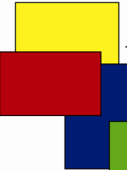
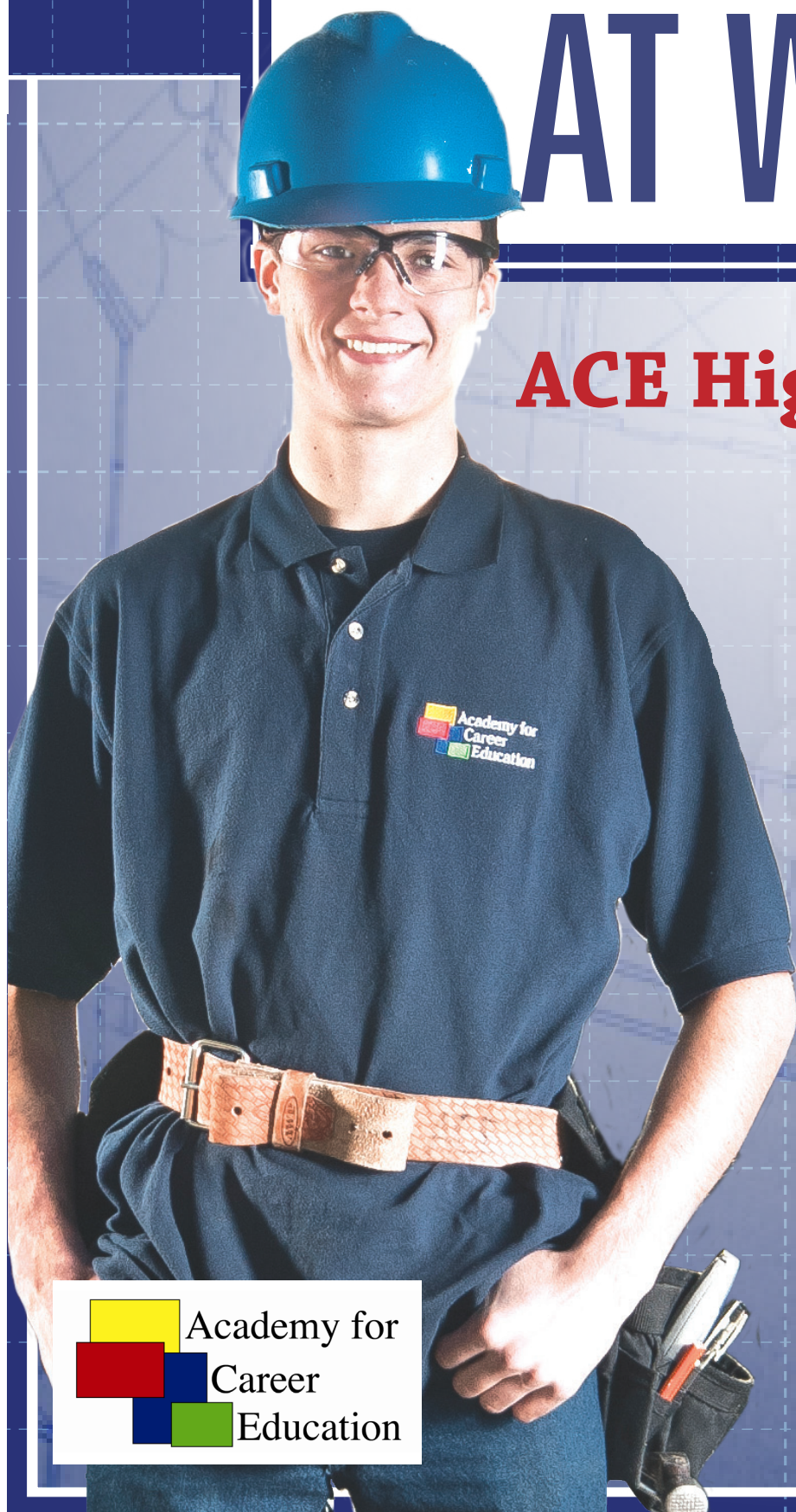




EDUCATION AT WORK

ACE High School



Academy for
Career
Education

“Students see the value of what they’re learning. We don’t hear the question, ‘Why are we learning this?’”

LEIGH BERDROW, Director/co-founder, ACE High School

Students at ACE High School complete all the regular high school courses (English, math, science) while also pursuing an education in a technical career.
PHOTO COURTESY OF ACE HIGH SCHOOL



WHAT IS ACE?

