



GLOBE Mission EARTH

Fusing GLOBE with NASA Assets to Build Systemic Innovation in STEM Education

<https://www.globe.gov/web/mission-earth>

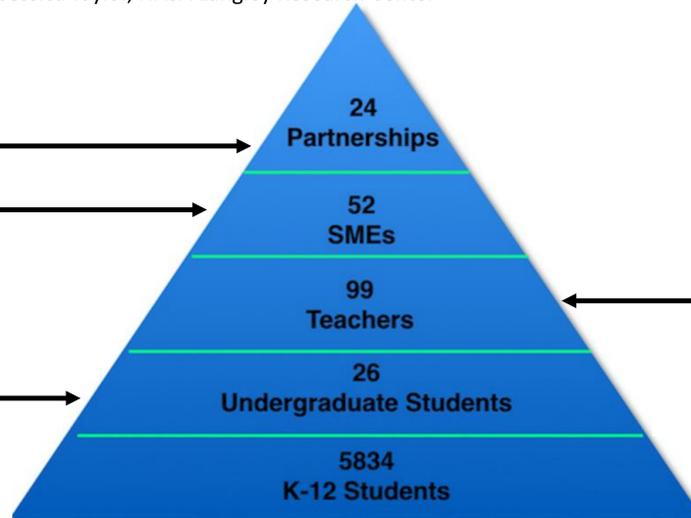
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Partnerships

24 partnerships. At local, district, state and national levels.



Teachers

99 Teachers active; 55 schools reached; 18 professional development (PD) sessions provided; 81 new curricular materials developed.

NASA LaRC Teacher Summer Interns

Teachers learning the GLOBE "Heating Things Up" Activity

Professional Development

Constructing Data Collection Instruments

Subject Matter Experts (SMEs)

52 SMEs: Individuals with expertise relevant to the intervention.

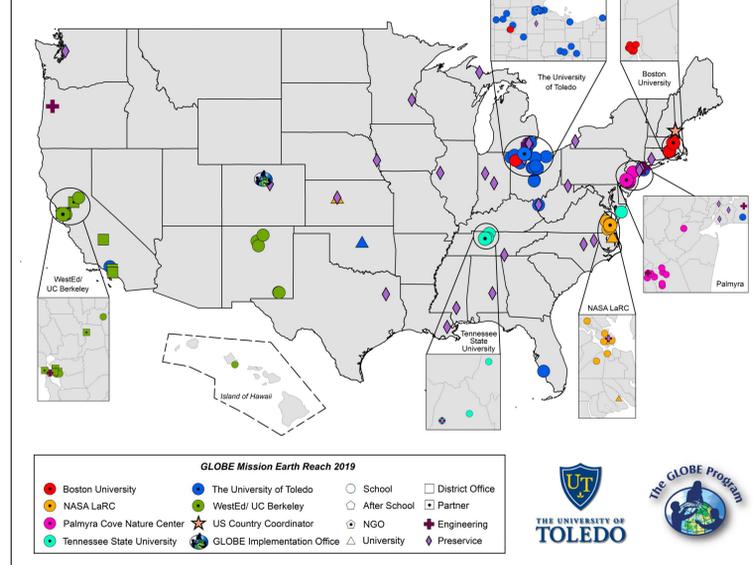
Aerokats

Elizabeth Joyner, NASA, visits PD

Dr. Brad Hegyi with Northern Shores Elementary Students, CA

Dr. Jessica Taylor of NASA LaRC Speaking to UT PD Teachers about the Urban Heat Island Effect (UHIE)

GLOBE Mission EARTH REACH MAP



Students

5,834 K-12 students involved! 1,436 matched pre- and post-tests in content knowledge, attitudes towards science and spatial skills; 306 student portfolios samples; 223 K-12 projects; 27 schools where data is uploaded on the GLOBE website.

Cherry Hill Huaxia Chinese School Students, NJ

Elementary Students from Virginia presenting research poster at SRS

Students inside the mobile Virtual Reality Learning bus, NJ

Students from Thirkell Elementary School, Detroit, MI, presenting at the GLOBE Annual Meeting, 2019

SATELLITES Conference, UT

Undergraduate Students

26 undergraduate students involved in GLOBE projects (? are pre-service teachers).

Dr. Padgett teaching TSU Pre-Service Undergrads about GLOBE Atmosphere Protocols

UT students visit Mrs. Madanski's Elementary Class, McKinley STEM Academy, Toledo, OH

Stratford TSU Students recording Atmospheric Data, TN

Atmospheric sensor prototype developed by University Engineering Students, University of Toledo

Undergraduate students testing Surface Temperature

Measurable Achievements in Years 2 and 3

- Increase in the number of teachers who joined the PD sessions from 64 in 2017-18 to 99 in 2018-19
- Increase in the number of K-12 students affected from 3,445 in 2017-18 to 5,834 in 2018-19
- **Decrease in the number of undergraduate students involved in GLOBE projects from 83 in 2017-18 to 26 in 2018-19**
- Increase in the number of SMEs who have interacted with students and teachers from 44 in 2017-18 to 52 in 2018-19
- Increase in the number of new curricular materials developed from 41 in 2017-18 to 81 in 2018-19
- Increase in K-12 projects produced from 169 in 2017-18 to 223 in 2018-19
- Increase in the number of new partnerships established from 22 in 2017-18 to 24 in 2018-19

Future Plans

- Increase in the number of new K-12 students affected from 5,834 in 2018-19 to ? **in 2019-2020**
- Increase in the number of teachers who joined the PD sessions from 99 in 2018-19 ? **in 2019-2020**
- Increase in the number of undergraduate students involved in GLOBE projects from 26 in 2018-19 ? **in 2019-2020**
- Increase in the number of SMEs who have interacted with students and teachers from 52 in 2018-19 ? **in 2019-2020**
- Increase in the number of new curricular materials developed from 81 in 2018-19 ? **in 2019-2020**
- Increase in K-12 projects produced from 223 in 2018-19 ? **in 2019-2020**
- Increase in the number of new partnerships established from 24 in 2018-19 ? **in 2019-2020**

Products

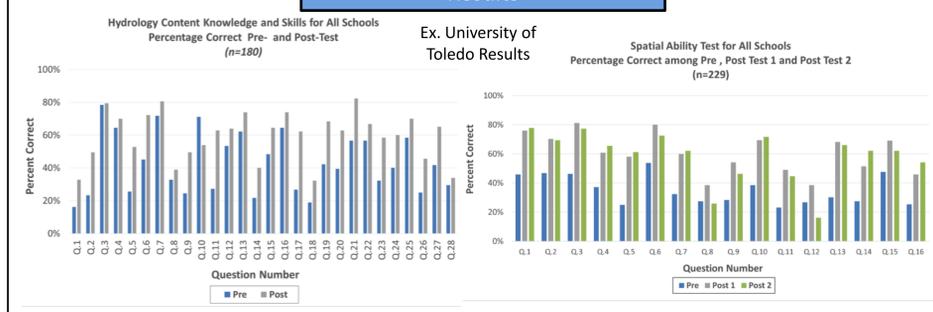
Urban Heat Island Story Map

My NASA Data Learning Cubes: Graph Cube, Data Cube, and Map Cube

My NASA Data Website Upgrade

NASA Langley Research Center Learning Progressions

Results



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