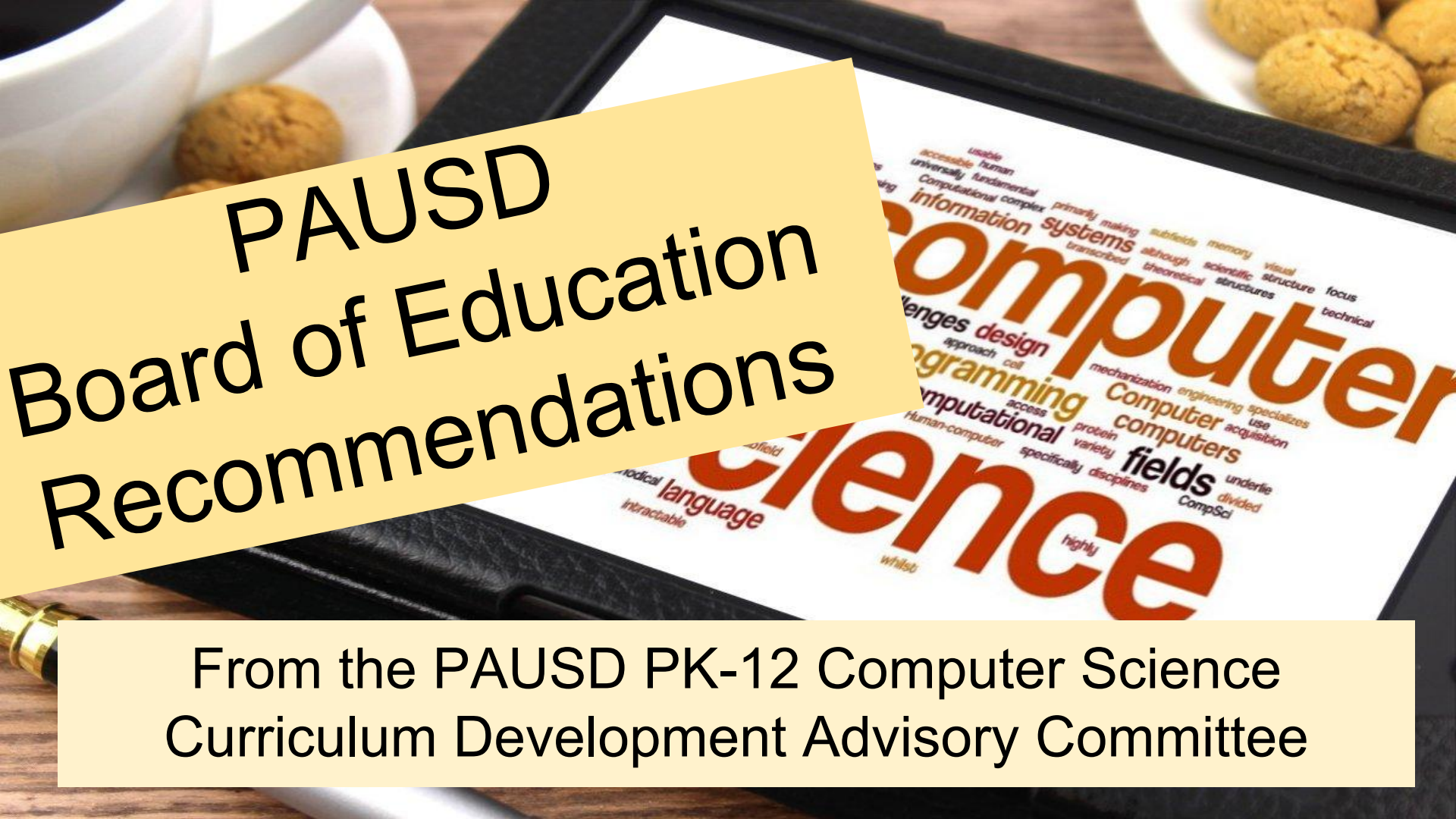
PAUSD
Board of Education
Recommendations
From the PAUSD PK-12 Computer Science
Curriculum Development Advisory Committee

Infrastructure

1. Create the PAUSD expectation that ***ALL students*** will study Computer Science, as it is a *core* subject.
2. Include One-semester of Computer Science in the ***Graduation Requirements*** for students to earn a PAUSD diploma.
3. Create a ***PK-12 Computer Science Department***

Overview of Elementary CS Model: Curriculum for **ALL Students**

The CS Standards for Elementary are clustered into the grade level spans of K-2 and 3-5. The following model ensures mastery of these standards by the end of 2nd and 4th grades while being fiscally mindful.

