



THE MANUFACTURING WORKFORCE PLAYBOOK



EDUCATORS



A PLAYBOOK FOR MFG DAY



EVERYDAY IS MFG DAY!

My journey in manufacturing started with a stumble, like so many others I know. I was not engaged in CTE pathways in high school, did not major in engineering in college, or ever have a drive to use the newest technology. I stumbled into a career that has provided me so much more than I ever imagined. Not just a career that I love, but colleagues that have become friends, opportunities to speak and engage with people that are just amazing, and experiences that I could have never imagined (hot air balloons, touring Boeing, speaking in front of hundreds of people). And what a gift to share this with the next workforce!

Our purpose at SME is to advance manufacturing to drive competitiveness, resiliency and support our national security. What an amazing opportunity to highlight the opportunities available right within your community. Using MFG Day to open the doors of your labs and classrooms and highlight the cutting-edge technology that your students work with every day. To provide an opportunity for students & teachers in your school district and community to see all that our industry has to offer.

We created this MFG Day playbook to use year-round, for recruiting not just in October, but anytime you have an opportunity to open your doors. Our goal is to help you create awareness, inspire interest and ultimately grow your program enrollment through highlighting the technology that powers our world.

We hope you find a few items in this playbook that are helpful, that maybe change the way you approach future students, instructors, and administrators to show the viable, engaging and exciting careers we have available. From technician to PhD, technical positions to gold collar careers, maybe even marketing, data analytics, finance or HR, it's our time to show, we have a place for you.

Make sure you tag SME on social media and use the hashtags #MFGDay & #MFGDayPlaybook so we can follow and share the ways you are building opportunities in your community.

Happy MFG Day,

Toni Neary
Director of Community Engagement & Workforce Innovation



COMPREHENSIVE HIGH SCHOOL



Host an MFG Day event in your lab and invite everyone in your building. This will be an opportunity to highlight STEAM (Science Technology Engineering Art & Math) as it comes to life in your program.

PRIMARY AUDIENCE:

9th & 10th grade students from your building

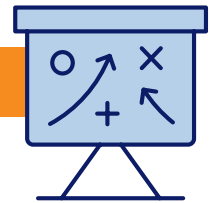
SECONDARY AUDIENCE:

11th grade students IF you have a senior only or 12th grade student option

TERTIARY AUDIENCE:

Middle school students from your school district

CAREER CENTER



Imagine all students at all feeder schools seeing your lab. Pretty exciting right? Leverage your buses that move between feeder schools and your building as an opportunity to bring all 9th and 10th grade students through your doors, no limits. This will be an opportunity to highlight STEAM (Science Technology Engineering Art & Math) come to life in your program. You can use this format for student visitation days also.

PRIMARY AUDIENCE:

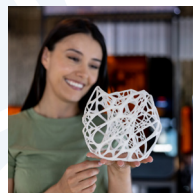
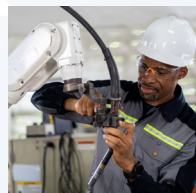
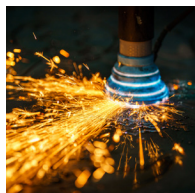
9th & 10th grade students from your feeder schools.

SECONDARY AUDIENCE:

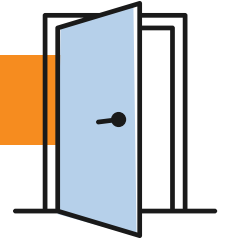
Math, science, history and art teachers; guidance counselors and administrators

TERTIARY AUDIENCE:

Middle school students from your school district



COMMUNITY COLLEGE



Open doors for your entire community to understand the potential pathways to prosperity provided by a career in manufacturing.

PRIMARY AUDIENCE:

Community-based organizations, non-profit organizations, one-stop (workforce) agencies, organizations working with at-risk youth and young adults

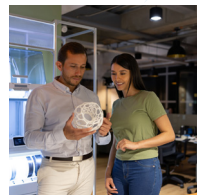
SECONDARY AUDIENCE:

Educators from comprehensive high schools, guidance counselors, administrators from comprehensive high schools and high school students that do not have a plan upon graduation

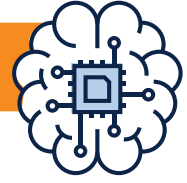
TERTIARY AUDIENCE:

Middle school students from your school district

- ✓ Have members of your staff on site to answer questions and start the process for individuals attending. These team members could be career coaches, financial aid or registration staff.
- ✓ If scholarships or financial assistance are available be sure to have clear and concise information on eligibility and application process.
- ✓ Engage graduates of your program to discuss how taking the program changed their life.
- ✓ If local manufacturers are attending, have them highlight growth plans upon hire in their organizations.



ADVANCED TECHNOLOGIES



Most students, parents, guidance counselors and teachers alike have very little understanding of the advanced technologies used in today's manufacturing processes.

