

# Ashe County Schools Career and Technical Education



Learning that works for North Carolina

## CTE™ AT-A-GLANCE

The mission of CTE is to empower students to be successful citizens, workers and leaders in a global economy.

### ACMS Participation

7<sup>th</sup> 261

8<sup>th</sup> 282

### ACHS Participation

9<sup>th</sup> 145

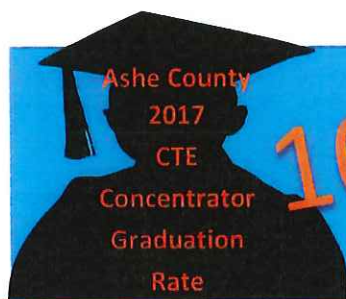
10<sup>th</sup> 173

11<sup>th</sup> 138

12<sup>th</sup> 155

2017/18

90% Proficiency on  
CTE Post Assessments



Ashe County  
2017  
CTE  
Concentrator  
Graduation  
Rate

100 %

819  
CREDENTIALS  
EARNED

2017/18 CTE CONCENTRATORS

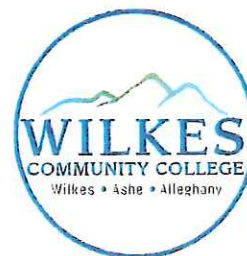
97



### Articulated Credit

2017/18—228

2018/19—108

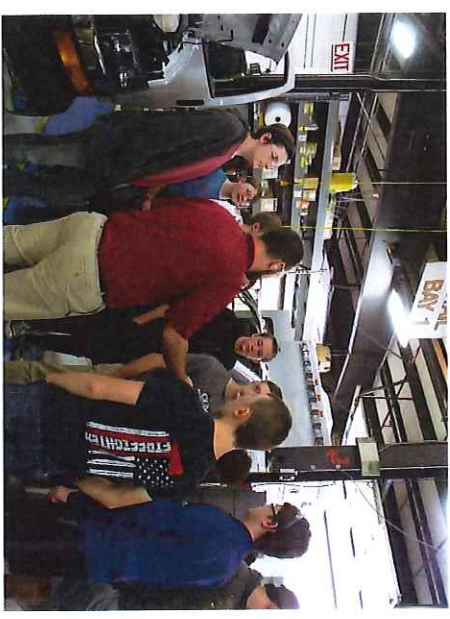


# **Ashe County Schools Career and Technical Education**





# CTE establishes a STEM Tour of local industries for High School and Middle School students.



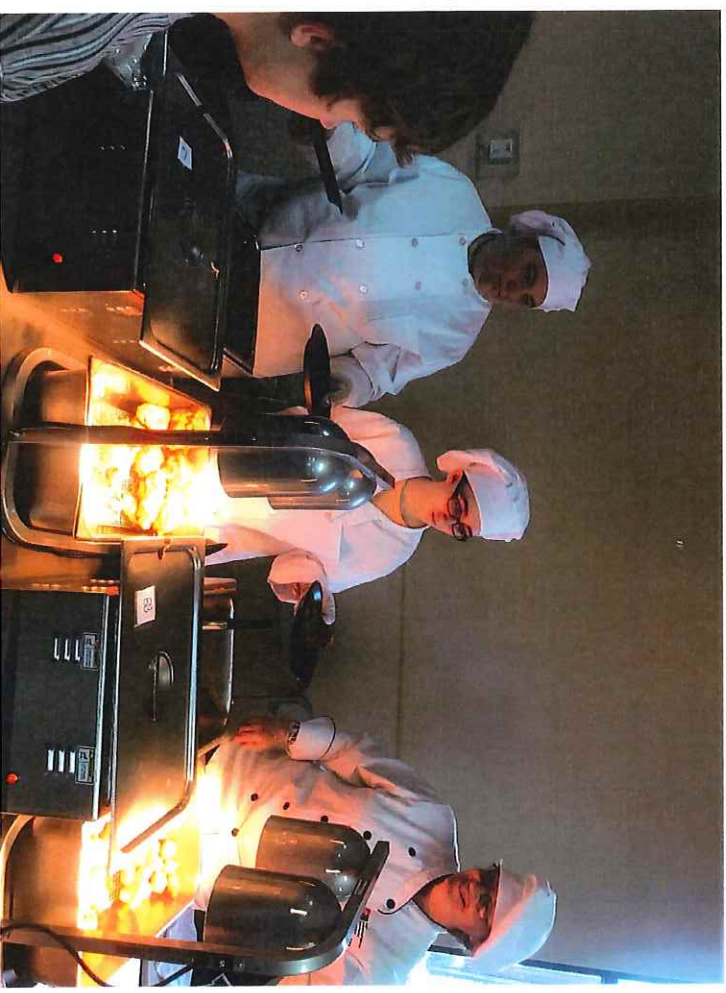




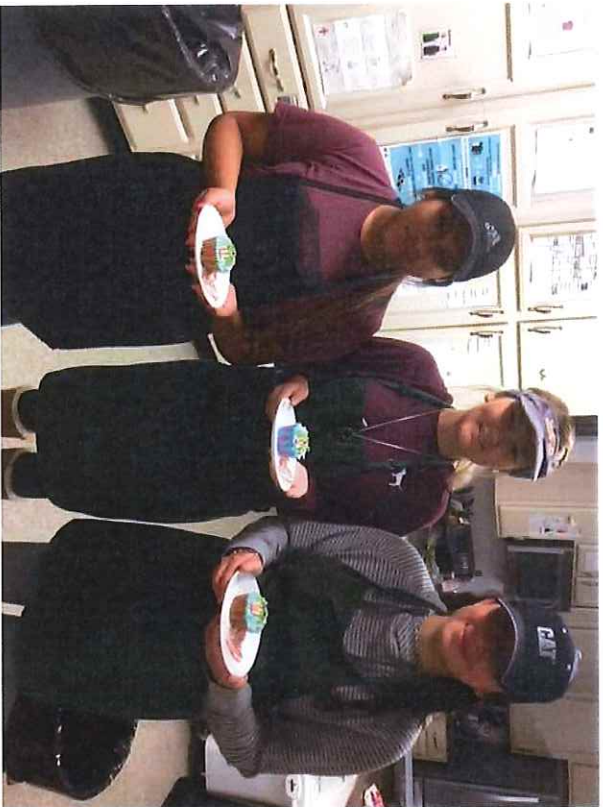
Mrs. Sturgill's Culinary students experience working in a commercial kitchen setting at ASU/competitions



Mrs. Sturgill's Culinary students assist by serving at the 10<sup>th</sup> grade STEM Tour Lunch and Learn.



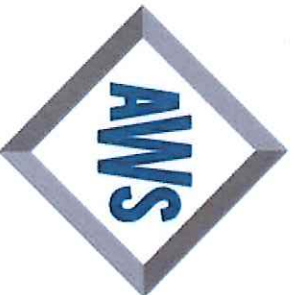
