

# Shifting the Stream

## Navigating Water Quality Data in the Classroom

### Teacher Professional Development Workshop

#### Quick Details

**What:** Water quality data professional development

**Dates:** July 14th & 15th 2025

**Times:** 9 am - 3 pm

**Location:** Towson University  
Center for STEM Excellence (701  
East Pratt Street, Baltimore, MD  
21202)

#### Benefits of Participation

Participating teachers receive:

- 1 CPD credit
- Kit of water quality testing materials with up to 60 students
- Curriculum to be used in your classroom in the 2025-2026 school year and beyond

## What is data science? Why is it Important?

Data is all around us; it's how we can predict the weather or traffic patterns, and why the ads that pop up on our devices seem just a little too targeted. In order to be successful in either the workforce or higher education, students need at least a basic understanding of how to analyze data.

Data science is especially important in climate and environmental science. Models used to predict how climate change will affect us are based on data, using data such as air temperature, carbon dioxide in the atmosphere, occurrences of natural disasters, animal populations, frequency and severity of diseases in humans, to name a few. Scientists and volunteers collect data making it possible to monitor air and water quality daily, allowing us to make informed decisions about our health.

## What is Shifting the Stream?

*Shifting the Stream* is a two-day professional development (PD) for high school teachers across Maryland. The PD will focus on water quality data, connecting data that students collect to more rigorous local water quality datasets. The workshop will take teachers through a series of data collection, analysis, and communication activities as learners while having them reflect on the experience. Teachers will then adapt the activities to make them appropriate for their own classrooms, hopefully applying them in the 2025-2026 school year.

## Who Can Apply?

Any high school educator in Maryland is welcome to apply! Since this PD focuses on water quality data, environmental science, biology, statistics, and data science teachers are encouraged to apply.

## How to Apply?

1. Complete the [Shifting the Stream application](#)
2. Have your principal fill out the [Principal Support Form](#)