ABOUT THE SCHOOL

Tuition-free
public charter school

Founded in 2002	Grades 9-12	220 students enrolled
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Quarter system of 4 classes each day	Small class sizes: 18-to-1 student-to-teacher ratio
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- Combines traditional high school curriculum with career and technical education
- Students complete all high school graduation requirements set by the Nevada Department of Education
- Accredited by AdvancED
- Endorsed by the Associated General Contractors Nevada Chapter, the Builders Association of Northern Nevada and the Sierra Nevada Chapter of Associated Builders and Contractors

IF YOU...

- Are interested in construction and engineering careers
- Want to earn community college credit while still in high school
- Want a smaller class environment
- Want a safe and accepting school environment
- Are a resident of Washoe or adjoining counties

ACE MAY BE THE RIGHT PLACE FOR YOU!

THE RIGHT SCHOOL FOR THE JOB

ACE High School gives students an education they can use

BY MATT JOCKS

Most high school students have had the experience of working on a class project. Very few have had the opportunity to watch a family move into that project to start a new future.

Building a house from the ground up may be the most dramatic way in which a student’s experience at the Academy for Career Education (ACE) High School in Reno differs from that of a traditional school. It’s hardly the only one.

When the founders of ACE were formulating their vision for the school before its 2002 opening, the primary focus was to provide solid training in a variety of job skills for industries desperately seeking qualified young applicants.

But they wanted more. In a comprehensive public charter school, they wanted to meld academic and vocational education in a way that enhanced both. And they wanted to create a different kind of learning structure, with small class sizes and a quarterly schedule that includes fewer but longer classes.

“In our English classes, they may be reading Shakespeare one day and working on how to write technical material the next,” says Leigh Berdrow, director and co-founder of ACE. “It’s a holistic approach and the students see the value of what they’re learning. We don’t hear the question, ‘Why are we learning this?’”

The result is a school where students are engaged. Although not a credit-recovery school, ACE students often earn more credits than required to graduate. Graduates walk away from ACE with a diploma and a special Career and Technical Education endorsement. They actually earn community college credit through a partnership with Truckee Meadows Community College and are eligible to continue their education at a two- or four-year university.

But many graduates start their careers right away. ACE emerged at a time when vocational programs at traditional public schools were withering and business owners in trades like construction and diesel engine repair were wondering where the next generation of skilled workers was going to come from.

“During the boom, we were really struggling to get qualified workers. It got to the point where if someone came in for a job and [was breathing], I’d have to give him a job,” says Mike Cate, the owner of Silver State Masonry and a founding board member of ACE.

At ACE, students learn technical skills but also develop character traits that make them great employees.

“The number one thing I look for is work ethic because that’s getting harder to find,” Cate says. “These kids show up on

time, they’re disciplined. They’re focused on what to do and how to do it.”

ACE has five programs — Building Trades (where the annual house construction and sale helps pay the bills), Diesel Technology, Machining Technology, Energy Technologies and Computer Aided Drafting and Design.

The approach is to make the school as much like a workplace as possible. There is zero tolerance for drug and alcohol use and fighting, and there are strict safety measures. Berdrow says there has never been a serious safety incident, despite the use of heavy and dangerous machinery.

But there is also the individual attention that can’t be found in traditional public schools. With an average class size of 18 and a maximum of 24, Berdrow says, “It’s impossible for a student to get lost, even if they want to.”

Sometimes the results of that close attention surprise.

Berdrow recalls a group of professionals who toured the school and asked students to fill out a questionnaire. One question asked, “What’s the single best thing about the school?”

“I expected it to be something like how great it was to work with the machinery or the help in getting a job,” Berdrow says. “Instead, it was that ‘the teachers care about us.’”

Julian Jacinto says ACE High School's Freshman Success Program helped him learn time management skills.

PHOTO BY GIL FOLK

“[Freshman Success] helped me a lot with planning and thinking ahead.”

JULIAN JACINTO, ACE High School junior



“[Freshman Success] helped me a lot with planning and thinking ahead.”

JULIAN JACINTO, ACE High School junior

Most high school freshmen probably don't know what the term "time management" means. But at ACE High School, the term is an integral part of first-year students' curriculum.

"It helped me a lot with planning and thinking ahead," says Julian, now a junior at ACE. "It's helped me manage my time with school and other activities."

planner, which parents sign on a weekly basis. Julian says he's used those skills to balance school and activities (he also does mixed martial arts).

