

Bringing Public Health Data to Washington Classrooms

Opportunity: Partner to explore ways to share Washington Tracking Network data on climate change and health for teaching high school science.

Success: [Brand-new learning materials](#) available to 35 school districts in Washington state, spotlighting local health and climate change data.

First-of-their-kind learning materials for Washington state high school seniors—using Washington Tracking Network (WTN) data—have just been published. The materials are the result of a partnership between the Washington State Department of Health and the Puget Sound Educational Service District (PSESD) begun in March 2021. They lead students through a unique look at the intersection of climate change and health.

This is the first time a state Environmental Public Health Tracking program has partnered on high school level learning materials. Tracking programs in other states are looking at this project to inspire future projects across the country.



“ I was excited to meet the WTN team when we did! We are working hard to engage students in real world data. These modules will help us give teachers a powerful tool to connect climate change to hyper-local public health issues of interest to them and their students.”

—Cheryl Lydon, PSESD

THE PARTNERS

PSESD is one of nine Educational Service Districts (ESDs) across Washington. ESDs are regional organizations that serve groups of school districts. They are designed to improve the quality, equity, and efficiency of educational programs. PSESD provides programs and services to 35 school districts and 281 non-district schools in King and Pierce counties and Bainbridge Island. Its programs serve 35% of Washington’s K–12 students.

WTN is a Washington State Department of Health (DOH) program focused on making public health data more accessible. It is part of the National Environmental Public Health Tracking Network, a project led and funded by the Centers for Disease Control and Prevention (CDC). WTN aims to increase usage of public health data, through partnerships and outreach.

MATERIAL DEVELOPMENT

PSESD received funding from the Washington State Legislature through the ClimeTime project. ClimeTime is a network of educational learning partners who work together to provide climate science professional development for Washington science teachers.



PSESD’s STEM program manager Cheryl Lydon hired curriculum design consultant Tom Hathorn to create the learning materials. Three WTN epidemiologists met with Tom and Cheryl to introduce WTN’s tools and data. Tom developed the materials between April and June, with feedback from WTN. He used high-interest news articles to inspire four WTN modules:

1. Asthma and Wildfires
2. Climate Change and Pregnancy
3. Information by Location Data and Community Engagement
4. Analyze and Interpret Data with WTN

Each module looks at climate change data, health data, the scientific process, and community experience. The materials largely pull from WTN’s [Environmental Health Disparities \(EHD\) map](#), and also include other WTN data.

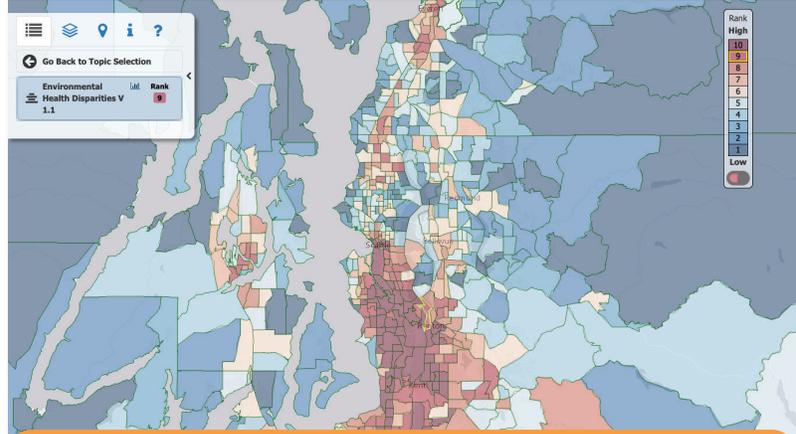
LEARNING OBJECTIVES

Students learn about the topics of each module, and how to navigate WTN tools and analyze data that impact their lives and communities. The modules are built around real data that reflect information about students' communities.

Students can dig into areas of health, climate, and socioeconomic data that interest them. They can see what is most impacting their region, differences between communities, and how factors are interconnected.

“I think that teaching adolescents about our tools and how to access data and information for themselves is fundamental to their understanding of these issues that will impact them so much,” said Alexis Carson, a WTN epidemiologist.

Tom said he hopes the modules “increase understanding about the intersection of public health, historical gender and race discrimination, and engaging students to use science and mathematics for public good.”



“ I really appreciate how Tom infused the ideas of social determinants of health into one of the modules. In our society, there is so much emphasis on our individual choices and not enough recognition that where we live also contributes significantly to our health.”

—Jennifer Sabel, WTN manager

BENEFITS OF PARTNERSHIP

WTN was able to provide information about the public health data and the ways in which epidemiologists think about and work with data, but knew very little about learning material development.

According to Lauren, “I don’t think we at WTN would have done anywhere near as well, or as efficient, of a job at pulling together so much great information, especially for an audience that is new to us. Tom’s expertise was invaluable.”

From the educator side of the partnership, Tom said it was “unusual to access people outside of our usual sphere of collaborators. The collaboration with DOH folks improved the technical quality of the modules through feedback and dialogue, and they enhanced the professional humanity in the modules by directly adding their voices.”

NURTURING FUTURE SCIENTISTS

The learning materials include insights into what it means to be an epidemiologist. The modules explore what issues epidemiologists consider in their work, how they analyze the data, and why they went into epidemiology. By humanizing the field, it helps students see public health as a potential career path.

NEXT STEPS

- Ensuring that science teachers, science program directors, and district administrators around the state know about the availability of the learning materials and WTN data (current and ongoing).
- Pilot-testing with science teachers to ensure the materials meets their needs (Spring 2022).
- Establishing if there is a need for creating a “WTN 101” course introducing WTN tools and data to teachers separately from the climate change learning materials (2021–22).
- Exploring opportunities for future collaboration (ongoing).

“ I really appreciated how Tom told the story of women in STEM careers. I hope talking about my role in making these data available to the public inspires future generations of women in STEM careers.”

—Lauren Frelander,
WTN spatial epidemiologist