

**North Rowan Elementary School**  
**Collaborative Unit**  
**Grade: 5th**



**Title of Unit:** Down the Drain

**NCSCOS Objectives**

**Science:**

Objective 1.06 Explain and evaluate some ways that humans affect ecosystems.

- Habitat reduction due to development.
- Pollutants.
- Increased nutrients.

**Social Studies:**

Objective 1.06 Explain how people of the United States and other countries of North America adapt to, modify, and use their physical environment.

Objective 5.01 Categorize economic resources found in the United States and neighboring countries as human, natural, or capital and assess their long-term availability.

Objective 5.02 Analyze the economic effects of the unequal distribution of natural resources on the United States and its neighbors.

Objective 5.05 Evaluate the influence of discoveries, inventions, and innovations on economic interdependence.

**Language Arts:**

Objective 4.01 Read aloud grade-appropriate text with fluency, comprehension, expression, and personal style demonstrating an awareness of volume, pace, audience, and purpose.

Objective 4.02 Use oral and written language to:

- formulate hypotheses.
- evaluate information and ideas.
- present and support arguments.
- influence the thinking of others.

Objective 4.03 Make oral and written presentations to inform or persuade selecting vocabulary for impact.

Objective 4.04 Select a self-evaluated composition for publication and justify rationale for selection.

Objective 4.05 Use a variety of preliminary strategies to plan and organize the writing and speaking task considering purpose, audience, and timeline.

Objective 4.09 Produce work that follows the conventions of particular genres (e.g., essay, feature story, business letter).

Objective 4.10 Use technology as a tool to enhance and/or publish a product.

### **Math:**

Objective 2.01 Estimate the measure of an object in one system given the measure of that object in another system.

Objective 4.01 Collect, organize, analyze, and display data (including stem-and-leaf plots) to solve problems.

Objective 4.02 Compare and contrast different representations of the same data; discuss the effectiveness of each representation.

Objective 4.03 Solve problems with data from a single set or multiple sets of data using median, range, and mode.

### **Technology:**

Objective 1.09 Recognize, discuss, and explore how spreadsheets are used to calculate, graph, and represent data in a variety of settings (e.g., schools, government, business, industry, mathematics, science).

Objective 2.04 Use spreadsheet terms/concepts and functions (e.g., median, range, mode) to calculate, represent, and explain content area assignments.

Objective 1.12 Recognize and explain the advantages and disadvantages of using multimedia to develop content area projects/products.

Objective 1.13 Identify and discuss multimedia terms/concepts (e.g., menu, branching, navigation, multimedia, design).

### **Essential Question:**

How does our water use compare/contrast to others on the planet?

### **Activities:**

Lesson: How Much In a Gallon - experiment determining flow rate

Materials : two gallon containers and sink

Lesson: Give out Lesson 1b: Water Usage Collection Sheet

Materials: Personal Water Use Chart

Students will collect data for personal water usage for one week

Complete Lesson 1b: Calculating Results for Personal Water Usage for each member of the household

Materials: Computer Lab

Calculating Combined Household usage

Materials: Computer Lab

Lesson 1d: Determine Class Water Use and make observation

Materials: laptop with numbers application and promethean board

Lesson 2: Develop a Hypothesis

Materials: class data; individual data ;

Expert to talk about water usage/conservation

Lesson 3: Testing your Hypothesis by comparing data

Lesson 4: Do the Experiment Submit the data

Computer: Look at data from other schools and analyze the data

Google Earth: Look at latitude and longitude of area

Communicate Results: Summarize what you have found. Share your results.

Post in student gallery

Create a Public Service Announcement encouraging water conservation

Students will create a public service announcement

Materials: Garage Band; Photo Booth; Imovie

PE - - Water relay race to determine water waste???

Art - - Water conservation posters

Music - - Write jingles for their public service announcements