

Subject Area: Environmental Science
Unit Title: Water Conservation
Grade Level: 9th Grade
Lesson Number: 1 of 7

Duration: 45 minutes
Date: March 10, 2023
Teacher: Ms. Johnson
Room: Science Lab

Curriculum Standards Alignment

Content Standards:

- Understand the concept of water footprint
- Explain the importance of water conservation

Skills Standards:

- Analyze data to calculate water footprint
- Develop strategies for water conservation

Cross-Curricular Links:

- Math: data analysis
- Language Arts: writing and presentation

Essential Questions & Big Ideas

Essential Questions:

- What is the impact of human activity on water resources?
- How can we conserve water in our daily lives?

Enduring Understandings:

- Water is a limited resource that requires conservation
- Human activity has a significant impact on water resources

Student Context Analysis

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Class Profile:

- Total Students: 25
- ELL Students: 5
- IEP/504 Plans: 3
- Gifted: 2

Learning Styles Distribution:

- Visual: 40%
- Auditory: 30%
- Kinesthetic: 30%

Introduction to Water Footprint

The water footprint refers to the amount of water required to produce, process, and transport the products we consume. It is an important concept in environmental science, as it helps us understand the impact of human activity on the environment.

Calculating Water Footprint

Students will use online tools to calculate their personal water footprint. They will analyze their own habits and develop strategies to reduce their water consumption.

Water Conservation Strategies

Students will develop strategies to conserve water in their daily lives, such as taking shorter showers, turning off the tap while brushing their teeth, and using water-efficient appliances.

Creating Posters for Awareness

Students will create posters with the theme "Save Water" to raise awareness about water conservation in the school community. They will present their posters in class and discuss their ideas for conserving water.

Presentation and Discussion

Students will present their posters in class and discuss their ideas for conserving water. They will evaluate the practical solutions proposed and develop strategies for protecting water resources.

Assessment and Feedback Plan

Formative Assessment Strategies:

- Class discussions and participation
- Poster presentations

Success Criteria:

- Students can explain the concept of water footprint
- Students can develop strategies for water conservation

Feedback Methods:

- Peer feedback
- Teacher feedback

Conclusion and Next Steps

In conclusion, the lesson plan on water footprint and conservation is an important approach to educating 9th-grade students about the value of water and the need for its management. Students will learn to analyze their own habits and develop strategies to reduce their water consumption.

Next Steps

Next steps include:

- Lesson Plan: "Water Ecology"
- Lesson Plan: "Water Technology"
- Lesson Plan: "Water and Society"

Appendix

Online tools for calculating water footprint:

- Water Footprint Calculator
- Water Conservation Calculator

Posters with the theme "Save Water":

- Poster 1: "Take shorter showers"
- Poster 2: "Turn off the tap while brushing your teeth"

Bibliography

References:

- "Water Footprint: How much water do we use?"
- "Water Ecology"
- "Water Technology"

Teacher Reflection Space

Pre-Lesson Reflection:

- What challenges do I anticipate?
- Which students might need extra support?
- What backup plans should I have ready?

Post-Lesson Reflection:

- What went well?
- What would I change?
- Next steps for instruction?

