AP COMPUTER SCIENCE A

COURSE DESCRIPTION
This course is designed to build upon the fundamentals of computer programming. The emphasis is on object-oriented programming methodology, problem solving and algorithm development, and is equivalent to a first-semester college course in Computer Science. Topics include arrays, recursion, inheritance, sorting and searching algorithms, and a case study of a complex program.

This course meets the UC/CSU "C" (Math) or "G" (Math elective) requirement.

FEATURES
- This course must be linked with either "Intro to Computer Programming" (informally referred to as "Level A") or "Data Structures" (informally referred to as "Level AB"). This course combined with the linked course is a year-long (two term) class.
  - For more detailed information on the "Level A" course (including units of study and student background), see the "Intro to Computer Programming" Profile.
  - For more detailed information on the "Level AB" course (including units of study and student background), see the "Data Structures" Profile.
- Quarters 2 and 3 receive a weighted AP grade.
- The course is taught using the Java programming language
- It is assumed that you have never programmed before. That said, any previous programming experience can be helpful - for example, taking CS Principles prior to this course. (See "possible course sequencing" chart below.)

(continued)

READINESS PROFILE & COURSE EXPECTATIONS

WHY LEARN COMPUTER SCIENCE?

- If you plan to major in computer science, this class gives you a head start
- Computer science is also applicable to many other majors, such as the sciences, math and business
- Even if you don't major in any of these fields, chances are you will be using computers in your future job; and you may be interacting with others who are developing software, so it helps to understand what they're talking about
- Learning to write computer programs is a great way to improve your logical thinking and problem-solving skills

POSSIBLE COMPUTER SCIENCE COURSE SEQUENCING

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   STOP              STOP                    STOP

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              │ Into to          │    │ AP Computer Science A │
              │ Programming &    │    │ & Data Structures │
              │ AP Computer      │    └─────────────────┘
              │ Science A        │
              └─────────────────┘

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   │ AP  CS Principles│
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   START             START                   START
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