

RESEARCH INFRASTRUCTURE IMPROVEMENT (RII 4)
PROPOSAL DEVELOPMENT PROCESS

EDUCATION & OUTREACH WHITE PAPER

FOR DISCUSSION
December 13, 2011

TITLE: INVOLVING NM EPSCoR SUPPORTED GRADUATE
STUDENTS AS MENTORS FOR NM STATE SCIENCE FAIR
PARTICIPANTS

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Involving NMEPSCOR supported graduate students as mentors for NM State Science Fair participants

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According to one ACS survey, grades 5-8 are critical stages where students either engage science or are permanently disconnected from the discipline and its tenets. Science Fair is one of the more engaging and competitive arenas that promotes the scientific method at an early age. Each year the number of student participants at the New Mexico State Fair continues to decline. While a number of reasons can be cited for such trends such as general interest, limited laboratory and equipment access, mentor availability, NMEPSCOR can offer two key resources that may help to reverse the current trend. Specifically, graduate student mentors and the access that these students have to rudimentary laboratory equipment such as analytical balances, pH meters, hot plate/stirrers and glassware.

As part of the NMEPSCOR-supported graduate students responsibilities, a few hours a week initially would be dedicated towards meeting on a one-to-one basis with students interested in the junior level Science Fair competition. Middle school science teachers would be provided with a list of eligible graduate students and their research interests and projects with the purpose of matching disadvantaged yet interested students who wish to participate in Science Fair. Following a few brief meetings to assist in getting the project started, the graduate student would avail themselves to the middle school students needs in the form of mentoring/advising the progress of the project, checking the hypothesis and providing access to basic laboratory equipment. Assessment for the outcomes of this proposal would involve data collection of the success rate for NMEPSCOR advised middle school students in their advancement through Science Fair competitions (local, regional and state) as well as tracking their post-science fair educational career paths to see if this program is proving to be effective.