# Foods students compete in team “Cupcake Wars” competition



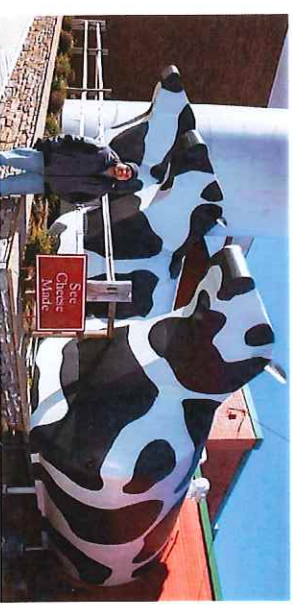


# Rusty Rogers spearheads the new NC welding curriculum and certification design.

Mr. Rogers states: "I am proud to say that Ashe County has been spearheading the change in that we are the first high school in NC to attempt AWS SENSE certification for students. This caught the eye of James Pressly at DPI who, after seeing what we were doing at ACHS, made the decision to steer all of the welding programs in NC towards AWS certification instead of the NCCER certification they were currently using. This was the logical thing to do in interest of the students since AWS certifications have been the industry standard for many years and is more readily recognized in the welding industry than NCCER. I personally believe it is a point of distinction when the state director looks at what we are doing here in Ashe County and is inspired to model the state curriculum after our initiative."



**American Welding Society**



Mrs. Griffith's Career Management students experience the ins and outs of marriage in a Marriage Project. The pairs create Power Points on expenses, Careers, Goals, and issues involving marriage and its outcomes.