ACE freshmen are a couple of steps ahead of traditional high school students in another way, too. By the end of ninth grade, ACE students already have a pretty good idea of what they want to pursue after high school, thanks to the career exploration component of the program.

teachers, and by the time they're juniors and seniors, students have more responsibilities and expectations are higher.

"He's motivated to go out into the workforce because of what he learned," she says. "It's a great stepping stone."

to pursue college, she appreciates the work ethic ACE has instilled in her son. For Julian, he's found that going to ACE is simply a better way to learn.

Julian plans to attend Truckee Meadows Community College after he graduates. He's been concentrating on carpentry in the Building Trades program, and would like to start his own business. No matter what he ends up doing, the 17-year-old has developed a strong work ethic and other tools that will make him successful.

ACE has been a big part in making that difference. And Julian was well aware of that fact when he decided to attend ACE three years ago.

HELPING STUDENTS SUCCEED — FROM DAY ONE

The first year of high school can be difficult. There's a lot going on — new teachers, difficult subjects, social pressures. Students could start to fall behind.

Adam Nicely, the assistant principal at ACE High School, says the Freshman Success Program helps by giving students tools to succeed, not only in school, but in life.

"At the end of the day, we're trying to make them productive employees," Nicely says.

The program aims to teach students the study skills, time management and communication that will put them on track for a successful high school experience. It pairs students with a mentor teacher who bolsters success in the classroom. Another component of Freshman Success allows students to explore the different career programs available at ACE, before they choose their “major” during sophomore year.

THE RESULTS HAVE BEEN GOOD:



No ACE freshman is credit-deficient by the end of the year



A majority have perfect attendance



Most students who start ACE as freshmen graduate with 25 credits (and several college credits, too)





ACE PREPARES STUDENTS FOR EXCITING CAREERS

BY MIKE BLOUNT

ACE High School trains students so they are prepared to work in the following careers:

BUILDING TRADES

The Building Trades program teaches everything that is involved in residential construction, and sometimes the classroom is an actual home build site. Students construct a single-family home from the ground up while learning about building layouts, electrical wiring, carpentry, masonry, concrete, exterior and interior finish, surveying, code requirements, insulation, sheetrock, landscaping, plumbing and roofing. Students enrolled in the program earn their 10-hour OSHA certification, as well as up to 21 college credits toward a construction management degree. Graduates from this program can go on to work as contractors, journeyman plumbers, carpenters, electricians, masons, project managers and engineers. Students enjoy applying the concepts they learn in the classroom to the build site, says instructor Tony Clark.

"For example, at the same time the geometry teacher may be teaching how to calculate the hypotenuse of a right triangle, we are teaching students how to calculate the length of a rafter using that formula," he says.



COMPUTER AIDED DRAFTING AND DESIGN (CADD)

Before something can be built, it first needs to be designed. The Computer Aided Drafting and Design (CADD) program gives students the opportunity to sketch designs, learn engineering concepts and manufacturing processes, and master translating an idea from paper into a 3D computer environment. Designs created with CADD are used in the manufacturing of many items, including automobiles, toys and industrial machinery. CADD drawings are also used in several industries including landscaping, building, stage design and city planning. Students earn college credit through the program and graduates can go on to work as mechanical engineers, architects, project managers and CADD technicians.

"Students who are really creative and are looking for an outlet for that creativity can do very well in this program," says Jon Stamps, CADD instructor at ACE. "We use the latest software to help them get their ideas out into the world."



MACHINING TECHNOLOGY

Modern machines are an exact science. They can create products precisely — down to one thousandth of an inch, according to instructor Laure'l Santos. The Machining Technology program at ACE trains students on how to use and maintain these complex machines, which create everything from the molds for plastic products to the food that ends up on grocery store shelves. Students enrolled in the program learn about blueprint reading, machine maintenance, quality control, engineering, metallurgy and using the 3D computer program MasterCAM. Students earn their OSHA safety card and a Computer Numerical Control (CNC) certificate to operate heavy machinery. Graduates can go on to work for large manufacturing facilities.

"Students who are really detail-oriented and have strong math skills to deal with the perfections of using machinery will like this program," Santos says. "Machines make everything, so there are a lot of opportunities for someone who is interested in this field."



