

GUTC Professional Development

NSF Highlights – Track 1 Education

Title

GUTC provides professional development to K-12 teachers to help encourage STEM activities in the classroom

Outcome

Teachers that participated in the GUTC (Growing Up Thinking Computationally) workshops during the 2013-2014 were able to implement what they learned in GUTC club meetings over 13 weeks at 12 school sites. Student participants in the clubs were introduced to STEM or computing content by these teachers, as well as given a hands-on activity and a computational modeling activity.



Teachers participate in a computational modeling workshop provided by NM EPSCoR & GUTC.

Impact / Benefits

Teacher professional development workshops exposed participants to and engaged them in the use of computational models for scientific inquiry and research, addressing workforce preparation issues and preparing them to serve as afterschool club leaders while integrating computational modeling into STEM classes. GUTC implemented two systematic strategies/approaches to STEM education: 1) inspire public school students to stay engaged in school through applying cutting-edge technology tools to study community issues during afterschool hours, and 2) prepare teachers to serve as afterschool club leaders and to integrate computational modeling into STEM classes.

Explanation

With funding from the New Mexico EPSCoR, GUTC (Growing Up Thinking Computationally) offered professional development workshops for teachers and afterschool clubs for middle school students during the 2013-2014 academic year. GUTC offered a summer professional development workshop to prepare teachers to serve as club leaders and to implement GUTC activities during school day STEM classes. Due to a late start of the GUTC program, this workshop was not held in concert with the Supercomputing Challenge Summer Teacher Institute. Instead, we held a condensed workshop, on August 1st through 4th 2013, just prior to the beginning of the school year. At this workshop, we prepared the teachers for the Computational Thinking and Computer Science content within the GUTC curriculum and prepared for the first six weeks of club meetings.

Source: Natalie Willoughby, NM EPSCoR

Image provided by: Irene Lee, GUTC