

Standards below are based on 2015 Alabama State Department of Education, Alabama Course of Study, Science

TVA Science Kids—World Water Monitoring

5th Grade Corresponding Standards

Matter and Its Interactions

1. Evidence that matter is made of particles too small to be seen (chemical reactions are performed by dissolving tablets in water)
3. Examine matter through observations and measurement to identify materials (observations are made of chemical reactions and conclusions are drawn using measurements)
4. Investigate whether the mixing of substances results in new substances (this is done by examining chemical reactions)

Ecosystems: Interactions, Energy, and Dynamics

9. Process of photosynthesis (while testing turbidity, we discuss how the clarity of a stream could affect how much sunlight and oxygen plants and animals receive)
11. Transfer of matter among producers, consumers, and the environment (producers and consumers are terms used during discussions of turbidity and water temperature)

Earth's Systems

14. How any two systems interact and support life
15. Distribution of freshwater and salt water on Earth (a human impact discussion includes information on the small amount of fresh water on Earth available for use and our responsibility to protect it)

Earth and Human Activity

16. Ideas that individuals and communities can use to protect Earth's natural resources (discussion of common forms of water pollution and solutions)
17. Cleaning a polluted environment (this is a good way to build on material presented during the program)

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