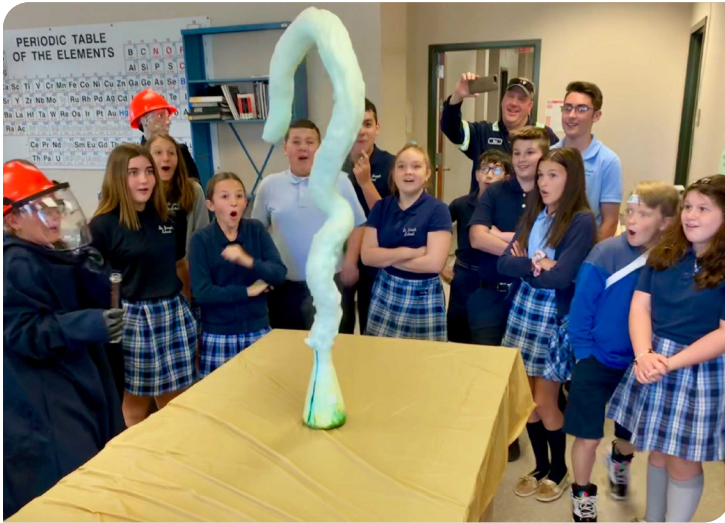


# explore

the new manufacturing  
a program of the WVMA Educational Fund, inc.

## NEWSLETTER | JANUARY 2020



## EXPLORE ACADEMIES 2019 WRAP UP

The WVMA-EF and its Explore the New Manufacturing Program held eight Explore Academies in the fall of 2019 across WV from late September through December. More than 900 students participated in these engagement opportunities with twenty-six manufacturer lab hosts. Additionally, through collaboration with the WV Department of Education, Career and Technical Education students from area high schools led and facilitated labs during several academies and shared their experiences with the Simulated Workplace and Project Lead the Way programs.

Explore Academies are designed for 8th grade students to learn about manufacturing and the educational pathways toward careers in the industry through hands-on labs hosted by local manufacturers. Students explore various facets such as operations, quality control, environmental health and safety, product development, etc.

Manufacturer lab hosts work hard putting together lab experiences and find that the time invested is valuable and worthwhile. SI Group's Morgantown WV Director Brian Bence said, *"It's such a great opportunity to directly engage with local students. Manufacturing has so many career choices here at home in West Virginia. The academies give us a chance to talk about some of those opportunities while having a lot of fun with the students. I continue to be impressed with the quality of the students attending and look forward each year to these events."*

**Students were surveyed before and after each Explore Academy. Here is what we found:**

- Before the Academy, **68%** were able to identify one or more items manufactured in WV.
- After the Academy, **92%** were able to identify one or more items manufactured in WV.
- **Coal** was by far the most non-manufactured item listed in this question (mining and agriculture in general are listed by some respondents).
- **23%** of students listed coal in their manufactured items list before but only **10%** listed coal after.
- **31%** said they plan to live in WV before and **34%** reported after.
- The number of students who identified as likely or highly likely to pursue a career in manufacturing increased from **21%** to **32%** while the percentage of students who planned to take a manufacturing career pathway in school stayed level at **23%**.





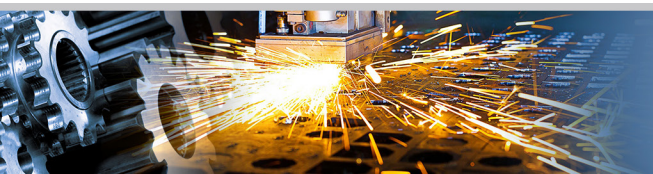
**Students were asked what they learned at the Explore Academy. Here are some of the students' responses:**

- *(I learned) how important this industry is and how quick(ly) it's growing.*
- *There are plenty of opportunities to get a job in manufacturing.*
- *Many different jobs come together and put (their) minds together for manufacturing*
- *That there are many manufacturing job options in West Virginia that don't require a college diploma.*
- *I learned that you don't have to go to college and still get good money.*
- *That there is a lot more to manufacturing (than) most people think and (it's) not all just labor jobs.*
- *(I learned) types of things made in West Virginia, gave me an idea how the vo-tech is, what type of classes I can take at the vo-tech center.*
- *That I have options of jobs in this state.*
- *That manufacturing is more important than I thought.*
- *(I learned) a bunch of things about how manufacturing helps the environment and how manufacturing helps us.*
- *I learned that you can make a lot of money with manufacturing with only two years of college.*
- *I learned about the different companies that are trying to make a change in our world.*
- *The process of manufacturing, the impact it makes, and the importance of the products.*
- *That you can do anything if you put your mind to it.*
- *Manufacturing is really cool.*
- *I learned that manufacturing can be fun!*



