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Research Experience via Active Collaboration with High Schools (REACH)

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Research Experience via Active Collaboration with High Schools (REACH)

Sharmistha Basu-Dutt, Megumi Fujita, Victoria Geisler, and Douglas Stuart Department of Chemistry, University of West Georgia, Carrollton, GA

Enrichment program for high school students and teachers

Strategies

- Problem based learning (PBL)
- Peer-led team learning (PLTL)
- Process oriented guided inquiry learning (POGIL)

100 hour program

- ❖50 hours of group work to learn about scientific method
- 50 hours of individual work to develop individual science fair projects

Participants

- 24 high school students, 92% finished
- 9 high school teachers 3 counties and 5 schools
- 4 UWG chemistry undergraduate students
- 4 UWG Chemistry faculty

Symbiotic and sustained collaborative "research group" environment

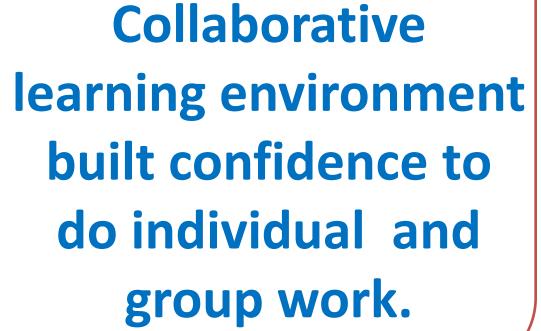
Roles

- * HS students and UWG students mentors developed academic (content and conceptual knowledge) and non-academic (teamwork, leadership, problem solving, higher order and critical thinking) skills.
- HS students and HS teachers accessed advanced chemical instrumentation, laboratory facilities, and library resources resulting in competitive science fair projects.
- * HS teachers experienced new pedagogical techniques such as PBL, PLTL and POGIL to implement in their own classrooms.
- UWG faculty helped to prepare and recruit more prepared HS students to major in as well as retain and graduate more skilled undergraduate from the Chemistry program at UWG.





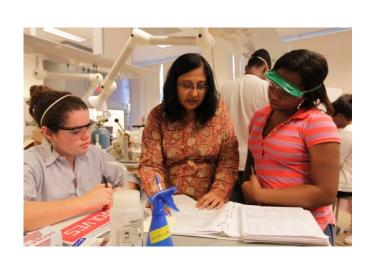
































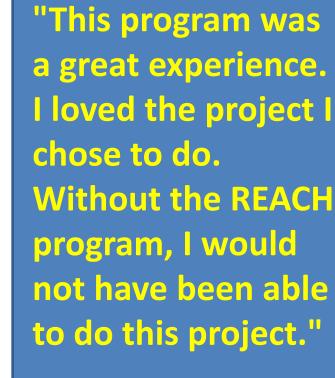




REACHing new heights!

- 22 students presented at REACH finale.
- ❖ 12 students placed at the school level.
- 7 students moved on to regional competitions.
- 5 students placed in the regional competition.
- 2 students placed at the 2012 state science fair.
- ❖1 student represented GA at the national Youth Science Camp.





"[I feel v]ery comfortable. I completely understand the science behind the procedure and information that I personally

"[I feel a] lot more comfortable than I did oing into the reach program. I now understand it's ok to make a mistake, just make sure you learn from it."

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