DIESEL TECHNOLOGY

Diesel powers such important equipment as bulldozers that clear out debris for new homes and the trucks that transport goods all over the country. There is always a need for qualified technicians to repair and maintain them. The Diesel Technology program at ACE helps students achieve a Diesel Power Technology certificate and OSHA safety card. Students earn college credit while they learn about diesel engines, steering and suspension, beginning and advanced electrical wiring, preventive maintenance and repair. Graduates from the program can go on to work as diesel mechanics, engine maintenance providers, farm equipment mechanics, service engine repairers, tune-up mechanics, industrial and construction equipment mechanics and truck mechanics.

Instructor Cliff Bartl says the program is a good springboard for students to move into very lucrative careers in diesel technology.

"There is a lot of equipment they can work on after they graduate," Bartl says.



ENERGY TECHNOLOGIES

Thanks to demand for cleaner and more sustainable solar energy, energy technology is one of the fastest growing industries. The Energy Technologies program at ACE helps prepare students to find a career in renewable energy while they also earn college credit. Instructor Tony Clark says students learn about passive solar strategies, geothermal pressure, wind turbines and retrofitting residences and businesses with solar energy panels.

Clark says the career paths are numerous, and students who graduate from the program can go on to work in solar systems engineering, electrical engineering, solar installation and management, photovoltaic production, product design engineering and system designing.

"This is one of the most exciting fields to move into right now," Clark says.



PHOTOS COURTESY OF ACE HIGH SCHOOL



For more information on career programs at ACE High School, visit acehighschool.org/programs.



Brett Butler says he enjoys working outside and the creativity involved in the construction trade, which he got to experience firsthand while building a “tiny house.”
PHOTO BY GIL FOLK



PHOTO COURTESY OF
TUMBLEWEED TINY
HOUSE COMPANY

“One thing I pulled from the experience is teamwork. There’s not a whole lot you can do by yourself.”

BRETT BUTLER, ACE Building Trades student



ACE’s Tiny House Project gives students hands-on experience in construction skills

Not many high school students get the chance to implement what they’ve learned in the real world. But students in ACE High School’s Building Trades program get to demonstrate all the skills they’ve learned in one big project.

Well, actually it’s kind of small.

This semester, students are building tiny houses, which are smaller living spaces built on trailers. The concept has become popular for its cost, efficiency and mobility. Although students have built several regular-sized homes in the past, students are currently working on three of these 188-square-foot dwellings in conjunction with the Tumbleweed Tiny House Company. The houses include solar panels and have full showers and low-flush toilets.

“They’re excited,” says ACE co-founder Ed Horan of the students. “They say, ‘I could live in one of these — this is nice!’” But the real treat comes when the work is done. “The pride — when they bring their parents to see it — is the best part.”

Horan, who’s been teaching almost 40 years, has played a huge part in shaping the school’s Building Trades program, which gives students hands-on skills in construction, including plumbing, electrical, masonry and even drafting.

But many young people who would enjoy this type of work aren’t getting the opportunity to learn how to do it. According to a 2013 article in Forbes Magazine, 53 percent of skilled-trade workers in the U.S. are 45 years old or older.

The Associated General Contractors of America has reported that nearly three-quarters of construction firms struggle to find qualified workers.

“Society in general doesn’t value people who work with their hands,” Horan says.

ACE is working to change that, one student at a time. Senior Brett Butler was drawn to the Building Trades program because his father is a contractor.

“I was always interested in construction, so I knew I’d enjoy it,” he says.

And he really took to it. The 17-year-old says Building Trades offers so much for students. He’s been in the construction program for three years now, and says working outside, being creative and the smaller class-sizes are ideal for learning.

“I’ve attended traditional high school, and ACE was the best thing for me,” Brett says. “It’s definitely better than traditional high school.”

Brett already does a lot of the plumbing work on his mother’s house, and he knows it will come in handy when he owns his own home. His skills even led to recognition — Brett is a two-time Nevada SkillsUSA gold medal winner in plumbing and placed 15th in the nation in 2013.

Whatever he decides to pursue after high school, his experience in ACE’s Building Trades program has left him with skills that will serve him the rest of his life.

“One thing I pulled from the experience is teamwork,” he says. “There’s not a whole lot you can do by yourself.”

BUILDING A FOUNDATION FOR COLLEGE

There are real benefits to attending ACE. Not only are students learning skilled trades, they’re already earning college credit.

