

DATE: July 28, 2011

SUBJECT: STEM Professional Development

ACTION RECOMMENDED: Information

BACKGROUND INFORMATION: Tennessee was one of just two states selected on March 29, 2010 in the first round of the federal Race to the Top competition, receiving over \$500 million. The funds will allow Tennessee to implement a comprehensive set of school reform plans over the next four years. The \$4.35 billion Race to the Top national fund is an unprecedented federal investment designed to reward states leading the way in comprehensive, coherent, statewide education reform across four key areas:

- Adopting standards and assessments that prepare students to succeed in college and the workplace
- Building data systems that measure student growth and success, and inform teachers and principals how to improve instruction
- Recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most
- Turning around their lowest-performing schools
- Expanding STEM (Science, Technology, Engineering, and Math) education opportunities through the STEM Innovation Network

As part of the effort to expand STEM educational opportunities, the Tennessee Higher Education Commission released a Request for Proposals focusing on professional development for K-12 STEM teachers. The purpose of this particular program is to promote innovative practice in K-12 schools within STEM disciplines to further develop K-12 STEM teachers' pedagogical content knowledge, while building a repertoire of highly effective STEM professional development programs to be housed and used through Tennessee's STEM Innovation Network. Tennessee's higher education institutions have the expertise to develop and implement such programs. This close collaboration between the institutions and LEAs will only further strengthen the goal of increasing student achievement.

In April 2011, 36 proposals were received in response to the Request for Proposals. A committee of individuals with expertise in STEM fields was convened to evaluate and select proposals for funding. The 11 proposals selected for funding will serve Tennessee's high-need districts. A total of \$1.8 million was awarded in this round of funding. \$4.2 million will be available for the second round of funding for professional development in 2012.

SUPPORTING DOCUMENTATION INCLUDED: A list of recommended institutions and funding levels is provided in Attachment A. The STEM Professional Development projects will be funded for the period August 15, 2011

to December 31, 2012. The grant review process is described in Attachment B to this agenda item.

OTHER SUPPORTING DOCUMENTS AVAILABLE: All grant proposals are available for review at the Commission office.

ATTACHMENT A
STEM Professional Development
Funded Proposals

<u>Austin Peay State University</u> <i>Momentum: Building Capacity for Change through Connections</i>	\$138,202.12
<u>East Tennessee State University</u> <i>Reaching for Excellence in Elementary School Science through Inquiry, Standards, Problem-based Learning</i>	\$176,650
<u>East Tennessee State University</u> <i>MICH: Modeling Instruction of Chemistry in High Schools</i>	\$164,834
<u>Lipscomb University</u> <i>Hands-on Chemistry</i>	\$113,027
<u>Middle Tennessee State University</u> <i>Project EMPOWER: Enhancing Mathematical Proficiency through Opportunities</i>	\$200,000
<u>Tennessee Technological University</u> <i>Numeracy and Multiple Representations for Grades 1-3 Teachers</i>	\$167,988
<u>Tennessee Technological University</u> <i>Transforming Matter and Classrooms-HS Chemistry Pedagogical Content Knowledge</i>	\$123,919
<u>Tennessee Technological University</u> <i>Embedding Inquiry & Technology/Engineering Standards into Physical Science Content for Grades 3-5</i>	\$198,542
<u>Tennessee Technological University</u> <i>Developing Middle School Mathematics Teachers' Pedagogical Content Knowledge (PCK)</i>	\$142,312
<u>University of Tennessee-Chattanooga</u> <i>TELMU: Technology/Engineering + Literacy = MATH Understanding</i>	\$199,905
<u>University of Tennessee-Chattanooga</u> <i>Numeracy, Representation, and STEM Connections for K-12 Teachers</i>	\$200,000

Attachment B

Proposal Review Process

On February 1, 2011, a memo from Dr. Richard Rhoda, Executive Director of the Tennessee Higher Education Commission, and the Request for Proposals (RFP) for STEM Professional Development proposals was distributed to college and university chancellors, presidents, deans, and faculty. The RFP included the background of the STEM competitive priority section of the Race to the Top application, the STEM Professional Development program goals and objectives, program guidelines, and submission requirements.

THEC First to the Top staff received 36 grant proposals and distributed them to advisory committee members. The advisory committee met on May 23, 2011 to make recommendations for awards. The committee was divided into four groups by subject area, meeting separately to discuss the grants related to their content area. Each grant proposal was assigned a lead discussant who gave an overview of the proposal and moderated the team's discussion. Each team chose their top proposals for funding and brought them before the entire committee.

The committee was given an overview of the proposals chosen for funding. The committee was given an opportunity to pose questions about the grant proposal, make recommendations or amendments, and discuss the level of funding the proposal should receive. Once each team presented the proposals recommended for funding, the committee voted on funding levels for each of the proposals and stated any required conditions for funding.