New Vision students create 3D games

The elective became possible for students through partnership with the University of Colorado Boulder

By Pamela Johnson
Reporter-Herald Staff Writer

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In the library at New Vision Charter School, students are mixing their imaginations with research, critical thinking and computer skills to create their own three-dimensional, interactive video games.

The charter school is the first within the Thompson School District to offer 3D video game programming as an elective, thanks to a partnership with the University of Colorado in Boulder that is allowing the school to beta test the university-created AgentCubes software.
The students are creating video games and simulations from scratch, hatching their own ideas, coding the games for different outcomes and working through issues with help from their teacher, Lynne Fossey, as well as collaborative help from each other.

"These kids are programming each and every one of the steps," Fossey said. "They start with a blank slate."

Each student worked through several lessons, including creating their own game as well as creating a simulation that navigates through natural disasters or issues that are the result of human impact on the environment. These simulations include everything from cleaning up an oceanic oil spill to containing a contagious disease.

Through the class that students described as "fun" and "cool," they regularly use math, science, research and computer skills, along with critical thinking, communications and more, explained Fossey, and a handful of the students who are currently enrolled in the elective.

Sawyer Dowden, an eighth-grader, said the class has helped him learn more about computers.
Morgan McGuiness, also in seventh grade, said she has learned about all the behind the scenes work that goes into coding a video game.

She is working on a simulation that shows how important bees are to the ecosystem. The goal of her interactive creation is to get the bees to pollinate flowers before birds eat all the bees and the vegetation dries up.

She said she loves the feeling of working through all the steps, of figuring out how to solve any coding problems and of ultimately being able to enjoy and share a completed game with friends and family.

"After all that work, it pays out," she said.

Emily Clemmons' game involved navigating Alice from the classic tale, "Alice in Wonderland," through a maze in search of the white rabbit before the playing cards can find Alice. She used the program to craft the maze and characters and to create code that would attract the cards to Alice.

"That involves some sophisticated programming," said Fossey, who was able to bring the test program to the Loveland charter school after she won a scholarship to a four-day training class at CU.

She hopes to continue the partnership for at least another year and bring back the elective class, in which 35 students enrolled over two terms this year.

Seventh-grader Ayden Savage built a game where a traveler must make it through a field of moving walls and lions, safely, without getting eaten or crushed, to move on to the next level. His game has eight different levels, which he said were fun to figure out and create.

He said he has expanded his knowledge in programming, computers and critical thinking.

"It has helped me quite a bit," Ayden added. "It's been fun, and it has taught me a lot."


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