

Growing Computer Science At Your School!

While we wait...



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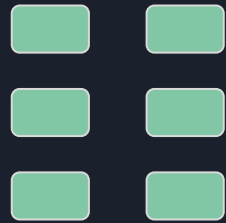


Regional School District #10 - Burlington, CT

- Serves towns of Harwinton and Burlington, CT
- District is about 2200 total students
 - 1 High School: ~710 students
 - 1 Middle School: ~720 students
 - 2 Elementary Schools: ~400 each
- Computer skills start in elementary
- Middle School Unified Arts Computer Classes (1 Quarter long)
 - 5th Grade: Typing, Basic Coding, Basic Sketch-Up
 - 6th Grade: Tech-Ed (includes some coding) , 3D printing
 - 7th Grade: Excel, Coding, Sketch-Up
 - 8th Grade: STEM Experiences (includes some coding), Woodworking

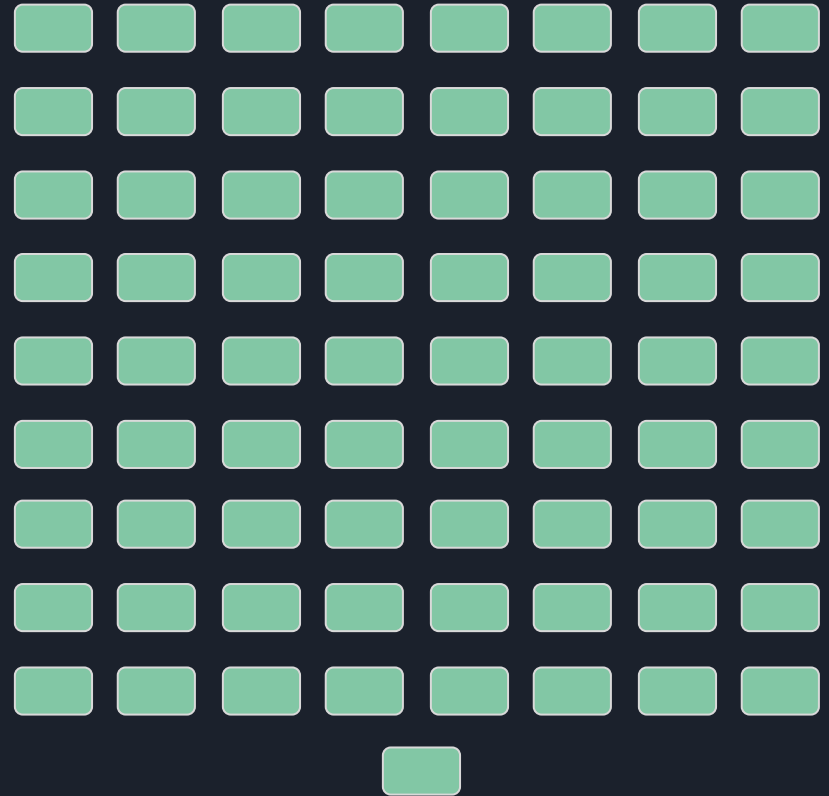


How it started



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How it's going!



Our growth over time...

Year	Sections - Course (# S's)	Total Students
14 - 15	1 - Java (6)	6
15 - 16	1 - Java (15)	15
16 - 17	2 - Java (14/19), AP CSA (1)	34
17 - 18	2 - Intro to JS (10/17), AP CSA (2)	29
18 - 19	2 Intro to JS (23), 2 AP CSP(52), AP CSA (2)	77
19 - 20	1 Intro to JS (6), 2 AP CSP (47), AP CSA (3)	56
20 - 21	2 Intro to JS (24), 2 AP CSP (44), AP CSA (5)	73
21 - 22	2 Intro to JS (20+), 2 AP CSP (53+), AP CSA (?)	73+

*I took over

*Began re-build



Then & Now

2014-15

1 - Computer Science Course

Java

Full Year

Students: 6

0.7% of students (~820)

Teachers available: 1 of 9

2020-21

Intro to CS(2), AP CSP (2)
AP CS A (through VHS)

Python, JavaScript, Java

Half Year, Full Year

Students: 24 (Intro) / 44 (CSP) / 5 (CS A)

Total Students : 73

10.3% of students (~710)

Teachers available: 4 of 9

2021-22

2 Intro to CS (20+)

2 AP CSP (53+)

AP CS A (??)