## EXPLORE ACADEMIES

- 9/27 Weirton: 65 students @ WVNCC - Weirton
  - Manufacturer Lab Hosts: Eagle Manufacturing, Ergon, Homer Laughlin, & Pietro Fiorentini
- 10/11 Martinsburg: 130 students @ BlueRidge Tech Center
  - Manufacturer Lab Hosts: Entsorga (BioHiTech), Procter & Gamble, & Technimark
- 10/25 Charleston: 100 students @ BridgeValley ATC
  - Manufacturer Lab Hosts: DuPont, NGK, & Toyota
  - CTE Student Lab Hosts & Facilitators from Capital High School
- 11/1 Fairmont: 110 students @ Pierpont ATC
  - Manufacturer Lab Hosts: Bombardier, ND Paper, Progressive Industries, & SI Group
- 11/8 Elkins: 150 students @ Randolph Tech Center
  - Manufacturer Lab Hosts: AHF Products, Colonial Millworks, Kingsford, & WV Wood Technology Center
  - CTE Student Lab Facilitators from Randolph County Tech Center
- 11/15 Parkersburg: 100 students @ WVU - Parkersburg
  - Manufacturer Lab Hosts: Hino, Mr. Bee Potato Chips, & Sim Ex
- 11/22 Huntington: 120 students @ RCBI
  - Manufacturer Lab Hosts: Alcon, Rubberlite, & Sogefi
  - CTE Student Lab Hosts & Facilitators from Wayne and Cabell counties
- 12/13 Wheeling: 125 students @ WVNCC - Wheeling
  - Manufacturer Lab Hosts: Mull Group & Ziegenfelder



## STUDENT VIDEO CONTEST

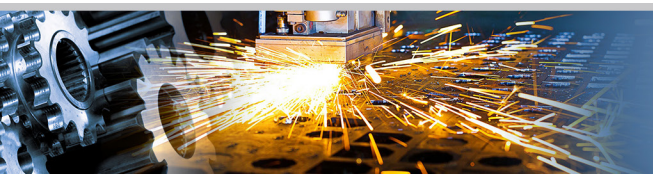
The 2019-2020 *What's So Cool About Manufacturing Student Video Contest* kicks off with 19 participating schools and manufacturers. For the Student Video Contest, middle school students team with a local manufacturer, tour the facility, interview employees about what they think is cool about manufacturing, and shoot video. Students edit footage and create videos to submit for the regional *What's So Cool About Manufacturing Contest* and promote their videos to their peers. This program culminates with an awards ceremony in April. The WVMA-EF provides teacher training, video equipment, and travel reimbursement for participating schools.



This is the second year for the contest in the Northern and Eastern panhandles. The Explore Program launched a new competition for the Charleston area while two schools and manufacturers in North Central WV are competing in the Pennsylvania South Region of the contest. Voting and award ceremonies begin in March.

## STUDENT VIDEO CONTEST (continued)

- **East Region: 6 schools/manufacturers**
  - AMS Vendors & Charles Town (Jefferson)  
P&G & Musselman (Berkeley)
  - Argos & North (Berkeley)  
BioHitech & South (Berkeley)
  - Quad Graphics and Spring Mills (Berkeley)  
Technimark and Hedgesville (Berkeley)
- **North Region: 6 schools/manufacturers**
  - Mull Industries & Bridge Street (Ohio)  
Eagle Manufacturing & Brooke (Brooke)
  - Tecnocap & Moundsville (Marshall)  
Homer Laughlin & Oak Glen (Hancock)
  - Pietro Fiorentini & St. Joseph (Hancock)  
Ziegenfelder & Sherrard (Marshall)
- **South Region: 5 schools/manufacturers**
  - Blenko & Poca (Putnam)  
Toyota & Winfield (Putnam)
  - Eagle Research & Elkview (Kanawha)  
NGK Sparkplugs & Sissonville (Kanawha)
  - Cyclops & John Adams (Kanawha).
- **Pennsylvania South: 2 schools/manufacturers**
  - 4D Tech Solutions & Taylor (Taylor)  
Precision Tool & Westwood (Marion)





