AP COMPUTER SCIENCE PRINCIPLES

Computer Science introduces students to the breadth of the field of computer science. In this course, students will learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They will incorporate abstraction into programs and use data to discover new knowledge. Students will also explain how computing innovations and computing systems, including the Internet, work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical.

It is important to note that the AP Computer Science Principles course does not have a designated programming language. Teachers have the flexibility to choose a programming language(s) that is most appropriate for their students to use in the classroom.

- Creative Development: Collaboration, program function and purpose, program design and development, and identifying and correcting errors.
- Data: Binary Numbers, data compression, extracting information from data and using programs with data.
- Algorithms and Programming: Algorithms and programming languages are essential for solving problems and completing tasks.
- Computer Systems and Networks: The Internet, fault tolerance and parallel and distributed computing.
- Impact of Computing: Beneficial and harmful effects, digital divide, computing bias, crowdsourcing, legal and ethical concerns, and safe computing.