Watershed Experience Lessons

The Watershed Experience is designed for High School students to gain a deep understanding of the watershed they inhabit and how human actions affect environmental factors including water quality. The series helps students build STEM skills and explore Environmental Science careers.

We include a nine-lesson, real-world curriculum series that teachers can adapt for their own use. The order of lessons, following the first introductory lesson, is flexible. The program includes lesson plans, PowerPoint slides, and data sheets. Teachers can edit the slides to reflect their own school's watershed.

The program allows students to experience different sites throughout their watershed, practice skills in water quality assessment, collect data, and then interpret that data back in the classroom. Goals include:

- Making the watershed real for students
- Real data collection skills practice
- Using stream tables to model fluvial geomorphology
- Looking at land use and its effects on both stream morphology and water quality
- Exploring STEM related careers
- Taking part in a real-world environmental action project

Thanks to funding from Avantor, Educators at The Watershed Institute successfully used this program in schools in Trenton, NJ since 2024. The original title was *The Assunpink Experience*, reflecting the waterway that runs through the capital city. We adapted the lessons to make them available to classes around the world.

We hope you find this to be a useful learning tool. Please reach out to us with any questions, and to share your Watershed Experiences. Ahill@thewatershed.org

NGSS standards addressed:

MS-ESS3-2. Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

HS-ESS3-4: Evaluate or refine a technological solution that reduces impacts of human activities on climate change and other natural systems.