

Unit Overview

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Unit: Walloomsac Watershed Study

Essential Question: How can humans protect water quality within their watershed?

Lesson #1: Our Place in the Watershed: Introduction to Watersheds

Introduction to Watersheds

Locate your place in the watershed & trace flow to Atlantic

Bill Nye Streamkeeper Video & Worksheet

Delineate Watersheds & Calculate Area

Watershed Model

Lesson #2: Geology, Soils, and Ecology of the Walloomsac Watershed

Research Geology of Walloomsac Watershed

Analyze Bedrock & Surficial Geology Maps

Soil Testing & Analysis

Ecology of Roaring Branch Corridor (Site Data Sheet)

Lesson #3: A Lesson in Humility: Landscape Changes in the Walloomsac Watershed

“Directive” poem by Robert Frost

Analyze New England Forests Through Time Images & Impact on Watershed

Use book: “Reading the Forested Landscape”

Analyze Land Use/ Land Cover Map

Lesson #4: Humans Can Make a Difference: “The Fight to Save the Hudson”

Video: “America’s First River: The Fight to Save the Hudson”

Worksheet on Video

Lesson #5: The Health of our Watershed: Water Quality of the Roaring Branch and the Walloomsac Watershed

Physical Survey & Analysis

Benthic Macroinvertebrate I.D., Testing, & Analysis

Chemical Testing & Analysis

Lab Report

Share Data

Analyze Data from Other Bodies of Water in our Watershed

Lesson #6: Why the Roaring Branch Roars: Stream Stability of the Roaring Branch

Geomorphological Study Results

Newspaper Article: ROARING TOWARDS RUIN

Analyze Map: Stream Channel Over Time

Analyze Map: Permeable vs. Impermeable Surfaces

Conclusions: Is the Roaring Branch Stable? Recommendations

Lesson #7: Stormwater Impact on the Roaring Branch

Analyze Map: Storm Drains & Discharge Points into Roaring Branch

Test for Stormwater Impairment

Conclusions

Lesson #8: Service Learning Project

Student Driven

Present Project to Community