

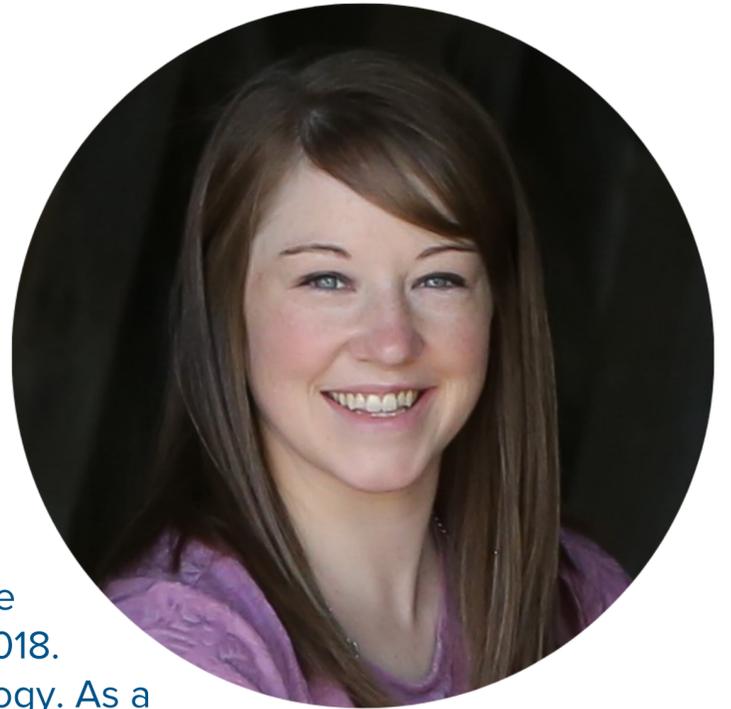
CASE STUDY

Making Computer Science Fun and Relatable

Alyssa Basthemer, Physics, Medical Terminology, and Computer Science Teacher at The High School of Health Sciences in Wales, Wisconsin

Almost every teacher knows how easy it can be for students to come into a classroom, habitually go through the motions, and then move to their next lesson. It's challenging to motivate students to apply what they have learned to real-world solutions. Alyssa Basthemer is taking on that challenge.

Alyssa, a new computer science teacher at The High School of Health Sciences which is a public charter school that exists on the Kettle Moraine High School Campus, added computer science to her course load in 2018. She was originally teaching Physics, AP Physics, and Medical Terminology. As a Health Science Charter, Alyssa's high school attracts students interested in exploring careers in health while completing their high school diploma. It was clear that computer science was a skill that students should be exposed to since it impacts every industry today.



Where To Begin

In preparation to teach her first Computer Science class, Alyssa took a summer professional development course through a well-known CS curriculum provider. She quickly became tired of the mundane curriculum—it seemed like none of the concepts were sticking and she was fearful students would feel the same.

Changing gears, Alyssa came across CodeHS, the solution for a 'jack of all trades teacher' like herself. Not only was the curriculum more engaging and digestible with CodeHS, she was also able to include her own curriculum—all in one location for her students! The ability to build custom curriculum, set due dates, quickly view and grade student code submissions, and send personalized feedback, gave Alyssa more time to develop new opportunities for her computer science classes.

The new Introduction to Computer Science and AP Computer Science Principles courses were a huge success at The High School of Health Sciences. Alyssa's first year students were hooked!

Throughout the course, the CodeHS environment allows them to easily visualize their progress from instructional videos to coding exercises. "It's interesting to watch how a strong sense of accomplishment can be created when students see a small progress circle on their screen turn green (meaning it's been completed)!" said Alyssa.

To capitalize on her students' excitement, she created the Pac Man board. At the beginning of the year, each student creates their own ghost and moves it during the year in order to visualize where they are in relation to course completion. They use their CodeHS completion percentage for the ghost's position and Alyssa uses the Pac Man and Miss Pac Man pieces to pace students, showing where they should be within the course.



Even though Alyssa paces her students throughout the year, a big advantage to CodeHS curriculum is the flexibility which allows students to work through the course at their own pace.

This makes the course more accessible to students who historically would not be in a computer science class. Alyssa currently has 5 students that show up to her class 30-minutes late (in a 90-minute block) because they are taking an Emergency Medical Technician (EMT) course. The flexibility of CodeHS allows this to be possible.

Whether students are self-paced or instructor-led, Alyssa sees the true spark of excitement ignited in the final CodeHS project where all the core concepts throughout the year come together—creating detailed helicopter animations and all!

A New Year, A New Goal

Reflecting upon her first year of teaching computer science, Alyssa asked herself, “how can I make computer science more real-world relatable for my students?” Her students are already excited to come to her computer science class, however, do students see the bigger picture—the application of computer science across many different industries and careers. Not only in the health sciences, but in all areas of their lives.

Even with a full course load on her plate, Alyssa is working closely with her school, community, and the parents of students to expose them to computer science in the real world. She is inviting alumni to speak about the many facets of computer science across industries. Alyssa is connecting with local programmers to create shadowing opportunities and summer internships. On top of all that, she is constantly fine-tuning her curriculum to keep the students engaged.

The students of The High School of Health Sciences have a bright future ahead of them, especially with a teacher like Alyssa Basthemer who goes above and beyond to ensure her students have the best education. Alyssa and her students are on a path to make a big impact on our world!

