



Water Distribution and You

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Subject/Grade: Science / 7th

What existing course and unit will this enhance? (e.g., Biology- Ecology Unit)

7th grade: Natural Resources and Human Activity

Water Science and Infrastructure Industry Connection (e.g., an industry-related career, skill, or challenge; addresses where water comes from, where it gets treated, how we get power, inspires watershed stewardship, or focuses on impacts on the community)

Chemical reaction in the water treatment process (Shelf life of water)

Learning Goals:

Students will be able to... explain how water engineering and planning is needed especially with the growing population in order to help keep the society healthy and safe.

1-2 Sentence Lesson Summary (Interactive Lesson Ideas)

1. **Remembering:** Identify the primary roles of water districts.
2. **Understanding:** Explain how water districts ensure access to clean water.

Driving Question that Students Will Explore

- How can communities promote sustainable water practices?
- What actions can you take to help improve water quality in your community?

Part 1 Above Due Tuesday for Peer Share

Instructional Outline: This should be the bulk of your writing. Bullets of what the students will do throughout the lesson to reach the learning goals you have set.

ENGAGING ACTIVITY : Water Crisis Scenario

- Description: Present students with a scenario where a local community is facing a water crisis due to contamination and limited access to clean water. Display a short video or infographic that illustrates the problem.
- Objective: To capture students' attention and provoke curiosity about the role of water districts in such situations.
- Questions to Ask:
 - What do you think caused this water crisis?
 - How do you believe the water district can help in this situation?
 - What do you already know about water management and resources?

EXPLORE

Activity: Water Quality Investigation

- Description: In small groups, students will investigate water samples (real or simulated) for pH, turbidity, and contaminants using simple testing kits. They will record their observations and discuss the implications of their findings.

(This is what students will do during the lesson)

EXPLAIN

Activity: Class Discussion and Concept Mapping

- Description: Facilitate a class discussion where students share their findings from the water quality investigation. Use a concept map to visually represent the roles of water districts in ensuring clean water, managing resources, and promoting sustainability.
- Objective: To allow students to articulate their understanding and connect their prior knowledge with new information.
- Key Concepts to Address:
 - Functions of water districts
 - Importance of sustainable practices
 - Methods of water management

ELABORATE

Activity: Community Action Plan Project

- Description: Students will work in groups to create a community action plan that outlines strategies for their local water district to improve access to clean water and promote sustainability. Each group will present their plan to the class.
- Objective: To apply their understanding of water management and the role of water districts to a real-world scenario.
- Expected Outcomes: Develop critical thinking and collaborative skills while drawing connections between their projects and the actual functions of water districts.

Standards: Common Core, NGSS, CTE, GoalBook or another state or national list.

- NGSS Standards on Earth and Human Activity
- Crosscutting concepts of systems and system models

Assessment: How will you check your students' understanding? Consider these [creative assessments](#).

- Description: Have students write a reflective journal entry or complete a self-assessment rubric evaluating their understanding of the lesson's key concepts, their contributions to group activities, and their personal learning.
- Objective: To assess individual understanding and provide students with feedback on their learning process.

Materials/Resources

- Video/Infographic on water crisis
- Water quality testing kits
- Chart paper and markers for concept maps
- Access to research materials for action plan project
- Reflective journals or self-assessment rubrics

Field Trip Opportunity (Optional) -Please include location, reason why you are interested in taking students, how the trip connects to your curriculum.

San Jacinto Waste Water treatment plant. Help students understand the process of “recapturing” waste water and how the filtered out materials are used and transported to different locations.

Part 2 Above Due The Monday After Externship Week