



National Lieutenant Governors Association

1 RESOLUTION IN SUPPORT OF STEM EDUCATION INITIATIVE

2 **WHEREAS**, the foundation of America's leadership in the 21st century, knowledge-based, innovation-driven, global economy is
3 built upon a Science, Technology, Engineering and Mathematics (STEM) literate workforce;
4 **WHEREAS**, the U.S. has one of the lowest rates of STEM degree production in an international comparison; the international
5 average is 26.4% of all degrees; the U.S. rate is 16.8%, while Japan's rate is 64%, China's rate is 52.1% and India's rate is 32.5%;¹
6 **WHEREAS**, the number of STEM-qualified, entrants into the aerospace workforce is projected to be insufficient to fill the
7 workforce pipeline creating a gap; 54% of the aerospace and defense STEM workers are 45 years old or older and 1/3 are eligible
8 to retire today and only 7.5% of students enter baccalaureate programs in STEM fields such as engineering and only 50% of those
9 graduate;²
10 **WHEREAS**, the integration of arts and design, broadly defined, into federal STEM programming, research, and innovation
11 activities, known as STEAM, is an effective approach to increasing students' engagement in the STEM fields and thus maintaining
12 the U.S.'s competitiveness in both workforce and innovation;"
13 **WHEREAS** the innovative practices of art and design play an essential role in improving Science, Technology, Engineering, and
14 Mathematics (STEM) education and advancing STEM research;
15 **WHEREAS**, the vitality of the aerospace industry in the United States is essential to national security and the economic
16 competitiveness of the nation; the aerospace industry relies upon a highly-skilled workforce to accomplish its mission; and
17 aerospace related employment declined from 800,000 in 1993 to 629,400 in 2012;³
18 **WHEREAS**, key STEM stakeholders have indicated that they want people in the workforce with 7-10 years of real-world
19 experience, and that significant real-world experience can be provided at the secondary level;
20 **WHEREAS**, the Real World Design Challenge provides real-world STEM experience for secondary students by providing real
21 problems, real tools, real roles, real designs, and an opportunity for students to make real contributions;
22 **WHEREAS**, the Real World Design Challenge has involved nearly 16,000 students from 43 states over the last five years;
23 **WHEREAS**, the Real World Design Challenge provides a quality STEM education experience that is *FREE* to students, is
24 provided at no cost to the taxpayers of the states, and brings millions of dollars of STEM education resources to the states;
25 **NOW LET IT BE RESOLVED**, that the NLGA encourages member states to investigate partnership with the Real World
26 Design Challenge;
27 **NOW LET IT BE FURTHER RESOLVED**, that the NLGA encourages interested states to publicize the Real World Design
28 Challenge, encouraging educators to take advantage of this partnership;
29 **NOW LET IT BE FURTHER RESOLVED**, that the NLGA recognizes the importance of art and design in the Science,
30 Technology, Engineering, and Mathematics (STEM) fields;
31 **NOW LET IT BE FURTHER RESOLVED**, that the NLGA would support, as possible, members and their state
32 departments of education in involving teachers in the Real World Design Challenge.

Sponsors: Lt. Governor Mead Treadwell (AK); Co-sponsors: Lt. Governors Yvonne Prettner-Solon (MN) and Kim Reynolds (IA); Additional co-sponsor(s) Lt. Gov. Kay Ivey (AL); Lt. Gov. Matt Michels (SD); Lt. Gov. Sue Ellspermann (IN); Lt. Gov. Shan S. Tsutsui (HI); Lt. Gov. Nancy Wyman (CT); Lt. Gov. Brian Krolicki (NV); Lt. Gov. Spencer Cox (UT); Lt. Gov. Jay Dardenne (LA)); Lt. Gov. Phil Scott (VT); Lt. Gov. Elizabeth Roberts (RI); Lt. Gov. Ray Tenorio (Guam)

¹ Jeffrey J. Kuenz, *CRS Report for Congress: Science, Technology, Engineering and Mathematics (STEM) Education; Background. Federal Policy and Legislative Action*, March 2008.

² Druyun, *Defense Reform 2001, A Blueprint for Action: Final Report*, DFI International 2001; *Occupational Outlook Handbook*, 2002-03; Chubin, *National Action Council for Minorities in Engineering Testimony to the Government-University-Industry Research Roundtable*, 2002.

³ *Aerospace Industries Association Year-End Review and Forecast*, AIA Research Center, 2013.