Course Overview

High School | AP Computer Science Principles - *Last Updated on April 2, 2025*

DESCRIPTION

K-12 Content Area | Mission & Philosophy Statement
• Young people are born investigators, with natural curiosities about the physical, biological, and social worlds they experience. Anchoring science learning in real-world phenomena connects curiosities to core conceptual understandings. • Students actively construct understanding through inquiry, experimentation, and analysis to develop science and engineering practices such as asking questions, planning and carrying out investigations, and constructing explanations. • Integration of crosscutting concepts such as patterns, cause and effect, and systems thinking promote interdisciplinary understanding and sense-making of the natural world. • Science learning occurs alongside other disciplines to foster holistic understanding and application of knowledge.

Course Description
AP Computer Science Principles (AP CSP) introduces the student to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting the student to understand how computing has changed the world. A rigorous course, computational content and skills are developed under the framework of creativity. The course focuses on using technology and programming to solve computational problems and create relevant artifacts. In addition, the course addresses the role of computing in society and the ethical implications of new computing technologies. Students are encouraged to take the AP CSP Exam in May.

STANDARDS

College Board - AP Computer Science (2020)

APCS.PDAD.1A APCS.PDAD.1B APCS.PDAD.1C APCS.CL.2A APCS.CL.2B APCS.CL.2C APCS.CL.2D APCS.CI.3A APCS.CI.3B APCS.CI.3C APCS.CI.3D APCS.CI.3E APCS.CT.4A APCS.CT.4B APCS.CT.4C APCS.D.5A APCS.D.5B APCS.D.5C APCS.D.5D

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COURSE OBJECTIVES

The objectives are the course are to meet the Pennsylvania State Standards in Science and Technology and the National AP Computer Science standards.

ASSESSMENT TYPES

The following assessment types will be used during the course:

- Formative Assessments
- Summative Assessments

SUGGESTED METHODS OF INSTRUCTION

Below is a list of suggested strategies for high-quality instruction in Mathematics:

- Instructional components outlined in the *Framework for Teaching by Charlotte Danielson*
- Teacher-Centered Instruction
- Inquiry-Based Learning
- Small Group Instruction
- Cooperative Learning
- Student-Centered/Constructivist Approach
- Project-Based Learning
- Flipped Classroom

RESOURCES

District Approved Program Resources	District Approved Supplemental Resources	District Approved Technology Resources
	Other Resources • Teacher Created Resources • District approved supplemental resources and labs	Technology • District approved supplemental technology