CASE STUDY

Unexpected Change in Teaching Schedule Leads to Excelling in Computer Science

Jeff Wojcik, a Self-Taught Programmer, and Now CS Teacher, Grows the Computer Science Program at Port Washington High School

After teaching math in Milwaukee for six years, Jeff Wojcik took a position teaching high school math in his new hometown of Port Washington, Wisconsin. Over the summer, his principal called him with some news and a question that would forever change the trajectory of his career. "Our computer science teacher just quit and we need a replacement. Can you teach computer science?" Despite having no formal education in CS, Jeff decided to take a chance and agreed to teach this new subject in addition to teaching math.

While planning for his new class, he recalled that a former colleague had mentioned CodeHS. He knew he needed a curriculum and product that he could rely on, especially without any prior experience, and decided to go with CodeHS. During the first year, Jeff taught two computer science classes: Introduction to JavaScript and AP CSA. He was taking the course at the same time as his students and learning the content along with them. By the end of his second year, he took and passed the Praxis exam for CS and became dual certified in Math and Computer Science! He had prepared solely by using CodeHS to teach his classes. Since he began the computer science position five years ago, Jeff built a full pathway for students.

Jeff offers several different courses that alternate each year, including:
- A Year
  - Intro JavaScript (1 semester)
  - Cybersecurity (1 semester)
  - AP CSA
- B Year
  - Intro Python (1 semester)
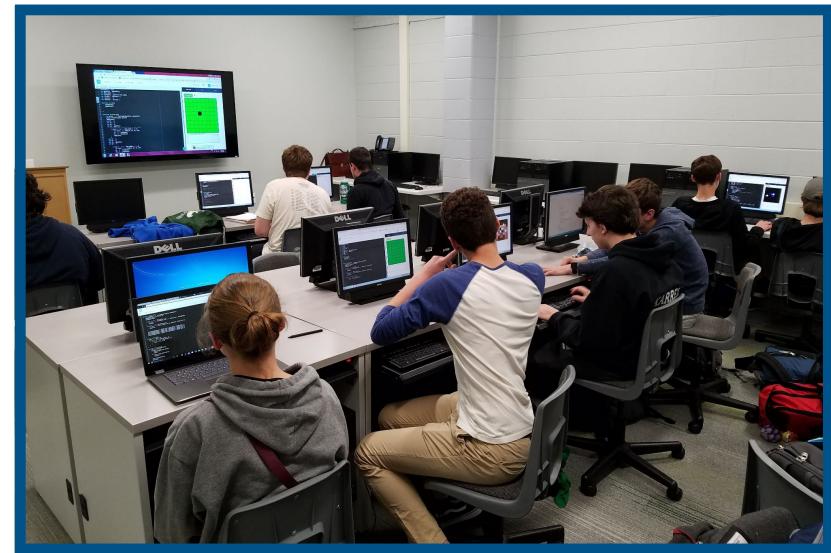 - Web Design (1 semester)
  - AP CSP

> **"I also personally believe that CS skills should be a graduation requirement because computer skills already are, and will continue to be, essential in today's world."**

The two goals of the computer science program at Port Washington HS are to prepare students for success in a technology fueled world and to push students to create original solutions to novel problems. Jeff has worked hard to ensure that the classes he teaches meet both goals.

Many of Jeff's students enjoy programming so much that they ended up taking multiple courses during their time in high school. One student took a course almost every semester and created their own game called "Castle Sauce," just for fun. Another student built the game "Breakout" as a freshman and continued to enhance it as he progressed through future courses.

Jeff shares, "He added new levels, new difficulty, cheat codes, easter eggs, music, and more every single year. This student would always find some way to tie it into the new courses and new units so that it eventually became a running joke with all my computer science students. When he was in my Algebra 2 class his junior year, he even found a way to sneak his Breakout into one of the assignments. It was so much fun to see him run with the project and to explore so many aspects that weren't even taught in the course, but he just discovered on his own."

Many of Jeff's current students will continue to study computer science in college.

After teaching this new subject for four years, Jeff wanted to get some real world experience to explain to his students what having a job in the field could look like. He enrolled in an Applied Computer Science Masters program at the University of West Georgia.

Jeff was able to use actual SQL programs he created as part of his graduate program as examples for his students in the Cybersecurity course.

Jeff's hope is that his school district will eventually have a full computer science department with multiple teachers and offer a full catalog of courses. Through his desire to show his students an example of what a computer science job looks like, he was offered the role of Data and Software Integration Coordinator at Port Washington HS's district level. He is hoping to continue to influence the growth of the school's computer science program through this role.

CodeHS looks forward to hearing about Jeff's growth in his new role and can't wait to see the amazing projects his students will create!