PLTW COMPUTER SCIENCE
Computer Science Principles | Course Resume

Course resumes showcase the technical skills students obtain in each PLTW course. Each resume outlines the computational skills, analytical skills, and knowledge acquired in the course. Course resumes also detail student experience with tools, software, lab work, and engineering design. The detailed skills listed within course resumes illustrate the immediate, applicable contributions that students can make within a workplace.

Computational Thinking Practices
- Computational Solution Design
- Algorithms and Program Development
- Abstraction in Program Development
- Code Analysis
- Computing Innovations
- Responsible Computing

Program Design and Development
- Design programs for a purpose
- Debug and test code
- Create programs using procedural,event-driven, and commonly used algorithms
- Design a user interface (UI)
- Create annotated programs with incode commenting and documentation
- Contribute to an inclusive, safe, collaborative, and ethical computing culture

Interpretation of Documentation
- Use application programming interfaces (APIs)
- Perform data analysis and create visualizations
- Use and create software to display charts and graphs
- Analyze large data sets through computational techniques
- Use coding to automate data analysis
- Interpret data visualizations

Modeling and Simulation
- Explore simulations using agentbased simulation software
- Explain abstractions present and assumptions in a given model
- Describe any limits to the predictive power of a given simulation

Professional Skills
Programming Language
- Python3®
- Presentation/communication
- Technical writing
- Public speaking
- Collaboration: pair programming
- Collaboration: Agile project
- development
- Ethics
- Cyber hygiene best practices

Tools and Software
- Trinket Embedded Code Editor
- Microsoft Visual Studio Code
- Google® Sheets®
- Vernier GA4®
- Netlogo