

# Bridge Basics



The National Building Museum recently launched its award-winning *Bridge Basics* education program nationally. For 15 years, thousands of young people in the Washington, DC metropolitan area have benefited from this program that teaches through creative hands-on activities why and how we create bridges and other structures. Now this unique learning experience is available as a curriculum program kit for youth across the country.

*Bridge Basics* program kits were developed through a Museum partnership with the Construction Industry Roundtable, and focuses on education and labor shortage issues that are receiving increased national attention from educators, policy makers, and industry experts.

- In 1995, U.S. 12<sup>th</sup> graders performed below the international average for 21 countries on a test of general knowledge in mathematics and science.  
- *National Academy of Sciences, Rising Above the Gathering Storm (2005).*
- Jobs requiring science, engineering or technical training will increase 24% between 2004 and 2014 to 6.3 million.  
- *U.S. Department of Labor, Bureau of Labor Statistics*
- There will be more than 1 million new jobs available in the construction industry by 2012.  
- *National Center for Construction Education and Research*
- Employment in heavy and civil engineering construction is projected to increase due to growth in new highway, bridge, and street construction.  
- *U.S. Department of Labor, Bureau of Labor Statistics*

*Bridge Basics'* fun and engaging activities address low nation-wide academic performance in core disciplines of math, science, technology, and engineering; while encouraging youth to consider careers in high-demand industries, such as construction and engineering, which are crucial to our nation's economic future.

*Bridge Basics* teaches fundamental structural engineering concepts through interdisciplinary activities and lesson plans. Students in grades 5 – 9 are challenged to design, test, construct, and evaluate solutions to transportation problems. The student "engineers" work in teams to design and build model bridges that balance issues of geography, materials, cost, and aesthetics. *Bridge Basics* cultivates an understanding of scientific inquiry, the use and ability of technologies, and the attributes of design and engineering. Through this learning-by-doing program, students gain a fresh perspective on how cities and towns are created, and begin to understand how design decisions have an impact on their daily lives.

*Bridge Basics* addresses skills in geometry, measurement, data analysis, probability, and problem solving. The curriculum also meets national standards of learning in math, science, engineering, visual arts, and social studies. The curriculum program kits come ready to use, and include a CD-ROM with an interactive activity, lesson plans, worksheets, posters, model construction materials, and other resources. *Bridge Basics* can be used by a variety of instructors, such as school classroom teachers, youth group leaders, or building professionals.

*Bridge Basics* national program sponsorship provides valuable public relations and marketing opportunities in targeted cities, and positions your company as a supporter of youth education relating to the building industry. For more information on the *Bridge Basics* program and sponsorship opportunities, please contact the National Building Museum Development Office at 202-272-2448.