FOR IMMEDIATE RELEASE

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Kevin Murphy 206.349.6091 | kevin.murphy86@gmail.com

Thomas Singer 937.512.2838 | thomas.singer@sinclair.edu

**GUITAR-BUILDING INSTITUTE TURNING TEACHERS AND STUDENTS INTO   
STEM ROCK STARS IN THE CLASSROOM**

The National STEM Guitar Project will again host innovative Guitar Building Institutes around the United States during Summer 2016. (INSERT SPECIFIC GBI HERE) The 5-day educator/student institute combines instructional activities and training on science, technology, engineering and math (STEM) with hands-on applied learning guitar building techniques. The result is a life-changing experience that engages middle, high school and post-secondary students and sparks excitement for learning STEM subject matter.

The Guitar Building Institutes educator registration is fully funded through a grant from The National Science Foundation (#1304405) in partnership with Advanced Technological Education (ATE) Centers. The national STEM Guitar Project has been hosting these STEM Institutes around the United States annually since 2008, impacting nearly 4,600 students nationally.

Interested Phoenix/Mesa area educators are encouraged to apply now to receive free tuition and stipend to participate in the five-day workshop (a $1,200 value).

ABOUT THE STEM GUITAR INSTITUTE:

Educators take part in an intense five-day electric guitar design/build workshop. Each faculty member builds his/her own custom electric guitar and engage in student centered learning activities that relate the guitar design to specific math, science and engineering topics. Participants leave this weeklong experience with their custom-made guitars, curriculum modules with short term assessments that can be immediately integrated into the faculty team school curriculum.

The last day of the Guitar Building Institute is “Rock Star Friday”, a guitar-driven event where the newly built, customized guitars will be showcased and the educators are celebrated. Prominent musicians have joined in the celebration to help fine tune and test the new guitars built by the participants. Special guest builders and performers have included Rock n Roll Hall of Fame inductees, Don Wilson of The Ventures and Roger Fisher from Heart, along with executives with Boeing, State Senators, and the Office of State Superintendent. The general public and guests are free to attend the “Rock Star Friday”.

Nationwide, there are increasing concerns from businesses about the supply of science, technology, engineering, and mathematics trained workers. Science and math test scores in the U.S. are among the lowest around the world.

EDUCATOR SELECTION PROCESS:

Through the NSF grant, educators who apply and are selected received free tuition and stipend to participate in the Guitar Building Institutes. Over the initial NSF grant period (2008-2012), the STEM Guitar Project has over delivered its objectives by recruiting 235 STEM faculty members to participate in Guitar Building Workshops around the country with an additional 335 faculty impacted via national education conferences. The estimated 4600 students impacted nationally are a result of educators adopting or adapting the curriculum developed through the project. At this rate, the project goal of reaching over 19,000 students by 2017 is within reach. This STEM guitar project is in the process of capturing direct student learning gains data in relevant STEM oriented modular learning activities that are used in classrooms around the United States.

The Office of Science and Technology Policy with the White House reports “The development of world-class talent in science, technology, engineering, and mathematics (STEM) is critical to America’s global leadership.” The Obama Administration understands that fostering an open and diverse scientific community that draws from an array of unique experiences and viewpoints is a necessary step to realizing this goal.

United States Commerce Secretary Gary Locke recently pointed to a new report that reaffirms, “STEM workers/educators are helping America win the future by generating new ideas, new companies and new industries.” The report also showed sustained growth in STEM jobs and greater job stability for STEM workers.

Principal Investigator with STEM Guitar Project NSF ATE Center partner at Edmonds Community College in Washington State indicates, “This faculty workshop is one way we are helping rebuild the nation’s STEM workforce — beginning with teachers.” Cossette continues, “We need more science teaching stars.”

The goal and objective of the STEM Guitar Building Institutes is to showcase a new way to present learning for students with applied methods. “A workshop like this fulfills the state’s Office of Superintendent clock hour requirements for participating educators, but we really want to provide teachers an opportunity to gain new competencies for teaching STEM. By the end of this week, when our teachers have their guitars in their hands, they’ll be equipped to pass on energy, interest and new concepts to their students further motivating their students to learn more about the STEM behind the music, technology, and design.”

In five days, teachers at the workshop will design and build electric guitars and learn how different materials can be used to create various sounds and looks. They will also learn ways to integrate these concepts into their classrooms.

“The Guitar Building Institutes are designed to be sustainable as teachers who participate in the workshop will be tapped to help teach future workshops as a strategy to expand and offer the STEM training to more teachers and students in their communities.”

“You don’t have to know how to play the guitar to take the workshop, but in bringing these groups together, I have met a number of people who by day are engineers, teachers and other professionals and by night they follow their passion by playing in a band. We want to heighten interest and knowledge of STEM through music. It’s fun to offer it in a way that combines all of these interests.”

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**LEAD GUITARS / STEM Guitar Building Project | www.guitarbuilding.org**

IMAGES and VIDEOS:

https://www.flickr.com/photos/100085444@N08/sets/72157645142565610/

http://www.youtube.com/user/4ClassicmarketingG?feature=mhee

http://www.youtube.com/watch?v=kW5s\_0glxTw

http://galleries.tartanphotographic.com/guitarworkshop

The project is exploring the design and manufacturing of guitars to better engage students that otherwise may not be connected to STEM oriented subject matter. It uses the context of building an electric guitar to explore difficult theoretical concepts and advance STEM learning. Working with their peers and professional development institute facilitators, educators are studying the STEM principles associated with building guitars and developing applied STEM learning activities that are aligned with core curriculum national standards. Faculty are being recruited from underserved populations and are preparing a website to enable high school students to experiment with the physics, mathematics, and engineering design/manufacturing concepts that are associated with the project. The project's website offers educators widespread access to an exciting STEM learning community, allowing them to keep in contact with other professionals who are engaged in the curriculum implementation and professional development activities.

PARTICIPATING INSTITUTIONS:

Sinclair Community College - Thomas Singer, thomas.singer@sinclair.edu (Principal Investigator)

Butler County Community College - Mike Aikens (Co-Principal Investigator)

Purdue University - Richard French (Co-Principal Investigator)

Douglas Hunt, Southern Wells High School (Co-Principal Investigator)

Debbie French, University of Wyoming (Co-Principal Investigator)

The project faculty team conducted a total of 24 collaborative five-day professional development STEM Guitar building workshops. Participants came from suburban (46%), rural (29%), and urban (25%) settings within 17 different states across the United States. An estimated 30% of the participants of the STEM Guitar building workshops were female, a historically non-traditional participant of projects of this nature.

STEM Jobs Help America Win the Future

http://1.usa.gov/orVufd

• In 2010, there were 7.6 million STEM workers in the United States, representing about 1 in 18 workers.

• STEM occupations are projected to grow by 17 percent from 2008 to 2018, compared to 9.8 percent growth for non-STEM occupations.

• STEM workers command higher wages, earning 26 percent more than their non-STEM counterparts.

• More than two-thirds of STEM workers have at least a college degree, compared to less than one-third of non-STEM workers.