\$6,250/mo
\$500/mo-Child Support
\$200/mo-Alimony
\$225/mo-Gym
\$200/mo- Credit Debt
\$840-Meals
\$150-Diabetic Supp.
\$225-Medical Insurance
\$1,125-Airline Tickets
\$350-School Clothes
\$379-Car
\$1,623-House Payment
\$67- Insurance
\$180-Taxes
\$116.52-Utility Bill
\$38.52-Life Insurance

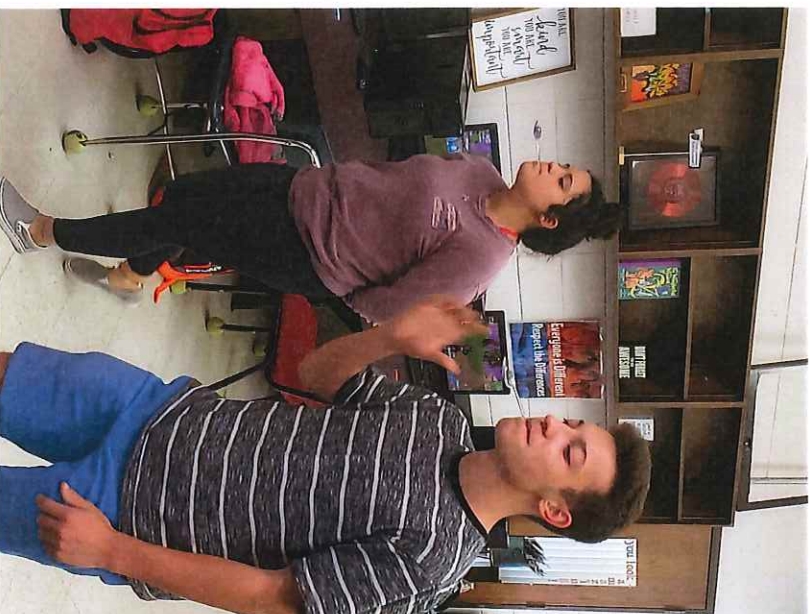
Expense	
Mortgage	\$1,800
Car payment #1	\$510
Car payment #2	\$495
Water	\$80
Electricity	\$100
Cell phone	\$100
Internet	\$80
Groceries	\$100
Medical Insurance	\$36
Day care	\$200
Child care	\$3,000
Life Insurance	\$14
Car Insurance	\$1,097
savings	\$2,000
credit card	\$1,000
Household items	\$200
School	\$3,440
Income	
wife	\$30,000
husband	\$5,660



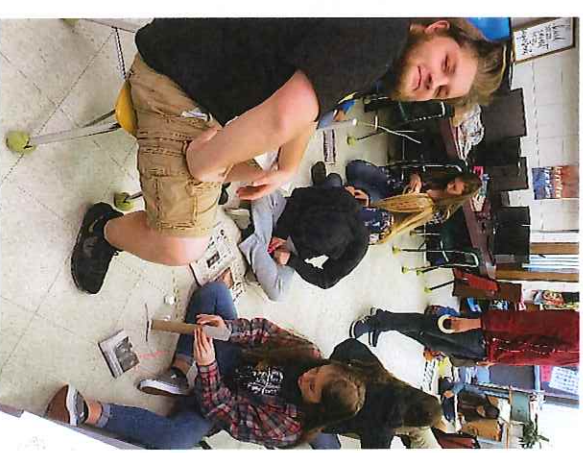


# Career Management hands on learning.

Career Management  
students work on marble  
race teamwork activities.  
Skills focused on for soft  
skills practice.



Tower building team activity





## Gear-Up sponsors Career Management classes visit to the Greensboro Woolworth Civil Rights Museum



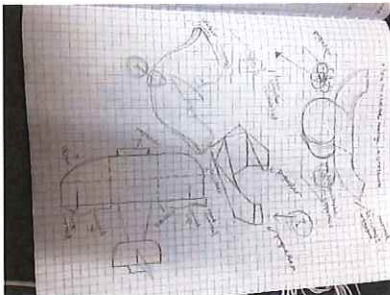
## Career Management Next Step Club students experiencing the reality of the job interview



Mr. Windish uses live projects to create STEM (Science, Technology, Engineering and Math) experiences for his students.



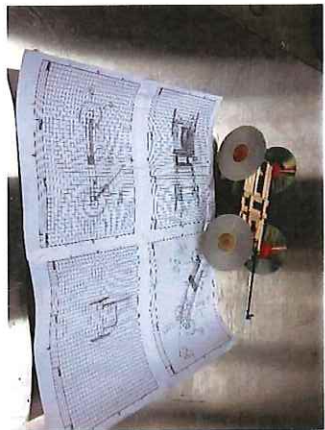
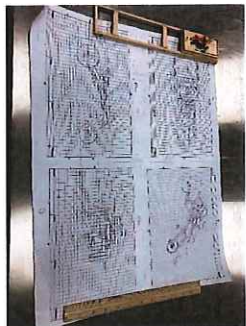
WALK-BEHIND GLIDER PROJECT (DESIGN, PROTOTYPE, STATISTICAL ANALYSIS)



