Course resumes showcase the technical skills students gain in PLTW courses. A resume outlines the computational skills, analytical skills, and knowledge that students acquire in a specific course. Course resumes also detail student experience with tools, software, lab work, and design. The detailed skills presented in course resumes illustrate the immediate contributions that students can make in a workplace as a result of their participation in the course.

This course resume highlights the PLTW Capstone course. The following lists detail knowledge and skills in computer science, engineering, and biomedical science, that each student experiences in the course. The innovation and problem-solving experience and course knowledge gained varies depending on the problem that each student (or team of students) chooses to address.

Problem-Solving Experience
Through designing a solution for an open-ended problem, students will can:
- Exhibit professional skills to successfully contribute to work in a team
- Determine how to proceed through possible alternate routes of design
- Solve a problem using a design process, experimental design, and/or a software development process
- Document in detail the process used to solve a problem or design a product
- Create a detailed and comprehensive design brief

Transportable Skills
Through design and innovation in teams with varying levels of knowledge and skills in engineering, biomedical science, and computer science, students practice:
- Team collaboration
- Project management
- Effective research
- Problem-solving
- Communication skills
- Presentation skills
- Technical writing
- Ethical reasoning

Tools and Software
Depending on the problem chosen and the solution paths explored, students may use:
- Microsoft® Office (Excel®, Word, PowerPoint®)
- 3D solid modeling software
- Variety of measuring devices
- Laboratory equipment
- Vernier® Graphical Analysis 4 data collection software and wireless sensors/probes
- MIT App Inventor
- Visual Studio Code
- Python
- Java

Course Knowledge

Through the problem-solving process, students gain an understanding of:

- Careers
- STEM careers
- Innovation and Design
- Defining a problem
- Completing effective research
- Developing and vetting solutions
- Constructing and testing a prototype or model
- Evaluating a solution
- Presenting design findings
- Application of STEM principles and practices
- Technical sketching and drawing
- Modeling
- Computational and analytical skills
- Experimental design
- Measurement