# OTHER EXPLORE EVENTS

## EXPEDITION INNOVATE AT THE CLAY CENTER:

The WVMA-EF partnered with The Clay Center for the Arts and Sciences of WV, Inc. and the West Virginia Department of Education to launch Expedition: Innovate on September 20th at the Clay Center. This program provided 150 7th graders from Kanawha County Schools a chance to explore how ideas become products by solving design challenges and building models in hands-on workshops hosted by manufacturers and student mentors.



The goal for Expedition Innovate was to introduce students to manufacturing, the career opportunities available, and ways they can start exploring career paths now through career and technical programs offered in the school system. In the opening presentation, Mark Elkins with DuPont talked about how the world is rapidly changing and how manufacturing plays a key role in their daily lives, followed by student Tanner Lee, from Riverside High School and Carver Career and Technical Center who talked about the hands-on, minds-on experience of being a student in a career and technical program.

For the workshop portion, students were divided up by school to participate in Innovation Labs where they had to work in teams and use critical thinking to create a solution to a twenty-minute design-based challenge, using supplies to build and test their prototypes. Manufacturer lab facilitators were from Level 1 Fasteners (Huntington, WV); Braskem (Kenova, WV); and DuPont (Charleston, WV). CTE student mentors were from Carver Career and Technical Center, Ben Franklin Career and Technical Center, and South Charleston High School. At the end of the workshop, students returned to the planetarium to present their solutions and learn about the WV Makes Festival from RCBI's Deacon Stone.

## SCRAP AND MANUFACTURING INNOVATION CHALLENGE: THE WVMA-EF LAUNCHES TWO PROGRAMS FOR WV HIGH SCHOOL STUDENTS:

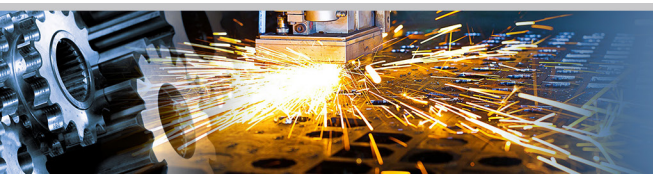


In effort to expand outreach programs from middle schools to students at the high school level, the West Virginia Manufacturers Association Educational Fund (WVMAEF) has launched two Explore the New Manufacturing Programs for the 2019-2020 school year. These new programs - Scrap and Manufacturing Innovation Challenge - have been rolled out in several high schools across the state.

The Explore Program will hold three Scrap Competitions across the state this year. For Scrap Competitions, student teams from career and technical education (CTE) programs use scrap manufacturing material supplied by local manufacturers to create artwork along the theme of West Virginia Manufacturing. The four-hour competition provides opportunities for students to problem solving and showcase their skills.

The first Scrap Competition was held at the Monongalia County Technical Center on Oct. 24th in Morgantown. Thirty-five students from six teams from Marion, Monongalia and Preston county CTE welding programs used scrap metal donated by Progressive Industries. The final pieces will be displayed and sold in Morgantown throughout March, with an event-culminating reception hosted by Arts Mon.

*"That is how it works in the real world. Employers are looking for people who know how to think,"* said MTEC welding instructor Don Robinette, who coordinated details for the event.





Two other Scrap Competitions will be held in the spring. Carpentry students will compete using scrap wood manufacturing material contributed by AHF Products and Colonial Mills, while welding students in Charleston will compete using scrap metal in March.

The other new program, the Manufacturing Innovation Challenge, is modeled after a similar program by Pittsburgh-based Catalyst Connection. In this challenge, a team of a student from one high school partners with a local manufacturer to improve processes, designs or performance. Students will meet with a local manufacturing company and tour the production facility. At the end of the tour, the manufacturer presents the team with a challenge or problem to solve. This team functions as consultants, applying project-based learning and their skill sets to perform research and find a solution. The student team gives a formal presentation to the manufacturer approximately one to two months later.

