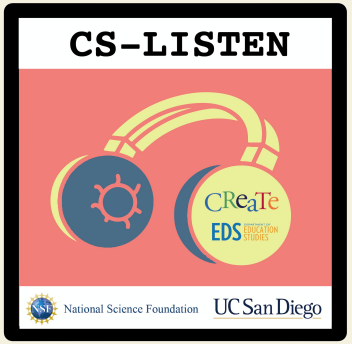


CS Listen: Mission Vista

Brought to you by

Allison T, Michael C, Wyatt W, Myles H, Nicholas A, Julia C, & Ian M.

Research Questions

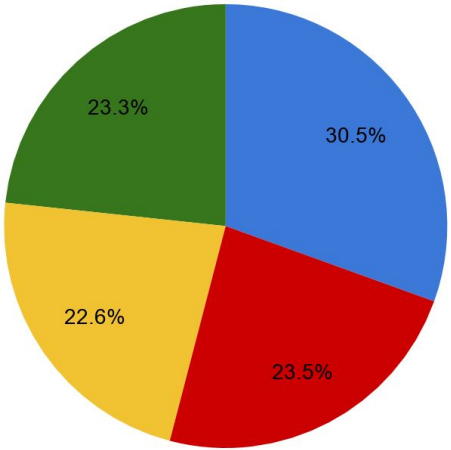
Of the women at MVHS who are interested in Computer Science but aren’t taking the class, why aren’t they taking the class?

How can we encourage those women to take the class?

Wyatt

School Demographics

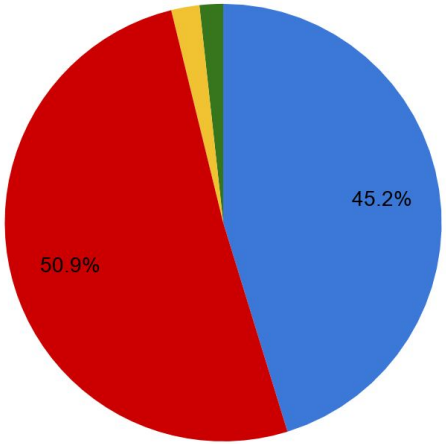
Students by Grade Level



- Freshman
- Sophomore
- Junior
- Senior

- Male
- Female
- Other
- Prefer not to say

Students by Gender



Total Students: 1693

Myles

Raw Data Analysis

- Sample - Attempted to reach 1700 students with a 50% return.
- Data Collection - Online Google Form to all 2nd period teachers
  - Asked to give 3 minutes of class time one day during the first week of March.
  - Principal Walden encouraged the teachers to participate in the survey. Students completed the survey during class time.
- Completed Surveys - 862
- Discarded results - Values in the Race category dropped due to student's nonsensical responses.

Wyatt

Life Skills

Female students average ratings:
Reading and writing: 5.2
Math: 4.2
Communication: 5.6
Computer Programming: 2.9
Problem Solving: 5.1
Time management: 5.4

Male students average ratings:
Reading and writing: 4.8
Math: 4.2
Communication: 5.4
Computer Programming: 3.1
Problem Solving: 5.2
Time management: 5.2

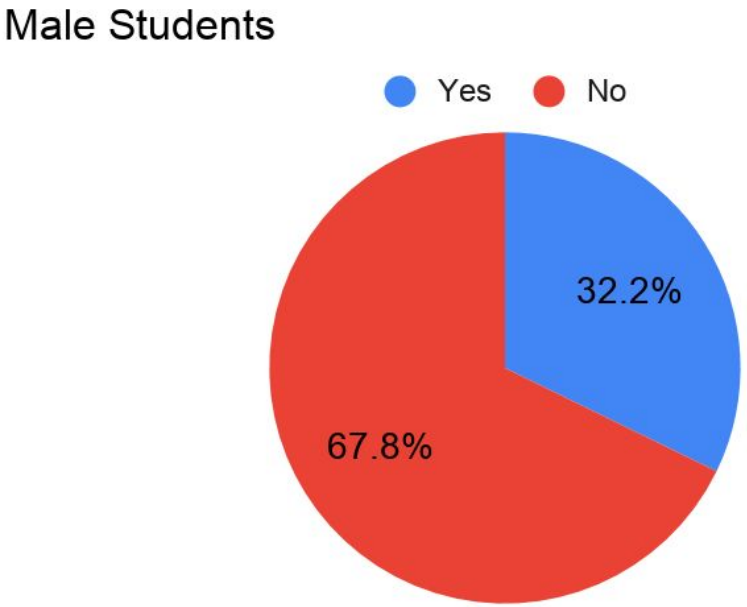
Total students average ratings:
Reading and writing: 5.0
Math: 4.2
Communication: 5.5
Computer Programming: 3
Problem Solving: 5.2
Time management: 5.3

