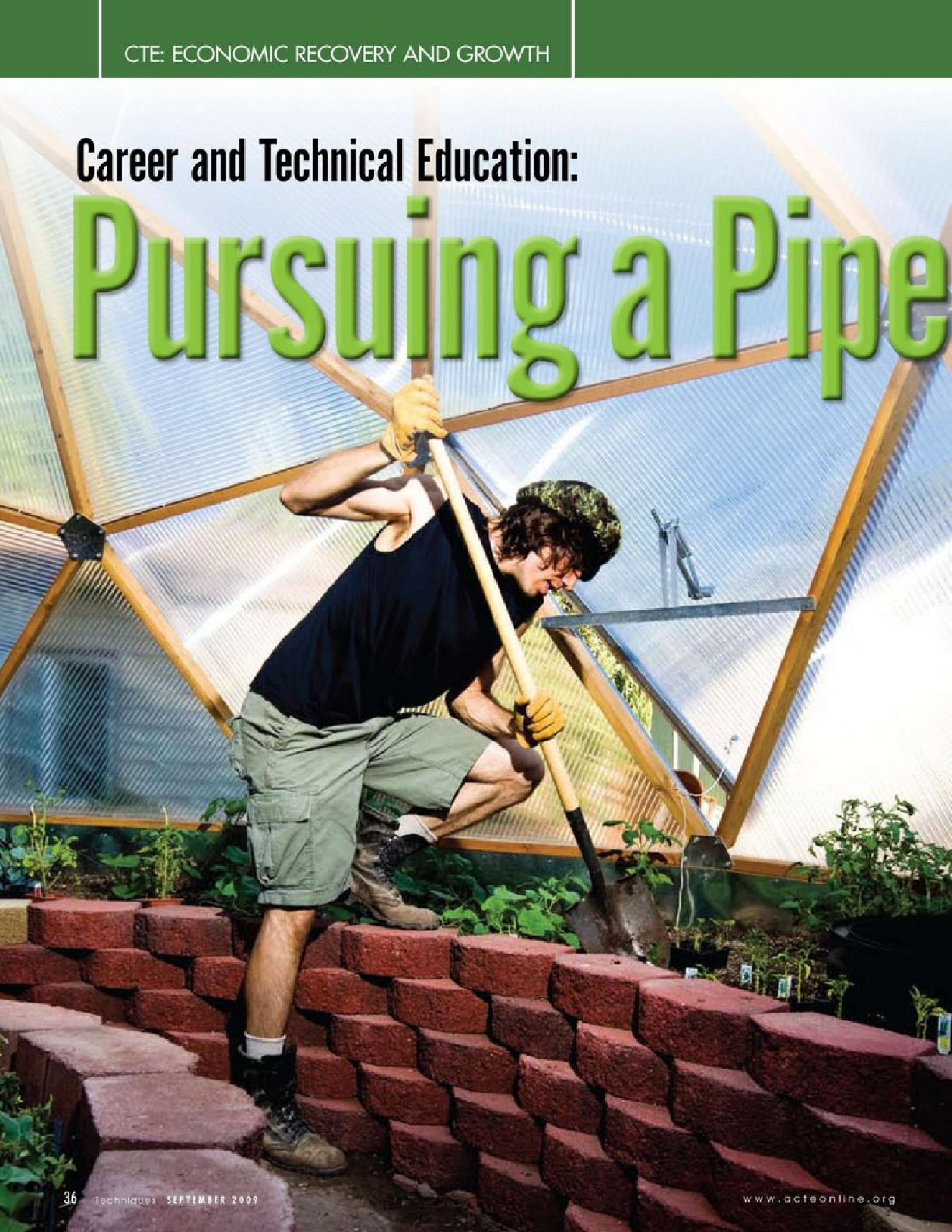


Career and Technical Education:

Pursuing a Pipe



line for the New Green Collar Workforce

BY SALLY E. ARNETT, PATTI KOZLOWSKI, PEGGY PEACH AND ERIKA VARELA

As the white- and blue-collar jobs are thinning because of the economic downturn, the economy is being rejuvenated by a new color of collar jobs—green. Green jobs encompass a range of skills, educational backgrounds and occupational profiles. The green industry has been recognized as a high-growth workforce sector because of the demand for sustainability products and services, in addition to government initiatives (*Collaborative Economics*, 2008).