There are a couple of ways students can do this at ACE through a partnership with Truckee Meadows Community College (TMCC):

- Students who take Building Trades and Computer Aided Drafting and Design at the high school can earn community college credit for a comparable course, as long as they earn at least a B.
- Under “dual enrollment,” ACE students actually take college courses at TMCC, which gives ACE students access to advanced machining workshops the high school couldn’t afford to maintain on its own. Most college workshops are underused during the day, when many adult students are at work, so letting ACE students use the facility is an efficient use of taxpayer dollars.

If ACE students take Machining or Diesel Technology for three years, they can receive a certification in that program from TMCC. ACE students also don’t have to pay tuition for these courses (it’s currently \$84.50 per credit), with ACE picking up the bill. Win-win.

“[ACE] gave me a sense of direction. I’m pretty satisfied with where I’m at today.”

JUSTIN EDWARDS, ACE High School graduate



Justin Edwards says ACE High School gave him the focus and training he needed to move into a career he enjoys in the construction industry.
PHOTO BY GIL FOLK

THE SKILLS TO PAY THE BILLS

BY MIKE BLOUNT

Former ACE student found focus and career through program

Like most teens in high school, Justin Edwards didn’t think about the future beyond next Friday night. When asked what he wanted to do in life, he would tell people a variety of things. At one point, he heavily considered joining the Marines. But Edwards, now 23, says ACE became the guiding force that helped him find a career and who he is today.

Edwards says he chose the Building Trades program because his father worked in the construction industry. But he had never actually worked on a site before. Once he started at ACE, he was immediately taken with the environment.

“I jumped right into framing a wall and running electrical wires through a home,” Edwards says. “It was just a whole lot of fun for me because there are so many things going on. You’re getting multiple job scenarios in one big project. It impressed me.”

Edwards says that — unlike a traditional high school — everything he was learning at ACE had a real-world application. He also liked that he was being graded and receiving feedback as he was working on projects.

“It’s a very fast-paced environment, but I liked that it was hands-on and you’re learning exactly what you would be doing on a job site,” Edwards says. “There is a lot of opportunity to get exposure to many different industries and learn how to use different equipment. You’re learning about

concrete, carpentry, painting, drywall, masonry — you name it.”

By the time Edwards graduated in 2010, the transition into a career was a natural one, he says. Through ACE, he received a basic residential construction certificate, an Occupational Safety and Health Administration card and college credit, which put him on track to earn an associate degree in construction management. Through a contact he met while in a leadership and training course he attended via ACE, he found his current employer.

Today, Edwards works as a contractor salesman and dispatcher at Basalite Concrete Products in Sparks. His boss, Gordon Hinkle, says hiring Edwards was an easy choice.

“He’s done a heck of a job for us,” Hinkle says. “He just gets it. If I can get someone with a little bit of experience who knows the specific trade we’re involved in instead of someone who is totally green, I will take that any day.”

Edwards is continuing to work on his associate degree when he is not working. He is happy with the path ACE put him on and looks forward to having a long career in construction.

“I wouldn’t trade going to ACE for any traditional high school experience,” Edwards says. “Everyone there was focused on what they wanted to accomplish, and it gave me a sense of direction. I’m pretty satisfied with where I’m at today.”

AN INDUSTRY-SUPPORTED SCHOOL



Dale Lowery recruits ACE students to work for him at his business, D & D Plumbing, because he believes the school is providing a valuable service to the community: They are developing a skilled workforce. Currently, he has four graduates working with him.

ACE is supported by many professionals, who serve as its advisers, teachers and board members. Lowery says he joined ACE’s governing board in 2003 after he started seeing a lot of the high schools in his area phase out vocational programs in response to budget cuts.

“It definitely left a big hole,” Lowery says. “Not everyone is going to go to college. I began to realize how important ACE was to local businesses and started to get involved in their career programs.”

Lowery says he was immediately impressed with the program and the dedication of its students. He’s been a partner with the school ever since.

“I think ACE gives students the right attitude going into a position or field,” Lowery says. “Some of them may go on to college, but the career programs give them an avenue to find out what else is out there.”



ACE High School students have regularly participated in the national SkillsUSA Championships in Kansas City, Mo., where students demonstrate their knowledge of trade skills. PHOTO COURTESY OF ACE HIGH SCHOOL



THE WINNING SPIRIT

Skills competition gives ACE students a chance to shine

BY MATT JOCKS

There are no baskets, no cheerleaders and no referees in striped shirts. But the gym is like nothing you have ever seen.

When Alex Street walked onto the competition floor at Bartle Hall in Kansas City, Mo., for the national SkillsUSA Championships, he was more than a little overwhelmed. The competition hall covered the space of 16 football fields and in Street's competition, diesel technology, there were 22 stations.