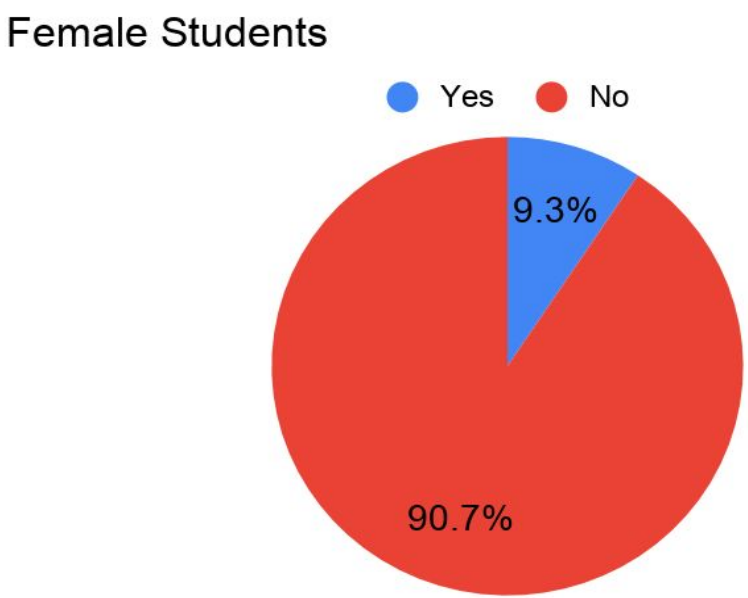
Female students rated computer science the least important compared to the others.

They prioritize liberal arts, like communications and reading.

Julia

Have Students Taken Computer Science Courses at Mission Vista?





Most students have not taken a computer science course, but out of those who have, most are male.

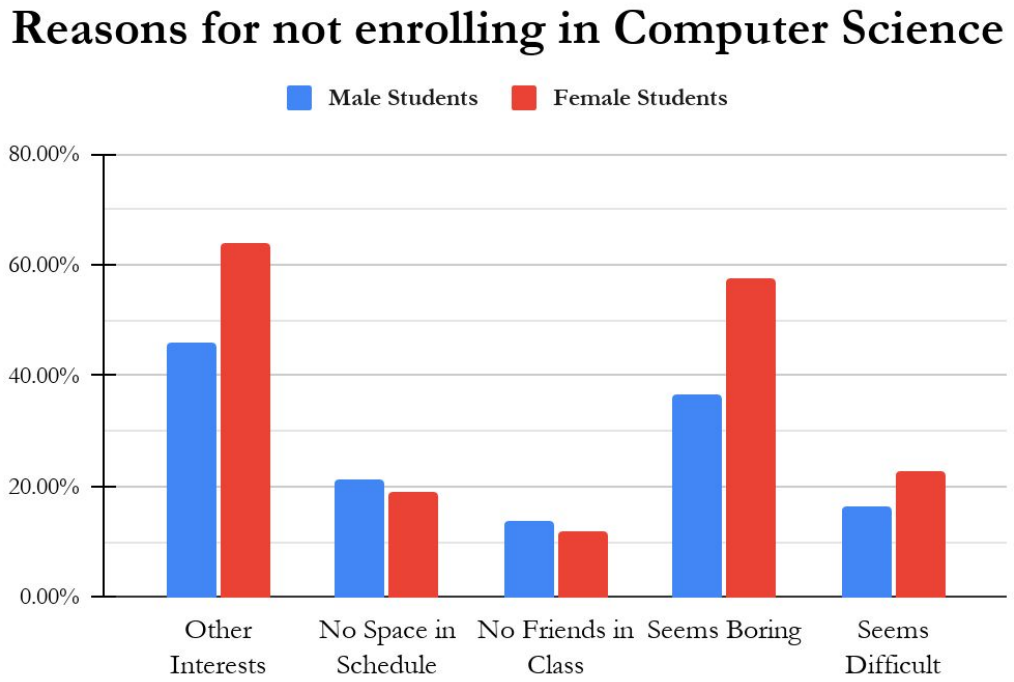
Nick

Reluctance to enroll in Computer Science courses

Female students are far more likely than male students to have interests other than computer science.

Female students find computer science more boring and more difficult than male students.

