate & Close	<p>Teacher will facilitate the discussion on how human activities/factors affect stream chemistry and animals.</p> <p>Lesson 3: Field Experience: Teacher will remind students of the field experience to Manoa stream and Maunalua Bay where they will get to kilo and do more water testing using the Stream Study Form.</p>	<p>ESL: Teacher will provide clarification of instructions. Students can provide verbal responses.</p>	<p>Summary: Student groups will share their results with the class.</p>

Lesson Title: Water Quality Testing

	Field Experience Intro Video		
--	--	--	--

Lesson Title: Water Quality Testing

Additional Resources

[How does it work? - East Maui Watershed](#)

[Lesson 3: Stream Study: What Does the Chemistry Tell Us? \(concord.org\)](#)

[Sec5.evalstreamlesson \(longwood.edu\)](#)