

# Transportation: A natural vehicle for integrated STEM learning

Webinar Presentation  
Wednesday July 20, 2016  
1:30p – 3p ET



More information and  
Registration at:

<https://attendee.gotowebinar.com/register/2298243560251885316>

Sponsored  
by the *TRB  
ABG20  
Committee  
on Education  
& Training*

in collaboration with the *National Network  
for the Transportation Workforce*  
& hosted by the *Northeast Transportation  
Workforce Center*

Presentations by:



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Science and Industry in  
Chicago

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## ***Transportation: A natural vehicle for integrated STEM learning***

The webinar will explore STEM learning in programs using a transportation lens through informal educational settings. It will build off of the findings from the 2015 National Research Council's report on productive STEM programs in out-of-school settings. It will explore ways in which the Transportation field can offer:

- ✓ a productive area for advancing STEM learning goals given the broad reach of the modes and the disciplines involved;
- ✓ a continuum of STEM job opportunities and career paths that start at multiple levels of credentialing (High School, advanced certificates, Associates degree, Bachelor's, Master's and Doctoral level);
- ✓ a familiar field of inquiry for students of all backgrounds to engage in as they all experience the field in daily life, from walking and biking to transit and highways.

Facilitator: [Martin Storksdieck](#) is the director of **Oregon State University's Center for Research on Lifelong STEM Learning** and initiated the NAS report on out-of-school STEM education when he previously worked at the National Academies. He will speak to the research on informal STEM education in terms of growth, benefits, issues with evaluation, and professional development for STEM professionals wishing to communicate their passion to youth and the community. He also is interested in exploring ideas in expanding "STEM learning" beyond K-20, to look at adult learners and how the ways we communicate and learn transportation concepts as adults impacts community involvement and planning decisions.

### **Programs:**

#### **WTS International's Transportation You – DC Youth Summit & Philadelphia Transportation You Mentoring Program**

WTS is an international organization dedicated to building the future of transportation through the global advancement of women. With nearly 6,000 members, including both women and men, WTS is turning the glass ceiling into a career portal through its professional programs, networking opportunities, and unparalleled access to industry and government leaders. The [DC Youth Summit](#) is Transportation YOU's flagship conference is an opportunity for select Transportation YOU participants from across the country and their mentors to gather. For the past five years WTS Philadelphia has hosted the [Transportation YOU mentoring program](#). This effort works with a dozen women professionals (planners, engineers, accountants, etc) who volunteer their time as mentors for the 10 month program, September through June.

**Volpe Transportation STEM outreach program in Cambridge, MA.** Volpe, The National Transportation Systems Center in Cambridge, MA, has made a concerted and coordinated outreach effort to engage their staff in STEM outreach efforts to the [Cambridge public schools](#) and local colleges. While some programs include more traditional in school activities and presentations Volpe has initiated a series of additional efforts to establish more significant connections with interested and engaged students, including e-mentoring through [Netpals](#) working with [Cambridge Schools Volunteers](#), engaging 1:1 with 7<sup>th</sup> graders preparing for a Science Olympiad providing guidance on research and implementation as well as discussing careers and other opportunities; Hosting "Volpe Days" for classes from the Cambridge Schools, the UMass Boston Summer Transportation Institute, local college classes and a program for North Carolina STEM scholars to spend time at Volpe, meeting staff researchers, experiencing Volpe's labs and simulators and engaging in various conversations in the workplace. Other programs include participation in the [Cambridge Science Festival](#), Volpe TED Talks, STEAM nights in local Cambridge schools with science and research demonstrations and an emerging program working with Wellesley College on creating a multi-college effort to grow a pipeline of future workers in Big Data especially targeting women.

**Summer Brain Games at the Museum of Science and Industry in Chicago.** [Summer Brain Games](#) explore how to keep kids engaged and learning science over the summer. In 2016 the focus is on hands-on science activities related to the *theme of travel* offering eight weeks of at-home science experiments designed to combat the "summer brain drain." Kids will be on the move with experiments that teach about engineering, physics, materials science and other STEM subjects as they launch a glider, move a vehicle with propulsion, engineer a parachute and more. It's a great way for families with kids of all ages to stay active and enthused as they learn more about the world around them. Additional exhibits in the [Transportation gallery](#), or the special exhibit "[Brick by Brick](#)" also showcase how museums can be excellent year-round partners in education and stimulating interest in science generally and transportation careers specifically.

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