Results were relatively similar for the other two reasons for not taking computer science.



Students were able to select multiple reasons for not enrolling in a computer science course.

Myles

What Career Skills are Seen as Most Important?

<u>Female Rating Averages:</u>

Coding: 1.68

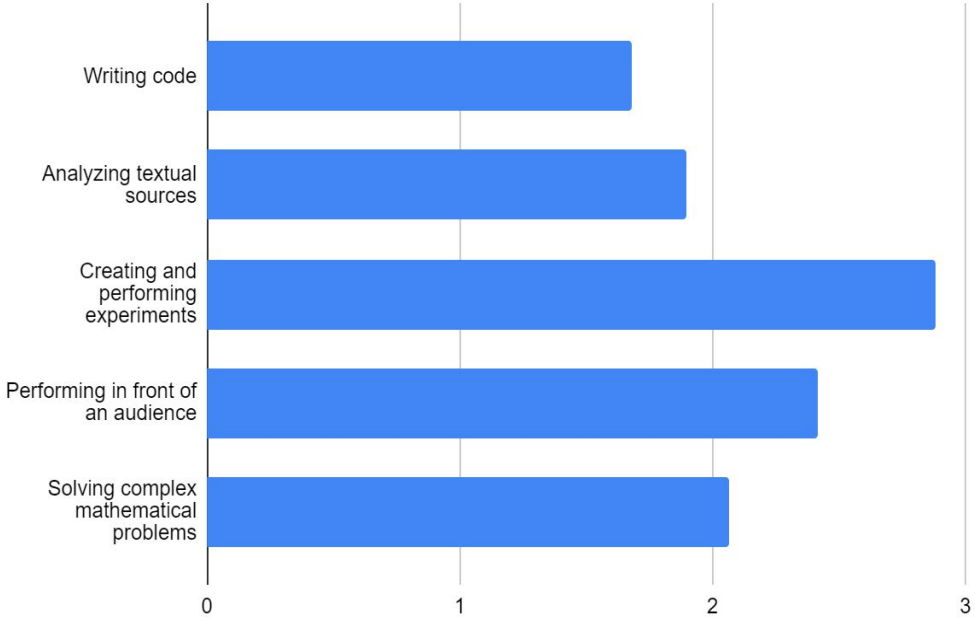
Analyzing texts: 1.89

Creating & performing experiments: 2.88

Performing in front of an audience: 2.42

Solving complex mathematical equations: 2.06

- We can infer through this data that MVHS students consider laboratory and physical sciences as generally more important. This may be because of a school culture that puts emphasis on these subjects.



lan

What do you think female students need?

Right now female students do not see the class as a beneficial course for their future.

Presenting computer science as a pathway may promote more interest in the classes.

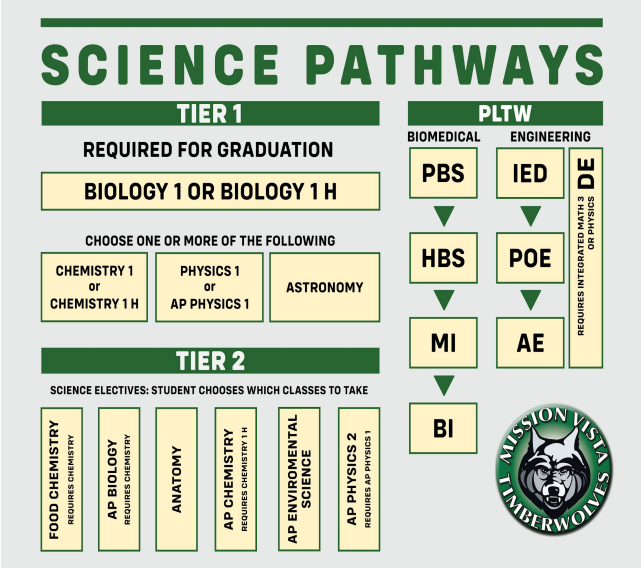
- may also have females value the class as more than just an elective.

