



**Mountain View
Whisman
School District**



TechSmart

Computer Science Implementation Model

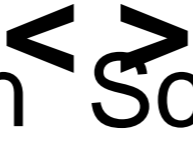


**MOUNTAINVIEW
Educational Foundation**

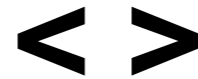
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Computer Science Implementation Model

An alternative to the existing computer science exposure models typically available to schools.

Mountain View Whisman  School District's Computer Science Implementation Model will be delivered through an innovative public and private partnership with TechSmart, a leading provider of K-12 coding & computer science education, which will provide coding teacher professional development and support, coding curriculum pathway and courses, and a cloud-based platform for teachers and students.

Five (5) Components



1. In-depth coding teacher professional development
2. Multi-year coding curriculum pathway sequence (grades 3-8)
3. Differentiated and rigorous coding courses offered on the master schedule
4. Integration of coding into core subjects
5. Computer Science work-based learning program to connect students and teachers to the world of work via partnerships with local corporate businesses.

Component #1:

In-depth coding teacher professional development



- Teachers become qualified to teach computer science, having mastered tools, content, and pedagogy to teach effectively.
- Teachers developing coding fluency through completing 100 coding exercises & writing 2,500 lines of code.
- Teachers will develop confidence and self-efficacy delivering new subject matter.
- Teachers will receive a Coding Competency Certification from the University of San Diego.

Component #2:

Multi-year coding curriculum pathway

(grades 3-8)



Students will learn algorithmic processes, problem solving, computational thinking, and comprehensive coding skills as they progress from drag-and-drop coding in elementary to Python line coding in middle school.

Elementary School

- Skylark -

Three-year coding course sequence will be offered from 3rd-5th grade in two 45-minute blocks of coding per week

Middle School

- Python -

Three sequential coding courses offered on the master schedule, beginning with a 6th grade wheel, followed by two semester electives

Component #3:

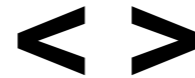
Differentiated and rigorous coding courses offered
on the master schedule



- Designed to keep ALL students highly engaged, gaining competency
- Student-appropriate levels determined by formative and summative assessments
- Six (6) levels of difficulty within each curriculum activity
- Curriculum aligned to CSTA, NGSS, and new CA state CS standards

Component #4:

Integration of coding into core subjects



Curriculum that provides students with applied coding curriculum and exercises in the core academic subjects. Students will learn how to apply computer science to other content areas.

Elementary School

Structured exercises and activities will be offered that enable students to apply their computer science and coding skills to the four core subjects (math, science, social studies and language arts).

Middle School

Stand-alone coding courses in will be supplemented by integrating coding into 8th grade math.

Component #5:

Computer Science work-based learning program to connect students and teachers to the world of work via partnerships with local corporate businesses



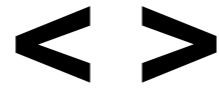
- Students will be provided a context to find the right work environment by matching their unique personality type to the work's characteristics
- Students will “meet a pro” through virtual industry chats
- Students will participate in work-based CS learning opportunities such as company visits and project presentations to industry leaders
- 2-3 day “externship” experiences will be provided to students, allowing them to explore the world of work

Impact



- 4 Schools (2 ES, 2 MS)
- 38 Teachers
- 1,800 Students

Solution Provided by TechSmart



- Teacher Coding Bootcamps (Professional Development)
- Coding Curriculum, Teaching & Learning Platform
- Ongoing Teacher Live Support