Computer Science Essentials *(1 year)*
Computer Science Essentials exposes students to a diverse set of computational thinking concepts, fundamentals, and tools, allowing them to gain understanding and build confidence. Students use visual, block-based programming and seamlessly transition to text-based programming with languages such as Python® to develop complex solutions to authentic and relevant problems. They apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them.

Computer Science Principles *(1 year)*
Using Python® as a primary tool, students learn the fundamentals of coding, data processing, data security, and task automation, while learning to contribute to an inclusive, safe, and ethical computing culture. The course promotes computational thinking and coding fundamentals and introduces computational tools that foster creativity. Computer Science Principles helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. PLTW is recognized by the College Board as an endorsed provider of curriculum and professional development for AP® Computer Science Principles (AP CSP). This endorsement affirms that all components of PLTW CSP's offerings are aligned to the AP Curriculum Framework standards and the AP CSP assessment.

Computer Science A *(1 year)*
Throughout the Computer Science A course experience, students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language. PLTW is recognized by the College Board as an endorsed provider of curriculum and professional development for AP® Computer Science A (AP CSA). This endorsement affirms that all components of PLTW CSA's offerings are aligned to the AP Curriculum Framework standards and the AP CSA assessment.

Cybersecurity *(1 year)*
Cybersecurity introduces the tools and concepts of cybersecurity and encourages students to create solutions that allow people to share computing resources while protecting privacy. Nationally, computational resources are vulnerable and frequently attacked; in Cybersecurity, students use virtual labs to discover key concepts of the field. These labs progress from an individual computer to more and more complex network environments. This course raises students' knowledge of and commitment to ethical computing behavior. It also aims to develop students' skills as consumers, friends, citizens, and employees who can effectively contribute to communities with a dependable cyber-infrastructure that moves and processes information safely.

PLTW Capstone *(1 year)*
Students engage in an open-ended research experience in the PLTW Capstone course, a culminating program for those completing PLTW's high school offerings. They collaborate in teams, designing and developing original solutions to well-defined and justified real-world problems.