The need to “Re-build”

- Student perception of being *really* difficult
- Full-year courses hard to fit into student schedule
- Course tools were clunky, not intuitive
- Limited access due to prerequisites
- Not necessarily “recommended” - needed some “branding”



What we did

- Created a half-year introductory course option with [no prerequisites!](#)
- Find a viable platform (such as CodeHS!)
- Get administrative support and funding (if necessary)
- Work to create a feeder program



Generating Interest

- Don't make the course impossible. Word of mouth is HUGE!
- Get STEM teachers and Counselors to *actually* recommend it!
- Annually push Hour of Code activities

Difficulties:

- Student's don't have room in their schedule, know if they'll enjoy it, or generally have an idea what it's really about.
- If more students take it, we also need more teachers to teach it.



Recruit Teachers

- Just ask.
- There are teachers who took CS courses in college. Check your state requirements.
- Finding an intuitive program makes it easy - for them!
- Talk to admin - get curriculum hours.



Our AP CSP Success...

Year 1 (18-19)

82% Pass Rate - 52% Earned 4 or 5

Scores:

1 - 0% (14.7% Globally)

2 - 18% (19.1%)

3 - 30% (34.8%)

4 - 24% (19%)

5 - 28% (12.3%)

6 of the 50 took a prior course.

Year 2 (19-20) - *No Multiple Choice*

79% Pass Rate - 46% Earned 4 or 5

Scores:

1 - 9% (9% Globally)

2 - 13% (20%)

3 - 33% (37%)

4 - 35% (23%)

5 - 11% (11%)

5 of the 46 took a prior course.



Student Voice

Based on 35 student responses

- Over 85% of AP CSP students never took a formal class prior
 - Of surveyed - All said they'd highly recommend it
 - Likelihood to recommend: 3.88 of 4
- Opinion of Expected difficulty: 2.59 of 4
- Opinion of Actual difficulty: 1.75 of 4



What were some concerns taking AP CSP?

- I didn't know much going in, and it was my first AP class (5)
- I am not good with technology and felt I'd be behind others (A)
- I had no background in coding and was worried about catching up with others (A)
- Starting something completely new that I knew nothing about was a little scary (A)
- Not sure if I'd get it or be able to keep up (4)



Why did you decided take AP CSP?

- It was recommended by a teacher and sounded pretty cool
- A teacher recommended it and I heard it was interesting
- I heard it was a lot of fun
- I heard from other students it was an easy AP and my parents encouraged me
- I heard it was an easier AP than some others courses offered
- Sounded easier and more interesting than AP Calc
- I found coding interesting and know it was a skill in today's workforce
- I wanted to double up on a Math course, and heard it was fun and interesting



What would you say to a student who may be on the fence to take it?

- Even if you don't see yourself going into CS, this class is a great way to build your problem solving skills while having fun doing it.
- You learn a lot, not just about CS, but problem solving in general and how to be creative in the way that you think and work through difficulties
- It's a fun course and opens your eyes to the behind the scenes parts of technology which is so prominent in our lives.



What would you say to a student who may be on the fence to take it?

(continued)

- It's not as bad as you would think
- CS is a growing field and even taking an intro course could get you hooked into the field.
- It's fun. I'm not a math person which was scary at first, but it was genuinely interesting for me to learn about.
- Most everyone is starting from scratch, so if you find in school you were never "top of the class" you may find that this is something you're really good at and/or something you really enjoy.



Sustaining it

- Build Relationships First!
- Make it accessible to as many as possible!
- Make the course FEEL different than “the norm.”
- Leverage the Hour of Code for district connections!

I've learned that people **will forget** what you said, people **will forget** what you did, but people will **never forget** how you made them feel.

Maya Angelou

Q & A

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