Explaining and demonstrating advanced technologies in manufacturing with hands-on experiences, virtual reality and even gaming can bring to life the excitement of working with technology for both engineering solutions as well as advanced production floor operations in:

- CNC MACHINING
- 3D PRINTING/ ADDITIVE MANUFACTURING
- MECHATRONICS/AUTOMATION/ROBOTICS
- SMART MANUFACTURING; IT/OT
- WELDING

INSTEAD OF CNC – USE THE TERM SUBTRACTIVE MANUFACTURING.

- Ask who knows what 3D printing is – explain that is additive manufacturing – adding material to take a product.
- Highlight a CNC machine and talk about subtractive manufacturing and how products are made through removal of product.
- Show the computer programming on the screen.
- Talk about the types of software you will use in the program.

INSTEAD OF MECHATRONICS – TALK ABOUT AUTOMATION.

- Mechatronics is a word that doesn't always make sense if you are not in our industry.
- Automation is a word that students have heard.
- Make the analogy of sending a text message vs. a letter – that is a form of automation.
- Talk about troubleshooting skills and opportunities for students to compete and travel.



STUDENT DEMOS

Have current or former students running equipment in your labs. A great opportunity to show that high tech equipment is something the students not only learn how to safely operate, but it's real-world equipment they get to use at work.

CONVERSATION STARTERS:

- Why did your students pick the pathway?

- What surprised your students most about the program?

- Are your students currently working while attending your program?

TALK ABOUT MINECRAFT!

Minecraft is a world of X Y and Z!

If you have programming on CNC or robotics machines, show how the world of Minecraft is directly applicable to skills in manufacturing.

MANUFACTURING IS ABOUT SAFETY FIRST!

High technology means high safety protocols that manufacturing MUST always follow..



We need to be investing in manufacturing and small businesses. We need to be creating a workforce where Americans can compete in a global marketplace because they have the necessary skills.

—SAMPLE QUOTE



IDEAS

On MFG Day, invite other teachers in your school to bring their classes to your lab to talk about how manufacturing relates to the curriculum they teach.

Prepare teachers from your building with talk tracks they can use in your lab.

MATH TEACHERS

Highlighting complex math problems in your lab is a way to make math relevant for students. CNC machines can highlight programming with X, Y and Z axis and show the movements so students can understand math in a new way.

HISTORY TEACHERS

Learning about the industrial revolution might be more exciting when students understand the automation and technology in the lab. Talk about the early industrial revolution and now industry 4.0, and how we are looking at the emerging technologies of the future today in manufacturing.

ART TEACHERS

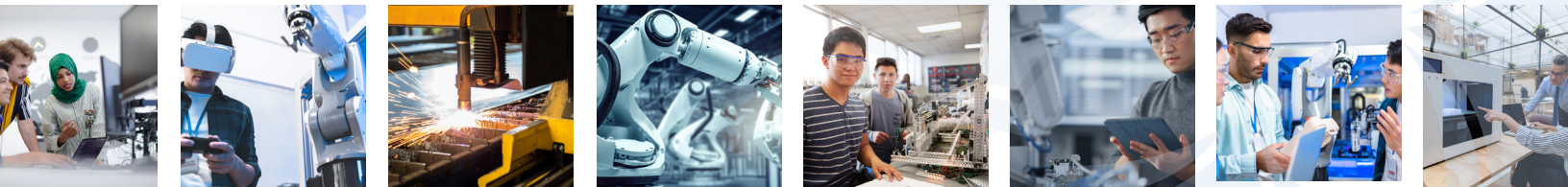
What is better than art that can last a lifetime? When you can explore the creativity in advanced manufacturing (think welding sculpture, design of cars, design software) explore how creative students flourish in manufacturing. Highlight the ability to create.

SCIENCE TEACHERS

Metallurgy is a lost art; be prepared to talk about the types of material that metallurgists work with and ductility, strength, conductivity of the materials used in the lab.

GUIDANCE COUNSELORS

Understanding the skill level that is developed in your program is extremely important. This conversation should not be based on pay scales and wages. It should be based on college credit earned in your program, the mobility of your students in the workforce, the number of students that go on to post-secondary from your program.



SPONSORSHIPS

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The day is intended to be about your program, however, if you would like to integrate industry partners – here are a few options.

- Have local manufacturers sponsor pizza, pop, water and chips with signage on the food table.
- Have key manufacturers that hire entry-level positions with tables set-up and opportunities for meet & greet.
- Have manufacturers offering tours of their facilities or contact information to schedule tours.



RESOURCES

NAM.org has great state data resources to discuss the average compensation (pay & benefits)

WHAT'S NEXT?

One of the most important steps in any event, is what's next?

How are you going to re-engage the potential student, and any career influencers they have for the next step?

Have these dates scheduled with sign-up or QR codes available at your event.

IDEAS FOR WHAT'S NEXT

- Family STEAM night
- Open house dates
- Exploratory days
- Summer camp
- Registration for classes (if open)
- Tours with local manufacturers
- Clubs that students can join and dates they are meeting

IDEAS

Today's manufacturing is not anything like yesterday's metal working project in shop class.

Show how manufacturing processes such as assembling a car to producing micro electronics has changed in the past 50 years.