Within the next 20 years, one in four Americans will be directly or indirectly employed in a green industry (Bezdek, 2007); however, reports indicate that there is a tremendous shortage of qualified individuals with the necessary skills to work in the green economic market. Despite the exploding interest in green jobs and the real potential for their development, there is a lack of a trained workforce that is hindering the development of green industries (White and Walsh, 2008). To ensure a pipeline of qualified individuals, education and training is necessary to prepare students for the industries into which they will be entering.

Career and technical education (CTE) is posited to support the economic recovery effort. With its foundation in preparing and training the workforce, CTE is responsive to industry trends

and workforce needs. To efficiently and effectively produce skilled workers for the green industries, early career exposure is a necessity for students to consider a green career and navigate through a career pathway. White and Walsh (2008) suggested that an increased investment in career-related experiences for students during the high school years can develop practical labor market skills, thus improving their postsecondary labor market prospects.

Green-Collar Curriculum Project

Sally E. Arnett, assistant professor at Northern Illinois University's School of Family, Consumer and Nutrition Sciences, partnered with Community High School in West Chicago, Illinois, on a project titled, "CTE: Preparing the New Green Collar Workforce." A team of CTE and academic teachers developed a unit of instruction for secondary career education classes (*i.e.*, consumer education, cooperative education).

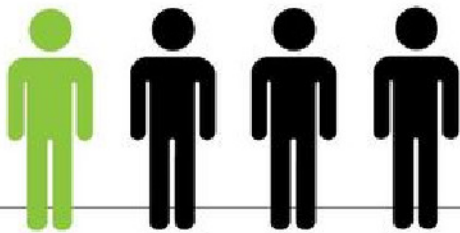
The purpose of the curriculum is to expose students to the green-collar workforce while integrating science, technology, engineering and mathematics (STEM) in an applied context. The curriculum unit contains six lesson plans with supporting materials; is aligned with the Illinois Learning Standards; details student outcomes; and identifies teacher

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and student resources. The six lesson topics are: Introduction to Green, Green Discovery Learning, STEM Connection in Green Careers, Green Career Opportunities, Green Career Pathways, and Green Skills and Green Education.

The curriculum was implemented into the career education classes at Community High School. The career education teachers customized their lessons to allow students to link career opportunities, skills needed and education pathways to the local economy of West Chicago.

Patti Kozlowski, a family and consumer sciences teacher, incorporated the unit into her consumer education course by having students engage in a problem-based learning project to initiate their interest in green opportunities. Six teams of students selected an area of need for a green issue in their school. Students researched the status of the school on topics such as the amount of paper used in



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our school. When Kevin Kane, supervisor of the school's buildings and grounds, spoke to the class he reported that the school used 5 million pieces of paper the previous year and it was increasing. Students in the classroom immediately became interested and were brainstorming ways to make a difference. The team produced a PowerPoint presentation of the breakdown of how much paper was used in each department and compared it to the number of trees needed. This team presented the information to the entire staff at a faculty meeting and provided a list of solutions to change or improve their ways of using paper.

Suggestions included: printing paper two-sided, giving electronic tests and lessons in lab situations, providing team packets instead of individual packets, and putting course syllabus online. As a result of the student-initiated projects, staff was provided with ways to save paper.

Another team presented its project at a school board meeting: a system of shredding and recycling that could be brought to the school for a small monthly fee. Currently, the school has a system of recycling that is cost effective, but the team provided alternatives. School board members e-mailed resources the Green Club could work with to keep this effort moving forward. The team members said, "Mrs. Kozlowski, this is the best project we have

done all year." Why? Students made a difference in their school and community, and perhaps this initiated an interest in seeking out jobs with a green niche.

Teaching About Green Careers

Peggy Peach, a business education teacher at the school, taught the lessons about green career pathways, skills and education to her Cooperative Work Training students. The goal of these lessons was to empower students in taking charge of their career destiny and making them realize that greening their career choice will increase their employment potential.

