

## CASE STUDY

## Trailblazing the Future of Elementary Computer Science Education

## How a Veteran Educator Transformed Computer Science Learning at Peachtree City Elementary through Innovative Curriculum and Collaborative Teaching

During Caroline Mrizek's 35 year long teaching career, she's been able to teach a multitude of students learning computer science for the first time. Caroline is certified to teach PK-12 computer science and has taught PK-5th grade computer science at Peachtree City Elementary school for 29 years in Peachtree City, Georgia.



She's currently the lead elementary computer science teacher for Fayette County Schools, and has been able to see the full evolution of the CodeHS elementary curriculum.

Caroline implemented the first pilot version of CodeHS elementary curriculum in 2021. At that time, CodeHS elementary consisted of lesson plans, links to starter code, and slideshows to use in the classroom, and students had to leave the CodeHS site to utilize the curriculum.

Because Caroline was an early user of CodeHS elementary curriculum, she and her team were able to contribute various ideas for improvement. At the time, students were being redirected away from CodeHS to code in Scratch and Scratch Jr., which was a main concern. When CodeHS eventually incorporated Scratch and Scratch Jr. directly into the site, Caroline said it was a game changer!

Having the lessons and Scratch/Scratch Jr. software built in so that teachers and students can create together is a powerful tool. For example, the content students create is visible to teachers to allow for assessment or presenting exemplars to the class. Another of her team's favorite enhancements added over the years includes the student-facing videos and slides. Since implementing CodeHS elementary curriculum in 2021, Caroline and her classes have been able to experience the new updates the CodeHS team has made first-hand, including allowing all K-5 students to log directly into the platform. All student work is saved, making it easier for teachers like Caroline to



manage lessons they send to students, monitor student progress, and utilize available resources.

The elementary computer science program at Peachtree City Elementary School offers several courses for all K-5 students, including grade band specific courses. After students move on from Peachtree City, they continue studying at Booth Middle School and eventually McIntosh High School. Caroline supplements each grade level course with robotics courses, 3D design lessons, animation lessons, and AI lessons.

As many learning platforms utilize gamification for lessons, Caroline thinks it's important to encourage kids to experience building things while working through failures and hardships. She feels CodeHS is able to provide a platform for computer science students to create, rather than just answer questions or solve puzzles. Students in her classes get excited to create original programs on the CodeHS platform in Scratch and Scratch Jr., and some even ask to log back in on their free time to create independent projects!

She shared several standout programs students in her class as part of the CodeHS Research Programs lessons:

- How to Make a Pretzel
- <u>Hiccups</u>
- <u>XRays</u>



Page 2

Based on Caroline's own experiences, she encourages other educators to think of themselves as not only an expert on the subject matter, but also as a facilitator.

She shares, "Encourage your students to learn from each other and discover solutions together. Remind them that computer science, like many things, is often a collaborative effort, and that different approaches lead to innovative results."

