

Manufacturing Project Wrap-Up



What Is Manufacturing?

Making things that people use every day! Like cars, phones, shoes, medical equipment.

Includes all the steps from design to engineering to production.

In SC, we manufacture things for aerospace, automotive, medical, and more.



What Is **ADVANCED** Manufacturing?

Making things
using high-tech
tools:

- 3D printing
- robotics
- computer design

Focuses on
making things
faster, safer, and
smarter.

Combines STEM
topics to solve
real-world
problems and
create better
products.



Did We JUST Do Manufacturing?

Yes! In your “Sole Survivors” project, you were a manufacturer!

Planning

You researched what problems people had with their feet.

Design

You designed an orthotic to fix your chosen problem.

Prototyping

You built a sample of your orthotic.

Production

Next up: You would try to find a company to buy your product and produce it.

Testing

Quality control checks are done to ensure good products.

Distribution

Your product would be sent to people who need it.



Skills You Have After this Activity

Engineering Design Process

research → design →
test → improve

You used critical thinking—just like real engineers—to design and build a helpful product.

Creating a Prototype

You built and tested a hands-on model, just like manufacturers do, to see how well your design worked and make it better.

Being a Team Player

You shared ideas and helped each other to create the best design possible together. This is a skill that every future employer will be looking for!

Problem Solving

You figured out challenges, tried new ideas, and fixed problems to make our design work even better. Mastering this skill will make you stand out as a leader!



Careers Related to the Activity

Manufacturing Assembler

Build medical products and orthotics.
No experience required!

Computer Machinist

Operate equipment and design custom parts.
Trade school or certification required.

Manufacturing Engineer

Design the manufacturing process for medical equipment.
College degree required.

Why This Matters

- South Carolina has 8,242 manufacturing companies.
- These jobs pay 33% more than the state average.
- Manufacturing makes up 17% of all SC's income (GDP).



A doctor and nurse review patient records



What's Next?

Stay curious

Ask questions
about everything
you experience.
How can it be
improved?

Practice engineering

Design your
thinking, take
steps to solve the
problems you see
around you.

Develop skills

Take design
classes, consider
applying to CTE
school, practice
teamwork.