

Committee on Science, Space, and Technology

**September 13, 2011 Hearing entitled,
“STEM in Action: Inspiring the Science and Engineering Workforce of Tomorrow”**

Opening Statement

By

Ranking Member Eddie Bernice Johnson

Thank you Chairman Hall, and thank you to all of our witness for being here today. As I've said so many times before, we truly have a STEM education crisis in this country. I don't need to remind this audience about how poorly too many of our students perform on tests of math and science proficiency, or how important it is to the future of our country that we do something to address this serious problem. By “we,” I mean all of the stakeholders: Federal agencies, States, school districts, businesses, non-profit organizations, and parents. We must all work together to leverage our respective strengths and resources to tackle this issue. STEM education in this country is truly a complex and grand challenge that no one entity can solve alone.

Today's witnesses represent the private sector. Companies ranging in size from multinational enterprises on down to local businesses are realizing more and more how critical it is to the long-term success of their businesses that they have access to a highly skilled and well-prepared workforce. While our own government is turning back the clock, other countries are pouring resources into building not just their associate and bachelor degree level workforce, but also their Ph.D. level research scientists and engineers, providing them a competitive edge we once took for granted. One thing that's interesting to me is that while some of my colleagues in Congress think the federal government has no role here, an increasing number of major U.S. companies are turning to partnerships with government, including the federal government, to achieve their workforce needs.

President Obama also recognized the importance of partnerships when he launched the “Educate to Innovate” campaign last year. As part of this campaign, the private sector coordinated with the White House to launch “Change the Equation.” Change the Equation brought together a coalition of more than a hundred CEOs from some of the Nation's largest companies, all dedicated to working together to improving STEM education in the country. These companies, including Time Warner Cable, Exxon, and Xerox to name a few, have all committed resources to STEM programs across the country. Many of these successful programs are run in partnership with federal agencies such as NASA and NSF. Among the new public-private partnerships announced as part of the President's Educate to Innovate Campaign was the National STEM Video Game Challenge. I look forward to hearing from Mr. Gallagher about the National STEM Video Game Challenge and how he and his colleagues worked with the White House and other partners to help make the competition a success.

Competitions and challenges have tremendous potential to both inspire students and teach them STEM knowledge and skills in ways that traditional classroom teaching cannot. However, we also know from a recent National Academies report on informal STEM learning, and a hearing we held on that same topic in the 111th Congress, that there remains a big gap in understanding about how students learn

outside of the classroom and to what extent informal experiences influence their long-term interest and success in STEM. Most of what we know or think we know is based on anecdotes or attitudinal surveys. Here there is a clear and unique federal role in developing the necessary body of knowledge. The National Science Foundation is the leading entity in this country for funding research on STEM learning in both formal and informal environments, including competitions. The results of NSF funded research over many decades have helped and will continue to help ensure that education practitioners are incorporating effective practices with measurable results. At the end of the day, what counts is whether the STEM programs we are hearing about are achieving their desired results, not how much money we are spending on them or even how many students they touch.

We're all in this together. I commend the witnesses and your colleagues in the private sector for your efforts in helping to improve STEM education in this country. But I would also like to repeat a request that I made at our last STEM hearing, that we not continue to ignore the unique and important role of the federal government in improving STEM education in this country.