

WHALEWORKS

PUBLICATION SERIES

VOLUME I

DIGITAL SKILLS ACADEMY

Technology Access, Computer Building, and Future-Ready Learning

PART 05

Opportunity - Innovation - Community - Belonging

Publication Overview

WhaleWorks Community Innovation Campus

Chapter 2

Digital Skills & Computer Build

Academy - Building Tomorrow's Technology

Leaders

Program Vision

The Digital Skills & Computer Build Academy introduces youth to technology through project-based learning. Students gain confidence by assembling computers from individual components, learning how hardware and software work together, and applying those skills to real-world technology challenges. The Academy is designed to reduce the digital divide while preparing participants for college, technical education, military service, entrepreneurship, and technology careers.

Student Learning Journey

Participants begin with computer safety, tools, and component identification before progressing to complete desktop assembly, BIOS configuration, operating system installation, troubleshooting, networking fundamentals, cybersecurity awareness, and responsible use of artificial intelligence. Students complete hands-on projects that reinforce teamwork, communication, and problem-solving.

Curriculum & Certifications

The curriculum introduces hardware, operating systems, networking, cloud computing, coding, AI literacy, cybersecurity, and digital citizenship. As the Academy grows, WhaleWorks will pursue partnerships and resources that prepare interested students for recognized industry certification pathways such as CompTIA, Microsoft, Google, and Cisco programs when appropriate and accessible.

Technology Innovation Lab

The long-term vision includes a dedicated technology lab equipped with computer workstations, networking equipment, robotics kits, 3D printers, AI-capable computers, repair benches, presentation technology, and collaborative learning space. When funding allows, students who complete the build program may keep the computers they assemble to continue learning at home.

Career Pathways & Community Impact

Students explore careers in information technology, cybersecurity, cloud computing, software development, engineering, robotics, digital media, technical support, and entrepreneurship. The Academy strengthens the local workforce by introducing career opportunities that are increasingly important throughout Washington State and beyond.

Implementation & Funding

Phase I (\$30,000): Launch the pilot lab with computers, components, tools, instructor materials, and mentor support serving 40-60 youth annually. Phase II (\$100,000): Expand into a larger technology center with additional workstations, robotics, networking equipment, paid instructors, and summer STEM programming.

Phase III (\$350,000): Develop a regional Technology & Innovation Lab supporting certifications, advanced STEM education, workforce partnerships, and hundreds of students each year. Measures of Success Success will be evaluated through student participation, completed computer builds, digital literacy growth, technology projects, workforce readiness, certification participation, school partnerships, volunteer engagement, and the number of participants advancing into other WhaleWorks programs or post-secondary opportunities.