

AP Computer Science Proposal



Presenter:

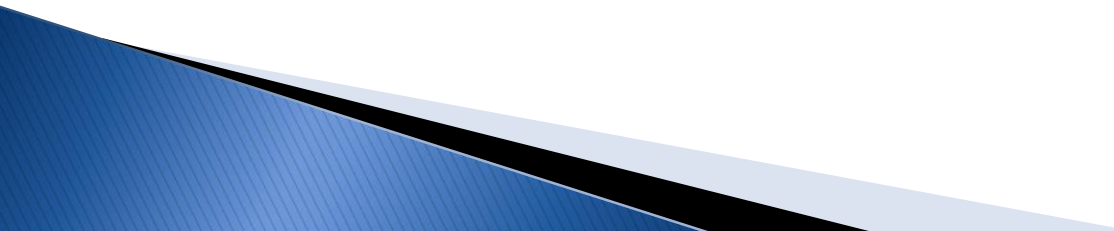
- ▶ Amy Ingente, Math Coordinator

November 6, 2017

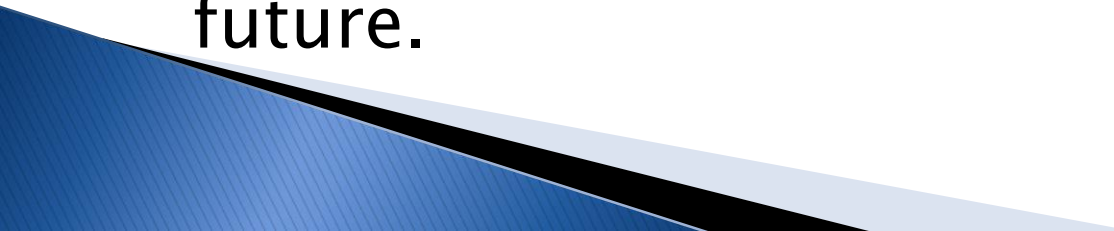


Purpose

The purpose of this presentation is to propose the adoption of two AP Computer Science courses, and supporting resources.

- ▶ AP Computer Science Principles
 - ▶ AP Computer Science A
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Rationale

- ▶ Computer Science is an area of study which has made significant changes in the past 10–20 years.
 - ▶ C++ is no longer the programming language used by the College Board, but is still the language of instruction for our Computer Science 3–4 course.
 - ▶ Students need to learn and be engaged with the latest technology to prepare them for the future.
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Aligned to the District Strategic Plan

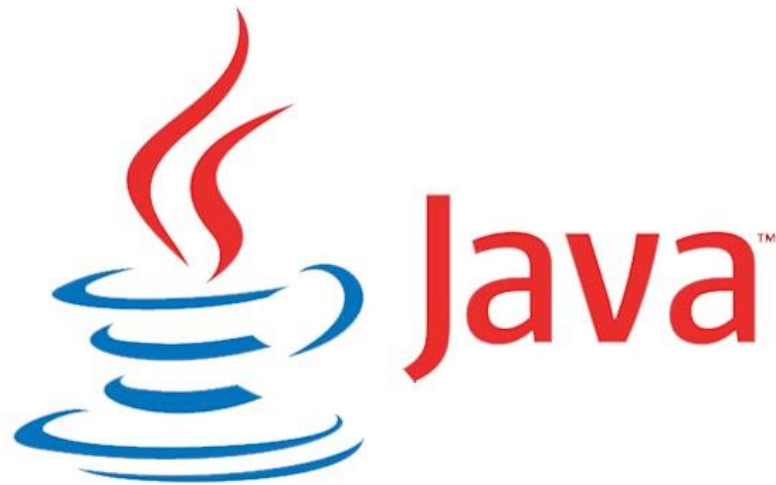
Student Achievement – Priority #1

We will implement and support a challenging, standards based curriculum across all content areas.

- ▶ AP Computer Science courses can broaden participation in computing to help address traditional issues of equity and access.
- ▶ Provide a strong and engaging introduction to the fundamental areas of computer science.
- ▶ Provide opportunities for Post-secondary and Career exploration.