Date	*Prototype	Time	Distance (R or L)	Straight	Average Time (P4) - 0.34 sec
4-Sep	4	0.43	3 in/L	4 ft	Average Distance (P4) - 12.8 in/R
4-Sep	4	0.32	0 in	6 ft	Average Straight Distance (P4) - 5.25 ft
4-Sep	4	0.61	4 in/R	3 ft	
4-Sep	4	0.19	30 in/R	5 ft	
4-Sep	4	0.18	10 in/R	5 1/2 ft	
4-Sep	4	0.31	30 in/L	8 ft	
4-Sep	5	0.62	24 in/R	5 1/2 ft	Average Time (P5) - 0.825 sec
4-Sep	5	0.68	40 in/R	7 ft	Average Distance (P5) - 19.8 in/R
4-Sep	5	0.24	40 in/R	1 ft	Average Straight Distance (P5) - 10.6 ft
4-Sep	5	0.71	6 in/R	12 ft	
4-Sep	5	1.2	6 in/R	20 ft	
4-Sep	5	1.5	3 in/R	18 ft	

\* I ended up not using either of these prototypes and creating a sixth one based off of the fifth one and its data seen above

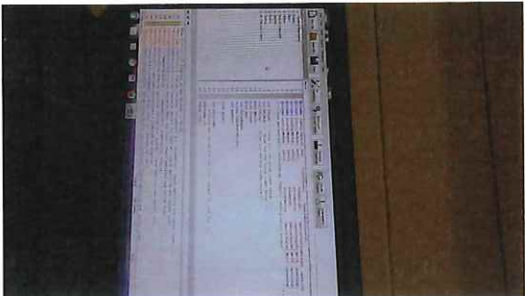
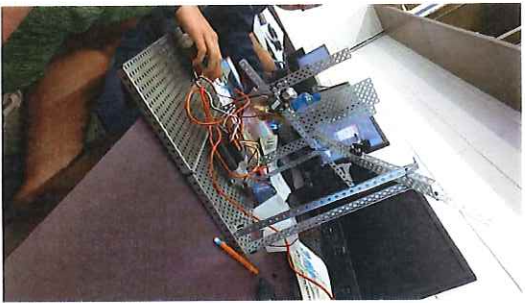
HYDRAULIC/PNEUMATIC POWER:  
ROBOTIC ARM DESIGN



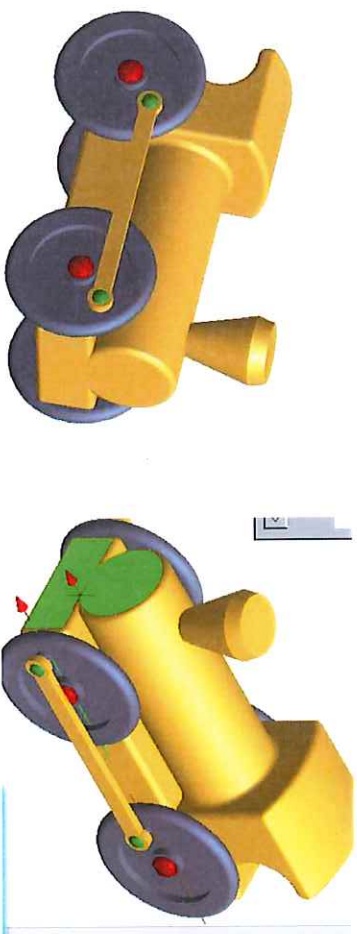
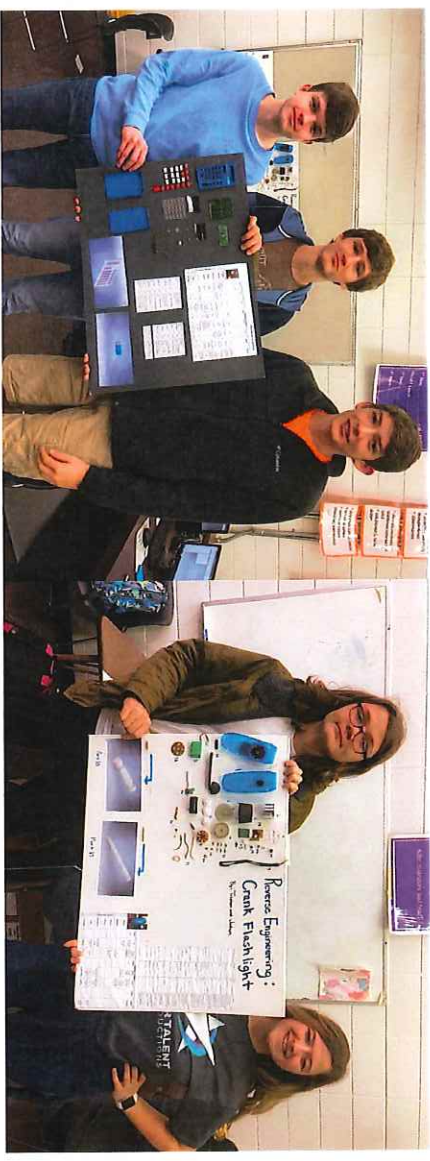
ENGINEERING TECHNOLOGY: MOUSETRAP CAR DESIGN PROJECT



