

Background

The Better Buildings Workforce Accelerator (BBWA) is a DOE initiative seeking to raise the level of building science and energy efficiency knowledge in the nation's building-related workforce. Through BBWA, DOE engages industry partners in activities that build interest and awareness, streamline pathways, and improve skills for green building careers.

A key factor in building interest and awareness is reaching and engaging with students early on, from kindergarten through high school (K-12). To discuss this topic, BBWA hosted a Peer Exchange event to share resources, foster understanding, and support communication between BBWA partners and the K-12 education community.

The top reasons attendees cited for not engaging with each other more included lack of relevant resources, time, or knowledge of who to contact.

To address these barriers, this fact sheet consolidates lessons learned and valuable resources to help green building trainers and employers connect meaningfully to K-12 students and educators.

Key Findings

Attendees and presenters highlighted some best practices to make effective and efficient connections with K-12 students and educators:

► The importance of real-world learning.

Curriculum and classroom-based learning are necessary and important, but many participants shared that the best way to teach concepts and get students excited about careers is through hands-on and in-person learning opportunities. These could include site visits or field trips, hands-on training with tools and technologies, and Virtual Reality tools, or actions like installing a window on the career and technical education (CTE) classroom or building utility room door or removing ceiling tiles so students can see how things work and start to ask questions.

► The benefit of personal interactions.

In alignment with the previous finding, offering opportunities for students to interact directly with industry professionals can make the careers seem more real and help students identify better with them. An easy way to do this is for industry professionals, especially school alumni, to visit and talk to classes about their education or training journey and what they do on a day-to-day basis.

► The value of local connections.

Building on the findings above, event participants – particularly educators – shared that the best way to build the green buildings workforce pipeline is to create connections between education and industry at the local level. This can start with simply calling local schools to connect STEM and CTE teachers with local industry and training professionals. For developing new high school programs, finding a local champion in the school or district is key to sustaining success.

► The necessity of proper messaging.

The green building and construction fields continue to struggle with image and perception issues, particularly with parents of students. Professionals and recruiters should highlight the growing role of technologies, social and environmental benefits, and family-sustaining wage opportunities in green buildings careers.

Ready to start engaging with K-12 students? Follow these easy steps:

1. [Visit Advance CTE's webpage](#) for details on CTE programs and contacts for your state.
2. Introduce yourself to a local STEM or CTE teacher and offer to do a classroom presentation, or host students on a tour of your job/training site.
3. Provide students and educators with career flyers, information about entry-level job opportunities, and other resources.

Table 1. Resources for engaging with the K-12 education community around green building

Resource Name	Description
Career Pathways Resources	
Green Buildings Career Map (IREC)*	Interactive tool to explore job and career progression opportunities in the green buildings and energy efficiency industry
Green Building Careers Page (USGBC)*	Quiz and information to explore interests and get personalized recommendations for green building career pathways
HVAC-R Career Map (IREC)*	Interactive tool to explore job and career progression opportunities in heating, air conditioning, and refrigeration technologies
O*NET Career Exploration Tools (DOL)*	Career exploration and assessment tools to help workers consider and plan career options, preparation, and transitions more effectively
Curriculum, Learning Activities, and Training and Education Programs	
ACE Mentor Program	National program that connects students with professionals in architecture, construction, and engineering through internships and mentoring.
EERE Education Resources (DOE)*	Energy introduction videos, energy coloring books, and other resources for teachers
Energy is Everything	Standards-aligned STEM and environmental curriculum and supplies for teachers
Energy Kids (EIA)*	Energy-related activities and other resources for teachers, including energy efficiency
Engineering Mindset*	YouTube channel with short videos on a variety of relevant topics, including HVAC, heat pumps, and energy
Green Strides Resources (ED)*	Resources for schools to improve sustainability of their buildings, facilities, and classroom education
Learning Lab (USGBC)	Hands-on green building curriculum and resources for K-12 educators
Lorax Activities (EPA)*	Games and activities for kids related to energy efficiency and saving the environment
Multi-craft Core Curriculum, (NABTU)*	Resources for high school counselors and teachers with information on building trades, apprenticeship models, and certification programs
Curriculum Resources (NEED)*	Energy guides, curriculum, and other resources organized by grade level and topic, developed in partnership with DOE
Renewable Energy Teaching Materials (CREATE)*	Standards-aligned lesson plans for high school, community college, and technical schools, including energy management and efficiency
Energize Schools (SEI)*	Standards-aligned sustainability curriculum, activities, and certificate opportunities
Solar Decathlon Building Science Education Series (NREL)*	Video modules and learning objectives for the design of energy-efficient buildings
STEM Careers Coalition*	Standards-aligned classroom activities, organized by grade level
Tiny House Design (ORISE)*	Lesson plan for designing a tiny house for middle school and high school students
Youth Apprenticeship Information (DOL)*	Career-focused activities, resources, and guides for engaging middle school and high school students in apprenticeship opportunities
Case Studies and Local Opportunities	
SEAT Program (LAUSD)	Los Angeles student energy auditor training program
Heroes for Zero contest (LAUSD)	Los Angeles student team competition to make schools more energy-efficient
Solar One (Green Design Lab)	New York State K-12 program for applying STEM skills to solve environmental challenges

* Indicates site which provide some or all resources for free

For more information and resources, visit the [Better Buildings Workforce Development portal](#).