



EASTERN KENTUCKY UNIVERSITY
PROJECT ISMAM

ENHANCING INQUIRY-BASED SCIENCE AND MATH IN APPALACHIAN MIDDLE SCHOOLS

PROJECT OVERVIEW

GOAL

The goal of this project is to promote interest, achievement, and the excitement of inquiry in Science, Technology, Engineering, and Mathematics (STEM) in Appalachian middle schools.

IMPLEMENTATION

The project will be implemented by twelve STEM teams, two teams from each of the six participating departments: Chemistry, Computer Science, Biological Sciences, Earth Sciences, Mathematics & Statistics, and Physics & Astronomy. Each team, composed of a fellow (a graduate student enrolled in a STEM program or an advanced undergraduate STEM major who has demonstrated a strong proficiency in science or mathematics), a science or math middle school teacher and an Eastern Kentucky University faculty mentor, will develop inquiry-based activities for middle school students. These activities will be designed to meet both Kentucky and national education standards based on existing mathematics and science curricula in the participating schools. The fellows will then assist the teachers in conducting these activities in local middle school classrooms. Appropriate training will be provided to all participants.

EXPECTED OUTCOMES

Overall, the project is expected to lead to:
 CEnriched learning by middle school students
 CExpanded professional development opportunities for middle school teachers
 CImproved communication and teaching skills for the fellows
 CStrengthened partnerships between Eastern Kentucky University and regional middle schools

FUNDING

The project is supported by the National Science Foundation under the Graduate Teaching Fellows in K-12 Education (GK-12) Program (Award Number DGE 0231738) and Eastern Kentucky University.

BENEFITS TO PARTICIPATING FELLOWS

CRceive a compensation of up to \$30,000 per year (graduate fellows) or up to \$10,000 per year (undergraduate fellows).
 CTuition waiver for graduate fellows.
 CIncrease understanding and appreciation for middle school science and mathematics education.
 CImprove communication skills, including how to communicate scientific ideas to diverse audiences.
 CImprove teaching skills, including inquiry-based strategies.
 CIncrease knowledge about both the content and applications of science, mathematics and technology through working with faculty mentors.
 CLearn to manage a classroom and motivate children.
 CLearn to maintain a balance between teaching and research activities (graduate fellows).
 CHave an opportunity to work with diverse disciplinary teams of university faculty, middle school teachers and other fellows.
 CHave professional development opportunities such as training in electronic communications, attendance at appropriate professional meetings, and leadership roles.
 CGain personal satisfaction by serving as a role model for middle school students.

ELIGIBILITY FOR FELLOWS

CMust be a citizen, national, or permanent resident of the United States at the time of application.
 CMust be a graduate student enrolled in a STEM program or an advanced undergraduate STEM major who has demonstrated strong proficiency in science and mathematics.
 CMust be available from July 2004 through June 2005.

APPLICATION PROCESS

CISMAM fellowship application materials may be found at the URL www.ismam.eku.edu
 CEKU Graduate School online application materials may be obtained at www.gradschool.eku.edu/
 CReview of applications will begin on April 1, 2004 and continue until all fellowships are filled.

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