## PRINCIPLES OF ENGINEERING: ROBOTICS DESIGN PROJECT



## INTRO TO ENGINEERING DESIGN: REVERSE ENGINEERING



## 3D MODELING AND DESIGN: AUTOMATED TRAIN PROJECT



Students in Business and Marketing Education have been busy this semester. Student's worked on towers in Personal Finance to illustrate the need for teamwork and communication skills. In computer

programming students learned about how to write an algorithm correctly thru writing out the instructions for how to create a hot fudge sundae. Their directions were given to another student and the student had to make the sundae following the others instructions. Demonstrating the use of importance of correct writing of code and finding errors through debugging. Computer Programming and Microsoft students participated in the honor of code week and were certified through code.org website. There are fun things happening in Mrs. Phipps classes.







Mr. Pugh's Carpentry students getting involved in community service projects.





# Construction of storage sheds for the Baseball and Softball programs by Carpentry students.







**Tanya Rogers pilots new  
state program/curriculum  
for students interested in  
becoming teachers.**

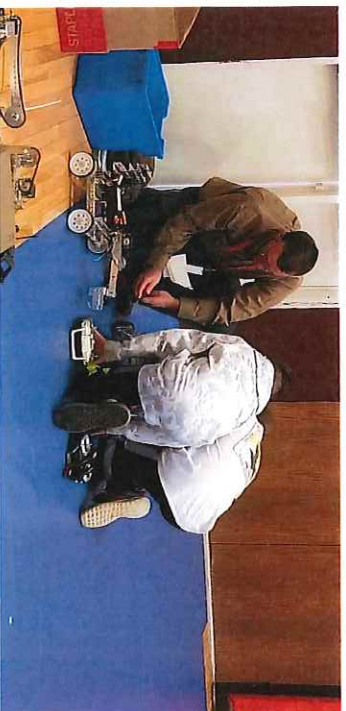
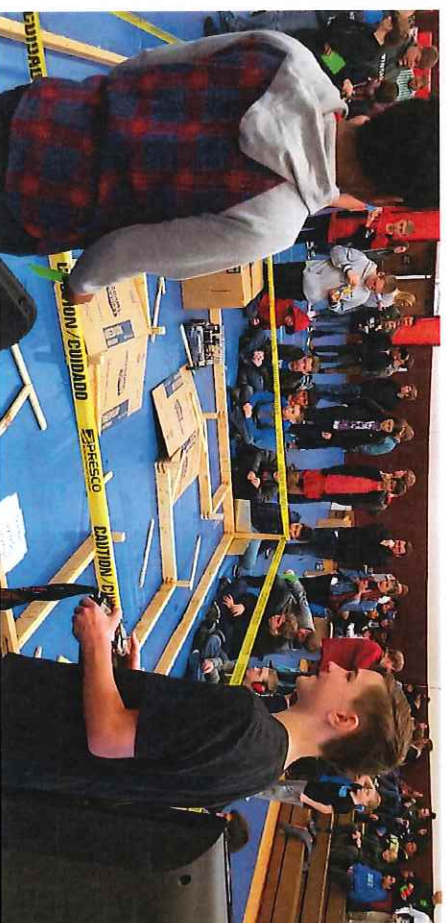
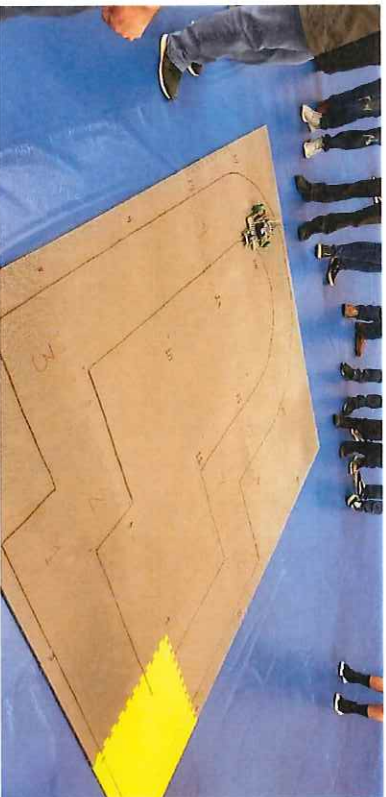