## EXPLORE IN THE NEWS

- **The Herald-Dispatch**

Eighth-grade students learn about careers in manufacturing through new program



- **Chemical & Engineering News**

In the name of community outreach, chemical firms invest in education

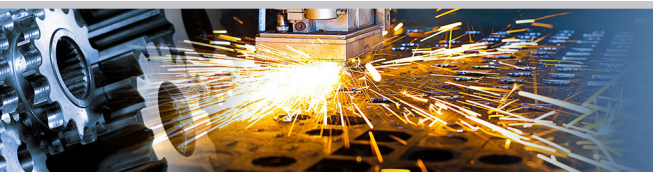


- **The Intelligencer**

Students Learn About Manufacturing Careers at West Virginia Northern Community College Workshop



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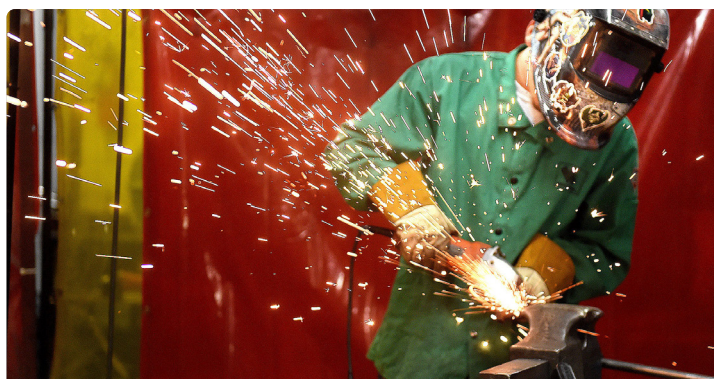
- **WDVM 25**

Eastern Panhandle students get hands on STEM learning experiences



- **Dominion Post**

Scrap Metal Art



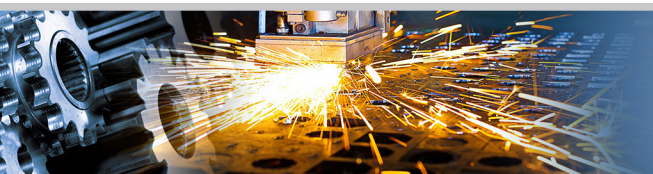
- **West Virginia Executive Magazine**

Finding Future Workers: West Virginia Manufacturers Association Launches Two New Programs



## UPCOMING EVENTS

- 2/2020 - (7) Explore Presentations for middle school students
- 2/2020 - (5) Manufacturing Innovation Challenge (MIC) partnerships begin
- 3/2020 - Scrap Competition @ WV Wood Technology Center in Elkins; scrap material donated by AHF Products and Colonial Millworks
- 3/2020 - Scrap Competition in Charleston
- 3/1/2020 - Scrap Competition in Morgantown - Exhibit @ local businesses and Online Sale begins
- 3/6/2020 - Beckley Explore Academy @ New River CTC
- 3/9/2020 - Northern Panhandle Region Student Video Contest voting (online)
- 3/16/2020 - Eastern Panhandle Region Student Video Contest voting (online)
- 3/19/2020 - Northern Region Student Video Contest Awards Ceremony @ WVNCC-Wheeling
- 3/20/2020 - Explore Academy in Huntington @ RCBI with 125 middle school students
- 3/23/2020 - Southern Region Student Video Contest voting (online)
- 3/26/2020 - Eastern Panhandle Region Awards Ceremony @ Blue Ridge CTC
- 3/31/2020 - Morgantown Scrap Competition - Showcase and Reception @ Arts Mon
- 4/2/2020 - Southern Region Student Video Contest Awards Ceremony @ BridgeValley
- 5/13/2020 - Emerging Elite & Industry Educator Reception @ Waterfront Marriott, Morgantown







## THANK YOU

THANKS TO OUR SPONSORS:

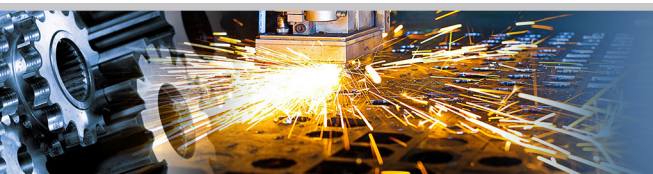
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