Julia

Recommendations #1

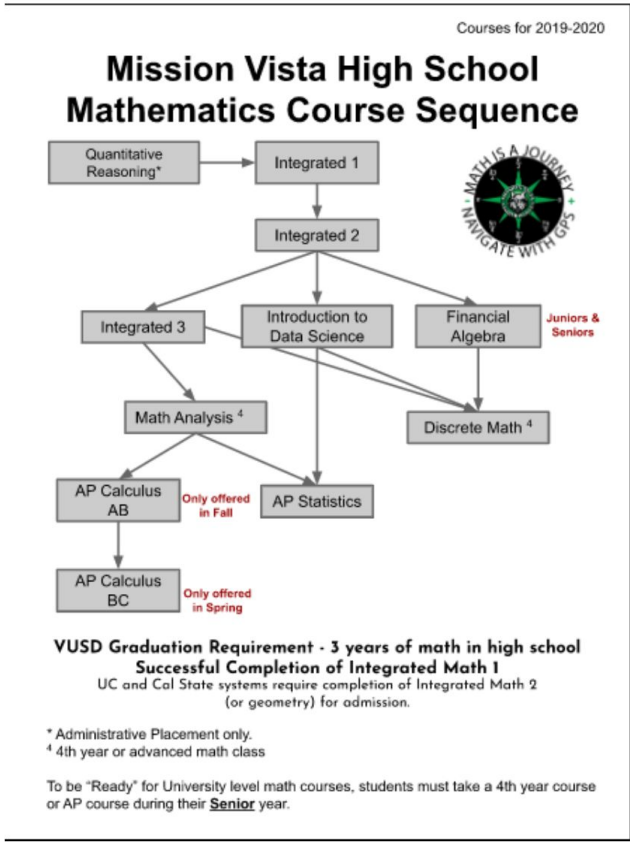
To raise awareness for CS classes at MVHS:

- Advertise as a pathway like Biomed / Engineering
  - C.S. should be given its own publicized pathway
  - presented to students by counselors and teachers as more than an elective.
  - Invite females who have taken the CS courses in the past to speak to students.
- Mission Vista doesn't prioritize CS as a valid science pathway for college and career limiting student interest.



Allison

Recommendation #1 (continued)



Courses for 2019-2020

Mission Vista High School
Mathematics Course Sequence

Quantitative Reasoning* → Integrated 1 → Integrated 2

Integrated 2 → Integrated 3, Introduction to Data Science, Financial Algebra (Juniors & Seniors)

Integrated 3 → Math Analysis [4]

Introduction to Data Science → Math Analysis [4], Discrete Math [4]

Financial Algebra → Discrete Math [4]

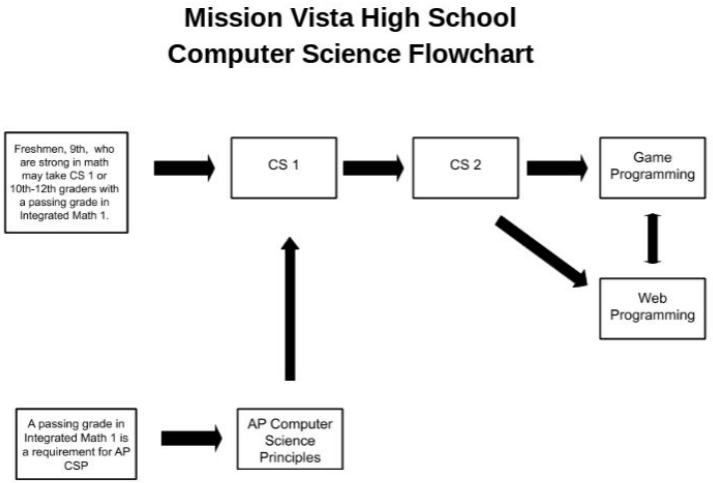
Math Analysis [4] → AP Calculus AB (Only offered in Fall), AP Statistics

AP Calculus AB → AP Calculus BC (Only offered in Spring)

VUSD Graduation Requirement - 3 years of math in high school
Successful Completion of Integrated Math 1
UC and Cal State systems require completion of Integrated Math 2 (or geometry) for admission.

* Administrative Placement only.
[4] 4th year or advanced math class

To be "Ready" for University level math courses, students must take a 4th year course or AP course during their **Senior** year.



A goal would be to integrate CS courses into existing pathways. Our new Data Science course is in the Math Pathway as a level 3 course and has CS as part of its curriculum. Existing CS courses can flow around this course. Data Science currently has 100 students enrolled.

Michael

Recommendation #2

On a larger scale, Computer Science at MVHS should ultimately be considered more than an elective (G requirement).

CSF (California Scholarship Foundation) would follow suit and move Computer Science to a higher list in order to increase student interest.

<u>Background:</u>

- CSF currently has CS courses in lower lists, since they are G requirements..
- MVHS currently graduates 80-90 students each year in white robes. Students may tend to avoid lower list courses to ensure graduating with CSF Life Membership status and a white robe.

Ian

Questions?