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Critical need in STEM education

Students in the United States are inadequately prepared for the science and mathematics needs of today's society and lag behind other industrialized countries

The Innovation – Data Nuggets address STEM education needs

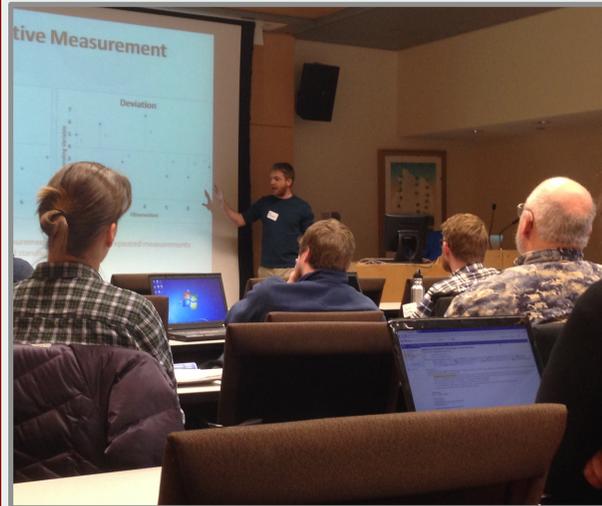
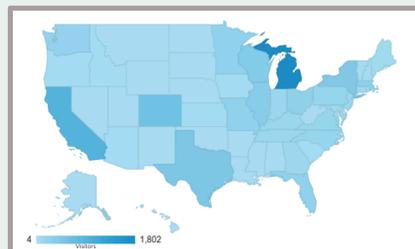
Data Nuggets are classroom activities, co-designed by graduate students and teachers, which give students practice interpreting quantitative information and making claims based on evidence.



The standard format of each Nugget provides a brief background to a researcher and their study system and a small, manageable dataset. Students are then challenged to answer a scientific question, using the dataset to support their claim, and are guided through the construction of graphs to facilitate data interpretation. Graphing and content levels allow for differentiated learning for students with any science background.

<http://datanuggets.org>

We have had over 9,000 unique visitors to the Data Nuggets website since it was launched, originating from all 50 states and 130 different countries.



Broader Impacts for LTER Researchers

Data Nuggets are built around data from recent and ongoing research, providing several benefits to researchers and students.

LTER researchers who create Data Nuggets will improve their communications skills; the challenge of unearthing the story within experiments is a difficult but rewarding process. Researchers must think about what questions are captivating to elementary and high school students alike.

To quote Albert Einstein, "If you can't explain it simply, you don't understand it well enough."

LTER Partnerships: Place-based student learning

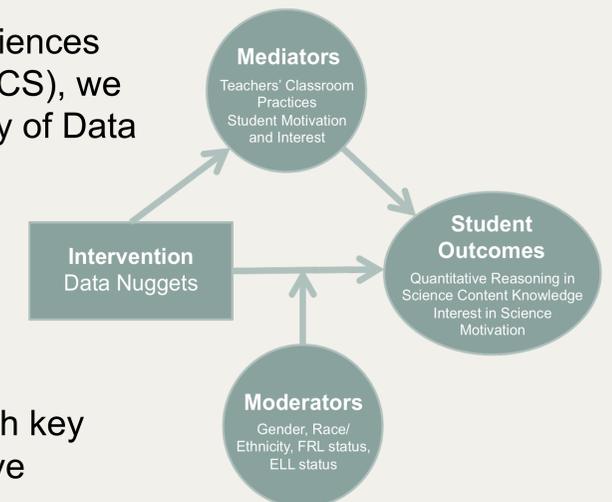
Using local data from Long-Term Ecological Research (LTER) sites in classrooms makes content more accessible and improves science education outcomes.

At the national level, using DN from various LTER sites allows students to learn about research conducted in unfamiliar biomes and study systems, increasing their understanding of ecological diversity.



DRK-12: Assessment with BSCS

With the Biological Sciences Curriculum Study (BSCS), we will assess the efficacy of Data Nuggets in engaging students in the practices of science through an innovative approach, combining scientific content from authentic research with key concepts in quantitative reasoning.



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