## **TEACHING AS A PROFESSION**

I signed up to pilot this program for the Department of Public Instruction. It is divided into 2 courses. Teaching as a Profession I is a one block course and Teaching as a Profession II is a 2 block course. Both courses are honors level courses and all students who pass with a B or higher will receive 6 COLLEGE CREDIT HOURS at the 3 colleges who are sponsoring the program- Western Carolina, UNC Wilmington and NC A&T. (with hopes that all NC Universities will accept the credits in the next 2 years).

The students are exposed to many facets of education - history, laws and regulations, ethics, the different types of schools. They participate in class discussions and group work as well as frequently observing and interviewing many teachers at different levels from kindergarten to high school. They reflect on their own personalities, values, learning styles and leadership. Students will attend School Board meetings and complete an internship component.

Steve Scott, Luke Eggers, and Jennifer Glass (WCC Career Coach) travel to Wilkes Community College to view a robotics competition of high school level and middle school level students. They were investigating the possibilities of starting robotics competition/clubs in Ashe County Schools.





**Mrs. Gilbert and Mrs. Barker's HOSA (Health Occupations) students from ACHS compete at the state level and came home with many awards.**





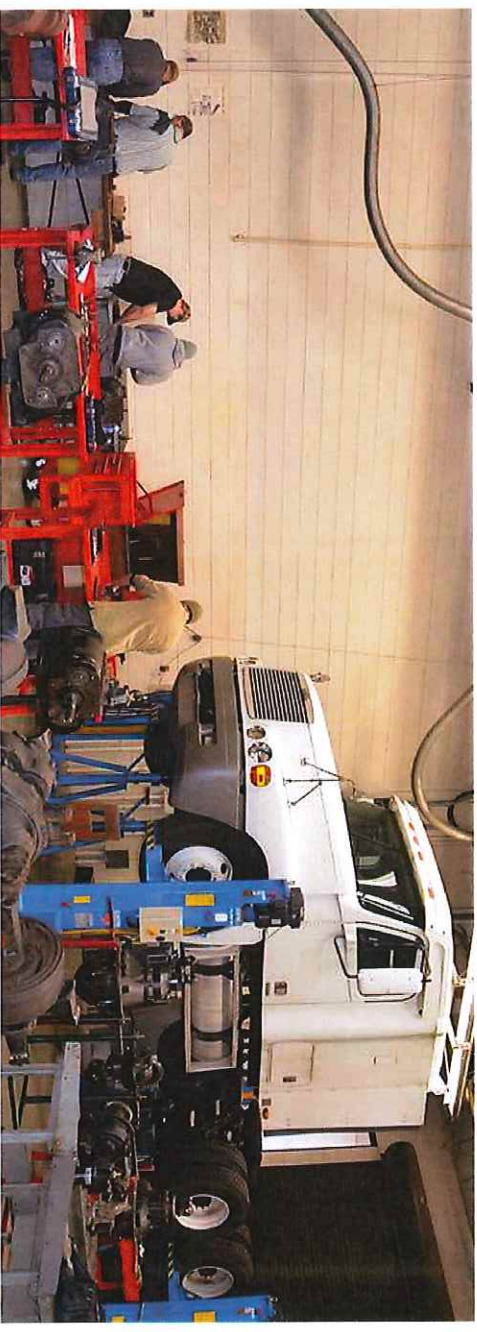
The National Technical Honor Society travels to Biltmore House. The NTHS is sponsored by Tanya Rogers, Jennifer Phipps, and Steve Scott.

The National Technical Honor Society is an honor society for outstanding career and technical students of workforce vocational education institutions in the United States. NTHS began in 1984 as the National Vocational-Technical Honor Society at H.B. Swofford Career Center, Spartanburg County, South Carolina.





