

# Oregon Building Congress

**Building A Better  
More Diverse  
Construction Workforce**



# Turning Challenges Into Opportunities

Oregon Building Congress (OBC) brings educators and businesses together to achieve the shared goal of developing better-prepared applicants, including minorities and women, to the building industry. OBC's innovative programs combine academic and technical education, using the building industry as a model. Educators discover that construction provides hands-on examples of how math, science, English and social studies are actually used to build things. Businesses and governmental agencies recognize OBC's work as an investment in building a quality workforce, the very fabric of our economic well-being.



## Educating Our Future Workforce: a Shared Challenge

The building industry faces a critical shortage of properly skilled workers with a good work ethic. Educational institutions face mounting obstacles from educational reform requirements and continual budget cutbacks. Educators, while attempting to impart to students the relevance of academic subjects, are generally unaware of the value construction brings as an applied teaching model. Moreover, there is an abundance of misinformation about careers in construction. The result is students with little or no exposure to the building industry as a potential career path.



## Tools of the Trade: Programs in Action!

OBC partners with teachers, businesses, public agencies and apprenticeship training centers to deliver hands-on, innovative outreach programs, including the Construction Academy, the Green Building Initiative, Math and Science Teacher Workshops, as well as our unique *Building Futures* magazine.

These programs are igniting the imagination and motivation of students and teachers, while dramatically improving the image of the industry.

**Our Mission:**  
Partnering with educators to increase the quality and diversity of entrants into the building industry.

Invest in Tomorrow's Workforce, Invest in the Oregon Building Congress

# Building Futures

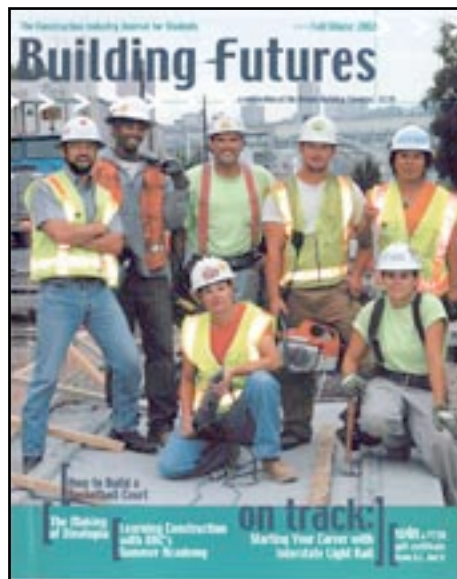
## Your Information Vehicle to Tomorrow's Workforce

*Building Futures*, OBC's magazine for students and teachers, plays a critical role in bridging the knowledge gap about construction careers. It serves as a valuable resource by demonstrating what the industry needs in its workforce and what students must do to prepare for construction careers. *Building Futures* reinforces the need for on-the-job skills in math, science, project management, team building and communications, as well as the value of a good work ethic.

### Building Futures Magazine

- ▶ Informs students and teachers on career opportunities and resources
- ▶ Tells stories of first-hand experiences in the trades
- ▶ Shares insights about the development of major building projects
- ▶ Educates students about scholarship opportunities in community college and university construction programs
- ▶ Delivers real-life teaching applications and lesson plans
- ▶ Gives businesses an opportunity to recruit through sponsorships and advertising

20,000 copies of *Building Futures* are distributed to high school and community college students in Oregon and Southwest Washington twice a year.



Sponsorship and Advertising Opportunities for Progressive Businesses

# Math & Science Teacher Workshops

## Application Builds Excitement!

Started in 1997, the Summer Teacher Workshops have attracted over 400 teachers interested in infusing their lesson plans with real world experiences. In a week-long program they learn how basic math, algebra, geometry, trigonometry and science are used in the trades, all while fulfilling teacher professional development requirements. Workshops are accredited by Oregon State, Portland State and Southern Oregon Universities for graduate credit, and have been held in Portland, Salem, Corvallis, Eugene, Medford and Klamath Falls.



## Bringing it Back to the Students

Our 400 teachers reach more than 36,000 students each year and the number continues to grow.

As teachers rotate through various apprenticeship and community college classes, they work directly with contractors, apprenticeship trainers and construction technology instructors. At the end of the week, teachers walk away with volumes of applied curriculum they can take back into their classrooms. And that's not all they learn; teachers are instilled with an increased knowledge about what it takes to successfully enter the building industry - and an enthusiasm for supporting careers in construction.

*"As a result of the workshops, I am now more comfortable recommending construction trades to my students."* Peter Dodson, Math Teacher, Lake Oswego High School



99% of teacher participants have rated the workshops in the upper 20% of all their professional development courses.

