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Report and Reflections from Year One of the NSF GK- 12 Program at USM

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PROJECT LOCATOR

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Fellows Submit STEM Research Abstracts



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Graduate STEM Fellows in K-12 Education

The NSF Graduate STEM Fellows in K-12 Education (GK-12) Program supports fellowships and [training](#) for graduate students in science, technology, engineering, and mathematics (STEM). Through interactions with teachers and students in K-12 schools, graduate fellows can improve communication and teaching skills while enriching STEM content and instruction for their K-12 partners.

HIGHLIGHTS

- [Featured](#)
- [GK-12 in the News](#)
- [Opportunities](#)
 - [For Fellows](#)

Graduate STEM Fellows in K-12 Education (GK-12)

www.gk12.org



- National Science Foundation
 - Directorate for Education and Human Resources
 - Division of Graduate Education
- Since 1999, the GK-12 Program has funded over 200 projects in more than 140 universities throughout the U.S. and Puerto Rico.

Graduate STEM Fellows in K-12 Education (GK-12) Program Goals



Graduate Students

Communication, Leadership,
Team Building



K-12 Education

Enhanced Teaching and
Learning

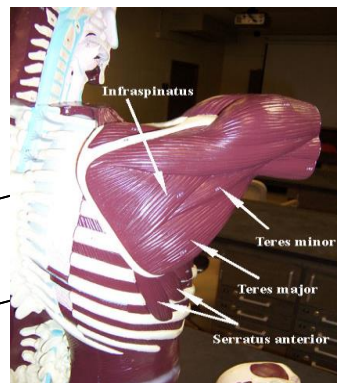


Higher Education

Transform Graduate
Programs



Molecules to Muscles



Research

Macromolecules

proteins
carbohydrates
nucleic acids

Science Frameworks

Chemistry
Biology

Muscle Operation

nutrition
human physiology
metabolics

Chemistry
Biology
Anatomy
Physiology

Advanced Materials

material strength
physics of sports
soldier protection

Chemistry
Biology
Anatomy
Physiology
Polymer Science

Molecules to Muscles



- Sarah Morgan, PI
Polymer Science
- Sabine Heinhorst, co PI
Chemistry and Biochemistry
- Sherry Herron, co PI
Biology and Science Education
- Jeff Wiggins, co PI
Polymer Science
- Rich Mohn, Evaluator
Educational Research
- Kim Wingo, Director
Speech Communication

Requirements and Benefits

Graduate Students (Fellows)

- For 3rd - 5th year students who are US citizens.
- \$30,000 fellowship
- \$ teaching materials and conference travel
- Summer course and workshop.
- 10-15 hour time commitment each week of school.
- Mentor Science Fair student.
- Develop and teach an original theme-based lesson.
- Develop and teach a research-based lesson.



Teachers

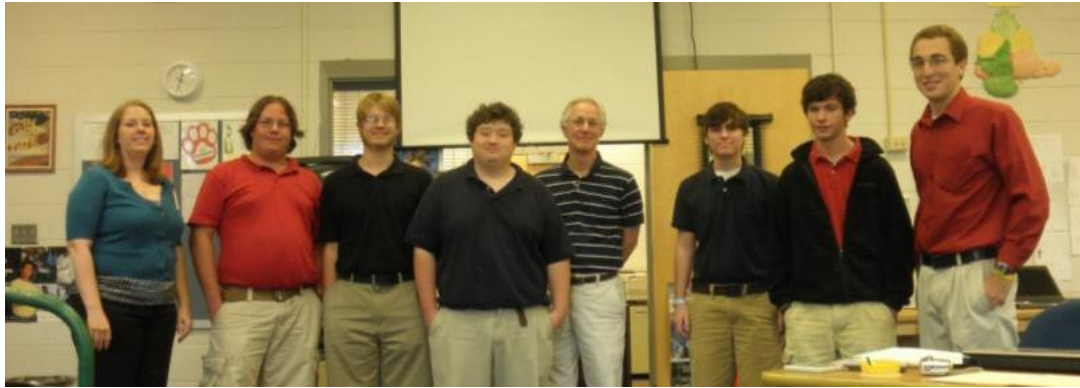
- \$4000 stipend
- Summer workshop
- Assistance in the classroom
- 3-hr graduate course tuition free
- \$1000 allowance for conference travel

Workshops



Lesson Implementation





Industry Interactions



Stephen Christensen, Boeing Research and Technology
Petal and Hattiesburg High Schools

Elementary School Demos