**Steve Simms and the ACHS Auto Mechanics students visit WCC Diesel Mechanics, Auto Mechanics, and Collision Repair programs.**





Steve Simms states: "This year the Automotive classes have been working on a lot of exciting projects. The one project that stands out the most is our run engine stand we just finished building. Thanks to a bright idea's grant we received this year we received the funds to build a stand that we could put an engine on and start it. The purpose of this is to be used as a tool for our shop to help student diagnosis engine problems and perform basic automotive test that would be otherwise very difficult to perform in a vehicle. I have enclosed a picture of some of my students who helped in the build process. Since we didn't have a motor yet to put on the stand we installed a high performance motor I had in storage that a previous automotive class built. I have a video of us starting this motor for the first time. The smiles on the students faces and the excitement in their voices are the reason I enjoy teaching. I hope you are able to view the video, when you do pay close attention to the student's reactions it's priceless. Our goal in the future is to be able to install a late model fuel injected motor on the stand. This will help the students be able to train on the latest technology. Hopefully we will be able to get more funding to meet this goal. As a teacher I feel it is important to get the students excited about the automotive field. Many young ones have no idea what they want to do in life for a career. The automotive industry has many career opportunities for these young ones to be successful. I have a great passion for the automotive world and try to fuel that same passion in them."





The WorkKeys test was given to CTE Completers on December 4<sup>th</sup>. The Certificates earned will help students in college applications and job applications.

### Advantages of doing well on the WorkKeys

Helps a student stand out from the applicants who have not taken the WorkKeys test when applying for jobs.

Increases the chances of the student reaching their goals in the workforce.

Provides an opportunity to earn the United States and worldwide award for achievement in the workplace.

Increases the chances of the student reaching their goals in the workforce by providing a way to earn a certificate that is recognized by employers.

## WorkKeys<sup>®</sup>

# IS COMING

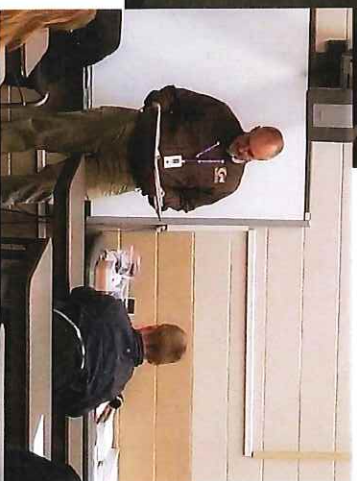
### Who takes the WorkKeys Test?

Any 12<sup>th</sup> grade students who is a CTE Concentrator or will be by the time they graduate.

A CTE concentrator is a student who has had 4 CTE classes in a career cluster area, with one of those being a level 2 or higher. See Mr. Scott if you are unsure if you are a concentrator.