# Workshops Make the Grade

## Teachers are Connecting with OBC's Message About Careers in Construction:

*"After my experience with the workshops, I decided to create some construction-related lesson plans for my classes using pre-algebra on up to trig. I am using them very successfully and now have a way to show kids how math can lead to great job opportunities." Robbie Lambert, Math Teacher, Franklin High School, Teacher of the Year, Business Education Compact*



*"An apprenticeship education is not just for manual labor—it takes brains & math to be a good sheet metal, construction, or electrical worker." This teacher will "encourage" her students "to consider the trades for their future."*



*"A better understanding of how much math is still needed after high school."*

*"There are job opportunities in the trades."*

*"I always hear 'I'm not going to college, so I don't need algebra.' I've learned here—they do need algebra."*

*"This is the first time I have ever gotten information on how kids can apply math."*

*"The fact that math was used so extensively in the trades was amazing."*



*"This is the best class I've attended. It really showed how and where students use math in different trades."*

# The Construction Academy

## Summer Programs for Motivated Students!

To truly make an impact in advancing construction careers, OBC knew it must not only reach out to educators with the Teacher Workshops, but also directly reach out to the students. The Construction Academy was a natural outcome of the success of the Teacher Workshops.

The OBC Construction Academy provides hands-on construction experience to students. The programs are designed to show students how math, science, and other academic subjects are applied in the construction industry. Younger students spend three to five weeks of summer school rotating through apprenticeship training centers, while older students work on construction projects on public lands for an eight-week period.



### Goals of the Construction Academy:

- ▶ Practice safety and a strong work ethic
- ▶ Emphasize how math and science are used in the building industry
- ▶ Explore apprenticeship programs and how to enter them
- ▶ Discover technical and managerial careers in construction

The cornerstone of the program is to learn what is needed to be an employable worker, such as calculating, writing, speaking, listening, problem solving, taking responsibility and becoming a team player. Students acquire an appreciation for the relevance of their academic course work and emerge with greater confidence about their abilities and their career opportunities.



### Diversity is Part of Our Mission

Staying true to our mission, OBC designed and implemented a four-week Construction Academy program at Benson High School to attract more minorities and women into the construction trades, funded by a grant from the City of Portland. In partnership with Educational Service District 112, a six-week, all-girl Construction Academy was implemented, attracting 12 young women. Attracting women and minorities will always be a measure of our success.



# A Green Construction Academy

## Building Green: The Next Generation of Builders

In preparing students to be members of the building community, OBC has integrated its “Building Green Initiative” into the Teacher Workshops and Construction Academies. Educating students about sustainable construction gives them a competitive advantage in the marketplace, and provides employers with a valuable asset to their team.

Environmental education was first incorporated into OBC’s Construction Academy in 2003 through a partnership with Clackamas County’s Environmental Youth Corps. It included information on the maintenance, growth and harvesting of sustainable forests, efficient energy usage, proper site preparation, use of sustainable products, clean air, proper deconstruction techniques and recycling.

*“These kids, over the course of the summer program, changed their attitude toward the environment. They started taking greater care in how they conducted their construction activities.”* Katie Aylward, Coordinator for Clackamas County Environmental Youth Corps



OBC’s goal is to introduce green building practices in all high school and community college construction technology programs in Oregon and Southwest Washington.

*“We did more than make things – we learned real life skills and the meaning of hard work. The most important thing to me was learning how to apply the math we are taught in real life. We learned that, if you don’t know how many cubic yards of concrete it takes to fill the form or how many shingles you need to cover the roof, you will never amount to much in the construction world.”* Charles Jost, student of the Medford Construction Academy

*“At school, math can be confusing, but whenever I actually use it in a project - like measuring stuff out and using math to build something - it gets so much easier,”* Brandy Guymon, student participant

“Most successful pilot we ever conducted because for so many of the students, ‘the lights went on.’ “  
Vancouver  
ESD 112 officials

# Be Part of the Solution

## Award-Winning Organization

- ▶ Distinguished Service Award from 50 State Directors of Professional/Technical Education
- ▶ Model for National Science Foundation Grant Award to Portland Community College and Oregon State University
- ▶ Business Partner of the Year Award from the Business Education Compact
- ▶ Two-time recipient of Paul Emerick Award for Training from the Oregon Columbia chapter of Associated General Contractors



## Help Build the Workforce of Tomorrow

Support OBC with your investment of time and money through sponsorships, advertising, OBC membership and in-kind contributions.

- ▶ Sponsor a student for the Construction Academy
- ▶ Sponsor a teacher for the Math & Science Workshops
- ▶ Sponsor the Green Building Program Initiative
- ▶ Become an OBC Member
- ▶ Advertise in the *Building Futures* magazine
- ▶ Provide in-kind contributions of expertise and materials



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