

WhaleWorks Publication No. 003

Digital Skills & Computer Build Academy

Preparing the Next Generation of Technology Leaders

Mission

The WhaleWorks Digital Skills & Computer Build Academy equips youth with practical technology skills through hands-on instruction in computer assembly, troubleshooting, networking, digital literacy, emerging technologies, and career readiness. Students gain confidence by building complete desktop computers from individual components and, when funding allows, may keep the systems they build as tools for continued learning.

Community Need

Technology careers continue to grow while many rural communities face barriers to access. This program addresses the digital divide by providing modern equipment, mentorship, and project-based learning that prepares students for future education, certifications, and employment in the technology sector.

Curriculum

- Computer Hardware Fundamentals
- Building a PC from Start to Finish
- Installing Windows & Linux
- Computer Troubleshooting & Repair
- Networking Basics
- Cybersecurity Awareness
- AI & Emerging Technology Introduction
- Responsible Internet & Digital Citizenship
- Resume Building & Career Exploration
- Team Projects and Leadership

Career Pathways

Students are introduced to careers in Information Technology, Cybersecurity, Computer Repair, Network Administration, Software Development, Artificial Intelligence, Cloud Computing, Robotics, Game Development, and Digital Entrepreneurship. The Academy encourages continued education and industry certifications.

Three-Phase Funding Strategy

Phase I – Launch (\$30,000)

Purchase classroom computers, PC components, tools, networking equipment, software, instructor supplies, and mentor support to serve 40–60 youth annually.

Phase II – Expansion (\$100,000)

Expand into a larger technology lab with additional workstations, 3D printers, networking racks, robotics kits, AI learning stations, paid instructors, and summer technology camps serving 150–300 youth annually.

Phase III – Innovation Lab (\$350,000)

Develop a regional Technology & Innovation Center featuring advanced computer labs, cybersecurity classroom, robotics lab, AI learning center, esports training area, certification programs, and workforce partnerships.

Equipment, Partnerships & Outcomes

Equipment: Desktop components, laptops, monitors, networking hardware, routers, switches, toolkits, testing equipment, 3D printers, robotics kits, AI-capable workstations, educational software, and classroom furniture.

Community Partnerships: Ocosta School District, local businesses, technology companies, community colleges, volunteers, and industry professionals.

Expected Outcomes: Increased digital literacy, completed student-built computers, workforce readiness, certification pathways, stronger STEM engagement, reduced technology barriers, and expanded career opportunities for Grays Harbor County youth.