Over a full day, Street would inspect, analyze and diagnose just about every system a car or truck has. He wound up with a 12th-place finish out of 48 and an accompanying sense of accomplishment.

"It was one of my favorite experiences. The competition was one day but we had five days total, so we had a chance to visit the museum and socialize with people from industry," says Street, now 22. "At 17, it was really a growing experience. And it definitely gave me a sense of achievement. You're competing against the best of the best."

As a charter school geared toward career preparation, ACE doesn't have the usual extracurricular activities such as sports or the performing arts, although ACE students can participate in those activities at their local

traditional school. At ACE, students have SkillsUSA, a competition held at the state and national levels in a full array of disciplines, including construction, drafting, electronics and Street's specialty, diesel technology.

Cliff Bartl, a Diesel Technology instructor at ACE and an adviser for the ACE skills team, said the competition does take the place of traditional extracurriculars, but with one important difference.

"When I was a kid, I raced a lot of motocross," Bartl says. "I had dreams of being the next Jeremy McGrath, but the truth is that a very low percentage of people will get the chance to go to that level. Here, we are teaching real skills that they can take into the labor market, where a lot of them can make six-figure salaries."

He added that a company from Idaho had just visited ACE to recruit some of its students — not unlike the college scout who covets the star high school football player for his team.

Street competed in soccer for the public school in his home attendance area. He said the nerves and competitive juices for the SkillsUSA competition were similar. Street remembers the state competition awards ceremony, where the winners were counted down from 10th to first.

"It was nerve-racking, not knowing if I'd even make the podium," says Street, who ended up as the last name called — he took first place.

Seeing a student like Street, who initially was reluctant to compete, get to experience the accomplishment that comes from participating in SkillsUSA is Bartl's equivalent of making the podium.

"One thing about the competition is that it separates the wheat from the chaff," Bartl says. "You can say you know this stuff but then, you've got to go out and prove it."

"It definitely gave me a sense of achievement. You're competing against the best of the best."

ALEX STREET, former SkillsUSA participant

SKILLS FOR WORK — AND LIFE

While many students will apply the skills learned at ACE directly to a related career, many will not. It doesn't mean their time at ACE won't help them.

What is learned during preparation for the skills competition or through the school's Leadership Program isn't just applicable to specific jobs.

"We're talking about work ethic, analytical skills, attention to detail," instructor Cliff Bartl says. "You can take those things wherever you want to go."

The Leadership Program entails inclusion of all students in the SkillsUSA program, a broad-based method of instruction that includes character building and leadership training, as well as specific skills. Older ACE students are also put in management and leadership positions to mentor younger students.

For the students who choose a different path than the specific career they trained in, school director Leigh Berdrow says the benefits can range from skills that can be used around the house to general life skills to increased confidence.

"We tell them, don't think of it as school, think of it as a job," Berdrow says. "I think we help them prepare for the real world. And that's transferable."



READY TO GET TO WORK?

Find out more about ACE High School

Academy for Career Education is a **free, public charter school** where education meets the real world. Find out more about how your student can get the skills to work in an exciting and lucrative career that he or she will love.

Go online: Find information about career programs, testimonials from former students and more at www.acehighschool.org.

Schedule a "shadow" visit: Come see education at work! Students can spend the day shadowing a current ACE student to get a feel for the school. Call **775-324-3900** to schedule a shadow visit.

Support ACE: If you are interested in becoming an ACE supporter, please call the school at **775-324-3900**, stop by for a visit, or email tsullivan@acehighschool.org.

Enroll: Visit www.acehighschool.org/enrollment to print out an application (up-to-date transcript required). Submit all completed paperwork one of the following three ways: Fax: 775-324-3901 | Standard mail: 2800 Vassar Street, Reno, NV 89502 | Email as a PDF attachment: tsullivan@acehighschool.org



TOP 5 QUESTIONS ABOUT ACE

1. What is a charter school?

Charter schools are public schools that give parents the freedom to choose the best learning environment for their student.

2. How much does it cost?

It's free!

3. What makes ACE different?

Small class sizes and a proven curriculum that combines traditional subjects with career and technical education.

4. What career programs are offered?

Building Trades, Machining Technology, Diesel Technology, Computer Aided Drafting and Design (CADD) and Energy Technologies

5. Who can attend?

Any eligible high-school-age resident of Washoe or adjoining counties.



Academy for
Career
Education

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