

AP Computer Science A

- PS 1 Students will use Object-Oriented Program Design, in order to ([Strand 1, Standard 1](#)):
- Run problem analysis
 - Data abstraction and encapsulation
 - Code reuse
 - Data representation and algorithms
 - Functional decomposition
- PS 2 Students will utilize implementation techniques to facilitate Program Implementation. ([Strand 2, Standard 1](#))
- PS 3 Students will understand and utilize the following program constructs ([Strand 2, Standard 3](#)):
- Primitive types vs. reference types
 - Declaration and Constants
 - Variables
 - Methods and parameters
 - Classes
 - Interfaces
 - Text output using System.out.print and System.out.println
 - Sequential execution
 - Conditional execution
 - Boolean expressions, short-circuit evaluation, De Morgan's law
- PS 4 Students will describe Java library classes and interfaces included in the AP Java Subset. ([Strand 2, Standard 3](#))
- PS 5 Students will explain debugging and identify error categories. ([Strand 3, Standard 2](#))
- PS 6 Students will be able to run Algorithm Analysis with statement execution counts. ([Standard 5](#))
- PS 7 Students will use Standard Data Structures (int, boolean, double, strings, classes, lists, arrays, etc.). ([Strand 4](#))
- PS 8 Students will use Standard Operations and Algorithms (Traversals, Insertions, Deletions). ([Strand 5](#))