

Standards below are based on the  
2017 Georgia Department of Education Curriculum Map

## **TVA Science Kids—World Water Monitoring 4<sup>th</sup> Grade Corresponding Standards**

### **Earth and Space Science**

S4E3. Obtain, evaluate, and communicate information to demonstrate the water cycle

- a. Changes of state - solid, liquid, gas
- b. Evaporation, condensation, and precipitation

The program discusses the water cycle and gives real-world examples of ways the water cycle affects the environment and humans.

### **Life Science**

S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.

- a. Roles of producers, consumers, and decomposers in a community
- b. Flow of energy through a food web/food chain (producers, consumers, and decomposers are terms used in the discussion of Turbidity, if producers can't get enough sunlight - will affect consumers all the way up the food chain)
- c. Effect of change on an ecosystem
- d. Changes to the flow of energy in an ecosystem when plants or animals become scarce, extinct, or overabundant (a discussion of temperature touches on the affects of changes to energy flow. If a species is forced to migrate away due to temperature, how will that affect other species?)

## **6<sup>th</sup> Grade Corresponding Standards- Georgia**

### **Earth and Space Science**

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes

- a. Where water is located on Earth's surface

S6E5. Obtain, evaluate, and communicate information to show how Earth's surface is formed.

d. Types of weathering agents, agents of erosion and transportation, and environments of deposition (erosion and weathering are terms used during a discussion of turbidity and the effects of erosion on water quality)

S6E6. Obtain, evaluate, and communicate information about the uses and conservation of various natural resources and how they impact the Earth

a. Differences between renewable/sustainable energy resources and non-renewable energy resources (during a discussion of TVA's role in the area, we discuss types of energy resources as well a renewable versus non-renewable)

b. Solutions for sustaining the quality and supply of natural resources such as water, soil, and air (the lab wraps up with a discussion of human impact and responsibility for natural resources)

## Extended Resources

### Monitorwater.org

- **Map** - reading the map; land features that may affect water quality
- **Lesson Plans** - designed for grades 6-8
- **Books** - ELA component: pdf versions online; could be used before or after the program; vocabulary and questions at the end
- **Video Tutorials/Kit instructions**
- **Cabinet of Curiosities** - interviews with various scientists may inspire possible future careers in STEM

### In-person Logistics

- 70 minute session preferred; two 30 minute sessions also possible
- Self-contained classrooms?
- Info needed:
  - Get teacher names and email addresses
  - Dates for each school: Tuesday-Friday scheduling, prefer to do all schools at one time
  - Number of sessions needed for each school
  - Number of students in each class
  - Will send presentation and room setup info the day before the program
- Would selected body of water be recognizable to students?

## Virtual Logistics

- 9 videos (5-7 minutes each); can conduct lab as class time allows
- Options for group work or individual work
- Teacher packet
  - Teacher Prep document
  - Test directions document
  - Virtual Lesson Guide
  - Water collection instructions
  - Data sheet
- Info needed:
  - Teacher names and emails
  - Number of classes/number of students
  - Internet connectivity/capabilities
- Teacher feedback form