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Engaging Young Black and Latino Students in Data Science Through Water Security

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Project type: DTI

Project URL: <https://water.columbia.edu/research-projects/americas-water-education>

Project Overview: By enhancing learning units with the use of interactive public water data platforms, students may acquire the knowledge, skills and attitudes necessary to pursue STEM education and careers that address water issues.

There are gaps in the learning standards at the federal, state, city and school levels that, if addressed, could help prepare the STEM workforce to tackle emerging and persistent water issues.

Lessons Learned & Insights Gained

Findings: Formal learning frameworks are not adequate to address water injustices and inequities within the US. **Insights and lessons:** Empowering the teachers for them to achieve autonomy and share their insights has been transformative for the research team. **Achievements:** Building a community of teachers around the project research questions and, foremost, serving the students.

Equity 1) Subjects of instructions (water and data) and methods (cyber-infrastructure) are aligned with NSF priorities. 2) Diverse team of instructors, with the specific involvement of the school's instructor in Social and Emotional Learning with respect to the demographics of the students. 3) Consultants in consequential learning will start their program with our full team in Jan 2023. 4) Workshop and meeting strategies have been adopted for increased inclusivity and participation

New Challenges & Next Steps

It was initially difficult to form the team of high-school instructors with changes of grades, subjects and placements. Now the challenge is that the team is growing with enthusiasm and more members. We may reconsider the involvement of a second school for this year to develop robust foundations during this first year of instructions.