### WorkKeys certificates to take to employers

Certificate	Level	Score	Employer
Applied Mathematics	Level 1	100	Math
Applied Mathematics	Level 2	125	Math
Applied Mathematics	Level 3	150	Math
Applied Mathematics	Level 4	175	Math
Applied Mathematics	Level 5	200	Math
Applied Mathematics	Level 6	225	Math
Applied Mathematics	Level 7	250	Math
Applied Mathematics	Level 8	275	Math
Applied Mathematics	Level 9	300	Math
Applied Mathematics	Level 10	325	Math
Applied Mathematics	Level 11	350	Math
Applied Mathematics	Level 12	375	Math
Applied Mathematics	Level 13	400	Math
Applied Mathematics	Level 14	425	Math
Applied Mathematics	Level 15	450	Math
Applied Mathematics	Level 16	475	Math
Applied Mathematics	Level 17	500	Math
Applied Mathematics	Level 18	525	Math
Applied Mathematics	Level 19	550	Math
Applied Mathematics	Level 20	575	Math
Applied Mathematics	Level 21	600	Math
Applied Mathematics	Level 22	625	Math
Applied Mathematics	Level 23	650	Math
Applied Mathematics	Level 24	675	Math
Applied Mathematics	Level 25	700	Math
Applied Mathematics	Level 26	725	Math
Applied Mathematics	Level 27	750	Math
Applied Mathematics	Level 28	775	Math
Applied Mathematics	Level 29	800	Math
Applied Mathematics	Level 30	825	Math
Applied Mathematics	Level 31	850	Math
Applied Mathematics	Level 32	875	Math
Applied Mathematics	Level 33	900	Math
Applied Mathematics	Level 34	925	Math
Applied Mathematics	Level 35	950	Math
Applied Mathematics	Level 36	975	Math
Applied Mathematics	Level 37	1000	Math
Applied Mathematics	Level 38	1025	Math
Applied Mathematics	Level 39	1050	Math
Applied Mathematics	Level 40	1075	Math
Applied Mathematics	Level 41	1100	Math
Applied Mathematics	Level 42	1125	Math
Applied Mathematics	Level 43	1150	Math
Applied Mathematics	Level 44	1175	Math
Applied Mathematics	Level 45	1200	Math
Applied Mathematics	Level 46	1225	Math
Applied Mathematics	Level 47	1250	Math
Applied Mathematics	Level 48	1275	Math
Applied Mathematics	Level 49	1300	Math
Applied Mathematics	Level 50	1325	Math
Applied Mathematics	Level 51	1350	Math
Applied Mathematics	Level 52	1375	Math
Applied Mathematics	Level 53	1400	Math
Applied Mathematics	Level 54	1425	Math
Applied Mathematics	Level 55	1450	Math
Applied Mathematics	Level 56	1475	Math
Applied Mathematics	Level 57	1500	Math
Applied Mathematics	Level 58	1525	Math
Applied Mathematics	Level 59	1550	Math
Applied Mathematics	Level 60	1575	Math
Applied Mathematics	Level 61	1600	Math
Applied Mathematics	Level 62	1625	Math
Applied Mathematics	Level 63	1650	Math
Applied Mathematics	Level 64	1675	Math
Applied Mathematics	Level 65	1700	Math
Applied Mathematics	Level 66	1725	Math
Applied Mathematics	Level 67	1750	Math
Applied Mathematics	Level 68	1775	Math
Applied Mathematics	Level 69	1800	Math
Applied Mathematics	Level 70	1825	Math
Applied Mathematics	Level 71	1850	Math
Applied Mathematics	Level 72	1875	Math
Applied Mathematics	Level 73	1900	Math
Applied Mathematics	Level 74	1925	Math
Applied Mathematics	Level 75	1950	Math
Applied Mathematics	Level 76	1975	Math
Applied Mathematics	Level 77	2000	Math
Applied Mathematics	Level 78	2025	Math
Applied Mathematics	Level 79	2050	Math
Applied Mathematics	Level 80	2075	Math
Applied Mathematics	Level 81	2100	Math
Applied Mathematics	Level 82	2125	Math
Applied Mathematics	Level 83	2150	Math
Applied Mathematics	Level 84	2175	Math
Applied Mathematics	Level 85	2200	Math
Applied Mathematics	Level 86	2225	Math
Applied Mathematics	Level 87	2250	Math
Applied Mathematics	Level 88	2275	Math
Applied Mathematics	Level 89	2300	Math
Applied Mathematics	Level 90	2325	Math
Applied Mathematics	Level 91	2350	Math
Applied Mathematics	Level 92	2375	Math
Applied Mathematics	Level 93	2400	Math
Applied Mathematics	Level 94	2425	Math
Applied Mathematics	Level 95	2450	Math
Applied Mathematics	Level 96	2475	Math
Applied Mathematics	Level 97	2500	Math
Applied Mathematics	Level 98	2525	Math
Applied Mathematics	Level 99	2550	Math
Applied Mathematics	Level 100	2575	Math



Construction Career Fair scheduled for April 30<sup>th</sup> involving Ashe County Schools, Ashe Campus of WCC, and the Ashe /Alleghany Home Builders Association for both Ashe and Alleghany high school students.





## **Student Credentials/Certifications**

**2017-2018**

American Heart Association Heart Saver First Aid, CPR & AED

American Welding Society (AWS)

- GMAW (Gas Metal Arc Welding)
- SMAW (Shielded Metal Arc Welding)
- GTAW (Gas Tungsten Arc Welding)

Autodesk Certified User AutoCAD

Conover Credential Workplace Readiness Job Readiness

CPR Health Care Provider

EverFi (Financial Literacy)

Lead Teacher Equivalency Certification

Microsoft PowerPoint

Microsoft Word

NCCER (National Center for Construction Education and Research) Certification

North Carolina Nurse Aide I

OSHA 10-Hour Construction Industry Certification

OSHA 10-Hour General Industry (Healthcare) Certification

S/P2 (Safety & Pollution Prevention) Mechanical Pollution Prevention

S/P2 (Safety & Pollution Prevention) Mechanical Safety

ServSafe Food Protection Managers Certification

Venture Entrepreneurial Expedition

Career Readiness Certification—Platinum

Career Readiness Certification—Gold

Career Readiness Certification—Silver

Career Readiness Certification—Bronze