

October 16, 2024

Press Release: Cannon County High School STEM III Students Tackle Real-World Challenges

Woodbury, TN- Cannon County High School STEM III students designed assistive devices to empower individuals with disabilities and enhance their independence. By exploring diverse disabilities and understanding how customized assistive devices improve quality of life, these students tackled this impactful content.

The research process included investigating disabilities, existing devices, design principles, ergonomics, and functionality. Students used the Engineering Design Process, 3D modeling, and 3D printing to create assistive devices, bringing their designs to life. This hands-on approach empowers students to make a meaningful impact by tackling real-world challenges and creating solutions to improve the daily lives of individuals with disabilities.

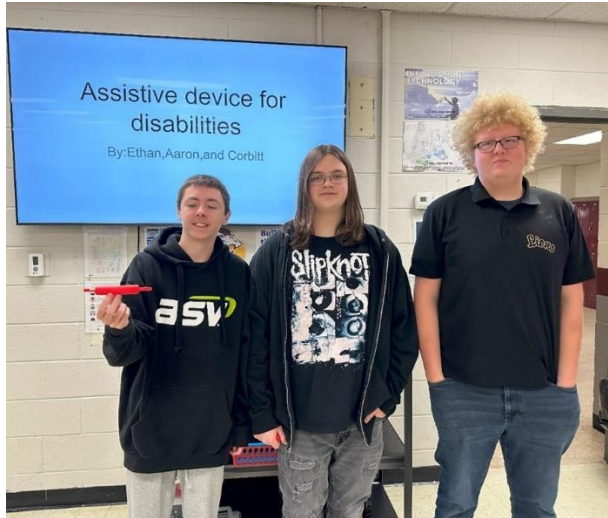
Assistive Device for Limb Loss Project: “The goal is to help people without hands perform everyday tasks more easily. Since those with limb loss struggle with activities like holding objects and writing, the project aims to design wrist attachments that enhance their independence and quality of life. The assistive devices created using 3D modeling and printing enable these individuals to write and manipulate objects more effectively.”



Left to right: Samuel Colatriano, Matthew Bane, and Savory Brown



Assistive Device for Arthritis: “After researching common issues faced by people with disabilities, we developed a multifunction product to assist those with grip strength challenges, such as arthritis, by helping with tasks like zipping and buttoning clothes.”



Left to Right: Ethan Barnes, Aaron Yates, and Corbitt Taylor

Assistive Device for Tremors: “Tremors from conditions like Parkinson's, MS, and stroke can cause erratic hand shaking, making it difficult to use utensils. This weighted, deep-bowled spoon with a wrist brace helps prevent messy eating for those with tremors.”



Left to right: Skyler Christensen, Preston Hamby, and Jacob Hawkins



Assistive Device for Mobility Impairment: “The purpose of this assistive device is for disabled people in wheelchairs that have a hard time reaching items above or below them, eliminating the struggles they faced with back pain, and this device solves that problem.”



Left to right: Kyle Judkins, Jason Franklin, Jesse Bogle, and Malachi Walls