

Drinking WQW Lesson Plan

Audience and Subject Background:

Middle school to High school science class

Through a collaboration of the California Institute for Water Resources (CIWR) and UC Merced's Food-Energy-Water Systems for and with the Underserved (FEWS-US Lab), we have developed extension resources, knowledge, and technical information for safe and affordable drinking water. This workshop aims to educate students between grades 6 - 8 and feel inspired/excited enough to inform their families.

Learning Objectives:

By the end of this lesson, students will be able to:

- Identify common water quality parameters using test strips
 - Compare results between contaminated and treated water samples
 - Discuss what makes water “safe” or “unsafe” to drink
 - Reflect on the importance of clean water access in their community
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Total Time Estimate:

1 Hour and 20 Minutes Long

- Introduction: 15 mins
- Activity: 40 mins
- Wrap-Up: 15 min
- Clean-Up: 5 mins

Materials Needed:

For the Instructor:

- 1 Clear Plastic Container
- 2.5 gallons of water + contaminants
- 1 Packet of P&G Purifier of Water
- 1 Ladle
- Paper Towel Rolls (For spills)
- Water Drop Stuffed Pillow

Per table/group of Students

- Activity Worksheet (per student)
 - 2 empty plastic cups
 - Towel Sheets
 - 2 pH Test Strips 0-14
 - 2 Chlorine Test Strip
 - 2 Water Hardness Test Strip
 - 2 Nitrite, Nitrate Test Strip
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Wrap-Up / Discussion

- Fill in the CCR table together
- Discussion Suggestions:
 - How did your treated water compare to the original—was it noticeably clearer?
 - Did your final values closer to what's considered safe for drinking?
 - How did the actual results match up with your predictions?
 - What stood out to you the most during this experiment?
 - If you had to explain what you learned today to your family or friends, what would you say?
 - “Ask your family where your home's water comes from or look up your city's Consumer Confidence Report (CCR) together.”