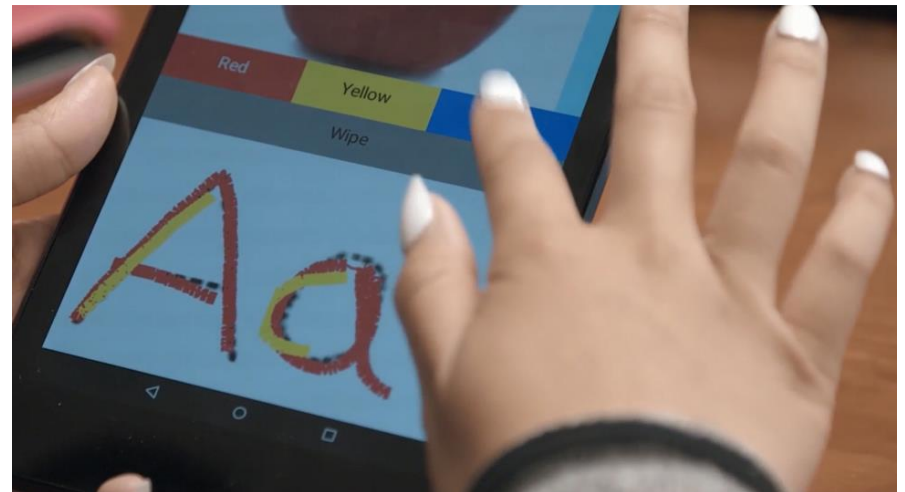
Course Overview

- ▶ **AP Computer Science A**
 - Focus on computing skills related to programming in Java.



Course Overview

- ▶ **AP Computer Science Principles**
 - Focus on creativity.
 - Importance of communicating solutions appropriately and in ways that are relevant to current societal needs.



Proposed Resources

▶ AP Computer Science A

- *Introduction to Java Programming AP Version*, Liang
- *Test Prep Series for AP Computer Science A*
- *My Programming Lab*

Proposed Resources

▶ AP Computer Science Principles

- *Invitation to Computer Science*, Schneider/Gersting
- *Fast Track to a 5: Preparing for AP[®] Computer Science Principles Examination*
- *MindTap*

Proposed Resources

- ▶ **HP ProBook Notebook Computers**
 - 1 per student
 - Ensure that all students will have the opportunity to complete activities and practice concepts outside of the classroom

Recommendation for Implementation

- ▶ Adoption of the proposed AP Computer Science courses and resources for the 2018–2019 school year.

Professional Development

▶ March 2018

- ▶ All new AP Computer Science teachers will attend a College Board endorsed workshop.

▶ Summer 2018

- All new AP Computer Science teachers will attend a weeklong College Board Institute.

▶ August 2018

- Professional development on the instructional resources.

▶ On-going Professional Development

- District Collaborative Days, Professional Practice Days and after school, as needed.

Cost Analysis

- ▶ 6 years of digital textbook access and a laptop for each student.
- ▶ Anticipating each high school will run 2 sections of each course.

<u>Description</u>	<u>Qty</u>	<u>Cost per Unit</u>	<u>Extended Cost</u>
Invitation to Computer Science, Digital Textbook + MindTap™ (AP Computer Science Principles)	390	\$127.25	\$49,627.50
Introduction to Java Programming AP Version, Digital Textbook + My Programming Lab (AP Computer Science A)	390	\$124.97	\$48,738.30
HP ProBook x360 11 G1 EE 11.6" Touchscreen LCD 2 in 1 Notebook (390 for each class being offered)	780	\$541.44	\$422,323.20
HP® Smart Buy Essential Top Load 15.6" Notebook Case, Black (390 for each class being offered)	780	\$23.29	\$18,166.20
HP Care Pack - 3 Year Extended Warranty (390 for each class being offered)	780	\$59.00	\$46,020.00
		Cost per student \$750.98	Total \$584,875.20

Cost Analysis

- ▶ Yearly cost for a consumable text

<u>Description</u>	<u>Qty</u>	<u>Cost per Unit</u>	<u>Extended Cost</u>
Fast Track to a 5: Preparing for AP® Computer Science Principles Examination	390	\$19.50	\$7,605.00
Test Prep Series for AP Computer Science A	390	\$19.97	\$7,788.30
		Cost per student \$19.97	Total \$15,393.30

Evaluation of Change

- ▶ Data will be reviewed yearly from indicators such as:
 - Enrollment rate
 - Percent of students taking AP exams
 - AP exam passing rates
 - Retention rates within the courses