Grade Level	Model
K/1	**Focus on offline experiences, incorporate coding skills into the existing curriculum by classroom teachers (using Code and Go Robot Mouse and Osmo Coding Awbie)**
2*	***CS Specialist*** **to deliver 8 weeks of instruction (using code.org or scratch)**
3	**Incorporate coding skills into existing curriculum by classroom teachers (using Scratch)**
4**	***CS Specialist*** **to deliver 8 weeks of instruction (using Dot and Dash)**
5	**Incorporate coding into existing curriculum and/or choice time (using Scratch and/or Dot and Dash)**

Elementary Level **CS Department**

One Master CS-Specialist (TOSA)

- Certificated Elementary teacher with CS Training and/or Degree
- Brings the Elementary voice to the PAUSD CS Steering Committee
- Teaches CS at at least two sites

Three CS-Specialists (TOSAs)

- Certificated Elementary teachers with CS Training and/or Degree
- Teaches CS at three to four sites

The CS-Ss and many elementary teachers will require **CS training.**

Overview of Middle School CS Model: Integrating CS into the Curriculum for **ALL Students**

Grade Level	Model
6	In the technology portion of the **WHEEL**, **three weeks** (out of five or six, depending on the middle school site) will be spent on **coding and solving problems with code**.
6, 7, and 8	**Integrate CS** into one, two or all three levels of the **science courses**, replacing one unit in each grade level with a code-based science unit modeling the appropriate topic. The focus is to have students explore science with science models that the students can program or manipulate. (E.G.: Project GUTS)
8	**Integrate CS** into the **Algebra 8** course, and **possibly the Math 8** course, by utilizing math-based programs such as Bootstrap Algebra or another appropriate course to teach specific CCSS-M topics.

Additional Middle School Curriculum for Students Who *Elect* CS

7th & 8th Grade *Elective* Options Remain

- Jordan- Computer Creations, Web Design, FUSE
- JLS- Computers, Web Design 1A & 1B, Design & Tech Studio
- Terman- Computer Applications, Web Design

Middle School Level **CS Department**

A CS-IL (Computer Science Instructional Leader) @ each of the three MS Sites

- Manages the CS Curriculum aligned across the three MS Sites
  - CS Wheel Curriculum
  - CS integration in Science and Math
  - CS Electives
- Brings the middle school voice to the PAUSD CS Steering Committee
- Provides or locates PD to provide progressive CS practices at the MS level
- Meets other expected IL responsibilities

Overview of the High School Model: Choice in meeting an ***ALL Student*** Graduation Requirement of One Semester (or 5 units) of Computer Science

To meet a One-Semester Grad Req't, students may successfully complete...

A One-Semester-long course

- One-Semester Grad Req't CS Course (TBD) at the *PRE*- AP CSP level

OR

One of many Year-long courses

- AP CSP
- FOOP
- AP CS A
- Web Development
- CS Capstone

High School Level **CS Department**

A CS-IL (Computer Science Instructional Leader) @ each of the two HS Sites

- Manages the CS Curriculum aligned across the two HS sites
  - Updates the CS Grad Req't curriculum as needed and appropriate
  - Supports the integration of CS in other curricular areas
- Brings the high school voice to the PAUSD CS Steering Committee
- Provides or locates PD to provide progressive CS practices at the HS level
- Meets other expected IL responsibilities

SUMMARY

1. Computer Science for ALL Students
2. Include Computer Science in Graduation Requirements
3. Create a PAUSD Pk-12 Computer Science Department

Likely annual cost is about $2M, offset by some savings.