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Office of Integrative Activities
National Science Foundation**

***Arlington Public Schools
Governor's Career and Technical Academy
Science, Technology, Engineering and Mathematics Convocation
Kenmore Middle School, Arlington, VA.***

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Good evening! I'm very pleased to join all of you. Dr. Bement sends his greetings and regrets. He really wanted to be here this evening, but he is attending a conference in Oslo, Norway, at the behest of the President's senior science advisor, Dr. John Marburger. I'm glad to take Dr. Bement's place at such an exciting gathering that will strengthen math and science education.

On behalf of Dr. Bement and the National Science Foundation, I want to congratulate Arlington Public Schools on receiving funding from the National Governors Association to establish the *Governor's Career and Technical Academy in Arlington County!*

This decision signifies the high confidence Governor Timothy Kaine has in your ability to advance Virginia students' academic achievement in science, technology, engineering and math (STEM) education.

This new Academy will serve as a national model for participation among federal, state, local, and private entities to prepare students to meet the workforce demands of the 21st Century.

The NSF is proud to be partnered with Arlington Public Schools in this important endeavor. We are a federal agency that is charged with advancing research and education across all science and engineering disciplines. And an important part of our mission is to support frontier research and education that advances our knowledge on how best to optimize teaching and learning. Having a this model nearby to ground us is very useful.

We all know that the old way of running schools is not adequate to address today's education needs. French physiologist Claude Bernard (Pronounced: Bér-Nar) once said that, "Art is 'I'; Science is 'we'". I believe that if WE we do nothing differently to raise student's proficiency in STEM, nothing is what we will end up with. This must be a collective exercise, a truly national effort for all students.

If the U.S. is going to be competitive, we have to build a new vision of the role of education in preparing students for the 21st century workforce. NSF invests both extensive time and a great deal of money in education research recognizing that the classroom of tomorrow requires teachers with different competencies. In fact, we fund almost 30 programs in STEM education, at every level from kindergarten to post-doctorate. And, we have three big programs that directly align with what you are doing. They are the Advanced Technological Education (ATE) program or ATE, the Innovative Technology Experience for Students and Teachers or ITEST, and Discovery Research K-12. My NSF colleagues Gerhard Salinger and Mike Haney, here in the audience tonight, are the real experts on these programs, but let me say a little more about them right now.

ATE involves partnerships between two-year colleges and industry to educate current and future generations of science and engineering technicians with the latest understandings and competencies to compete in the global marketplace.

ITEST funds over 100 projects that provide in-school and out-of-school experiences with information and communications technologies in STEM areas. These are intended to generate student interest in critical areas and to plant the intellectual seeds that educators can nurture to yield a future generation of people entering careers that extensively use technologies.

The DR-K12 program develops and studies new models for learning environments that help push the boundaries of education. Through funded grants, DR-K12 re envisions what schools could be in the future and provides the tools models and resources that help us as a nation achieve that future.

All of these programs are proof of NSF's commitment to education and the workforce.

Congress has also underscored the importance of STEM education through its support of the America Competes Act. Among other things, it expands NSF's education programs and pays special attention to teacher the professional development of teachers in STEM disciplines.

Your new Arlington County Academy, with its combined efforts from educators, businesses, and government is a win-win situation for all of us.

- **First, Students students learn STEM content and processes essential to the world of work;**
- **Second, Industry industry provides input into the instruction and gets the much needed employees who are able to step in and immediately fill the shortage of technically-educated workers who also have the a whole range of essential competencies: essential competencies of communications, critical thinking, information fluency, collaborative work, ethical and civic responsibility, and quantitative literacy; and;**
- **And last but not least, The the nation gets a workforce that can help drive innovation and sharpen America's competitive edge.**

In this fast-moving, knowledge-centered environment, the nation's that move to the head of the pack will be those that invest heavily in research, education, and the development of rigorously skilled STEM workforce.

I applaud you for being at the forefront of the fight to maintain America's preeminence. You are helping to build the STEM capacity that will allow our nation to thrive in the rapidly growing, global economy.

Congratulations once again!