She emphasized, "The key to having a successful career is to ensure that the career matches your personality, passion and skills." Students completed a career interest survey such as the one found at http://ilcis.intocareers.org/jrsurvey/JrSurvey_intro.aspx.

Each student then chose a career cluster and researched it regarding the cluster's typical duties/tasks; required skills/abilities; education and training requirements; employment outlook; and pay range. Next, students chose a specific career from their cluster to modify and transform into a green career. Students created a poster board or PowerPoint presentation for their classmates highlighting the research and green modifications. This allowed all the students to be informed of

other green careers.

The next step was the educational component. Students used the U.S. Department of Education's College Opportunities Online Locator and various other sites to compile a list of specific green community college programs, university majors, online courses, certificate training programs, internships and apprenticeships.

After compiling the list, students sorted it according to role (management, technical, hands-on, nontechnical, and marketing/sales). Finally, students were placed in teams so that they could complete an information sheet listing each program's details. These details included the program's description, Web site address, completion time, educational level acquired upon completion, fees and/or tuition, educational or work experience prerequisites, and job qualifications upon completion. This experience gave students an opportunity to learn how to seek out and research green training and educational programs.

After the completion of the lessons, a group of students expressed an interest in seeking out community college programs for alternative energy careers because many of these programs would get them into careers that had positive job outlooks. Peach commented, "By implementing the green-collar workforce curriculum, these students recognized the potential of pursuing a green career and positioning themselves with a marketable future."

Looking Ahead

The green economy presents students with many job opportunities, but they need to be aware of the marketable and in-demand careers available. The "CTE: Preparing the New Green Collar Workforce" curriculum provides CTE teachers with instructional methods and materials to include in their overall career development course curricula. Educating students about the relevant workforce needs, such as green jobs, has the potential to inspire

students to pursue careers in this sector and provide employers with a pipeline of skilled individuals for the workforce demands of the 21st century.

Creating student awareness of green-collar careers can inspire the improvement of societal conditions and students' own quality of life. CTE is committed to a continued effort to empower students to pursue a greener life in their communities, and fulfilling careers. ■

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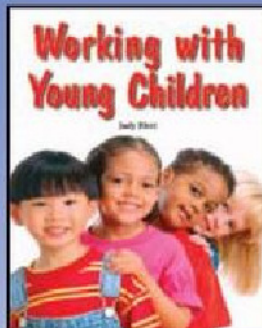
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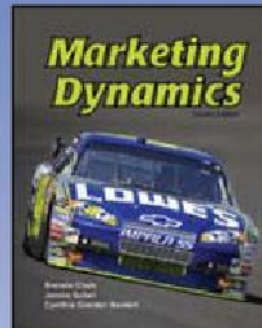


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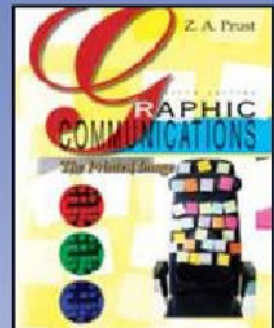
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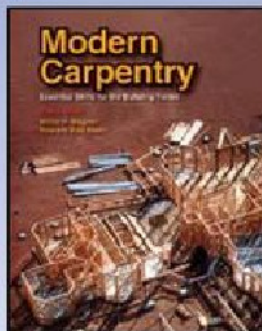
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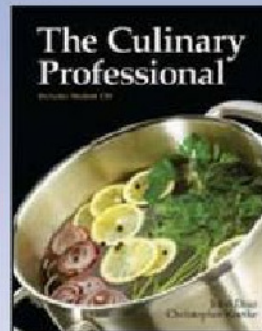
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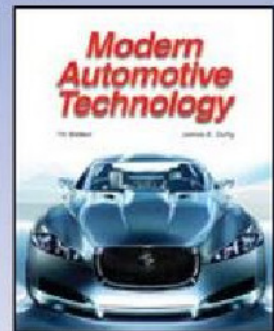
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