Student-led STEM: SAM Labs Elevates Learning at Ventura Unified School District

School: Lemon Grove School District: Ventura Unified School District Teacher: Darcy Duffy Class: Middle School STEM class Started using SAM Labs: August 2023

ABS

As science, technology, engineering, arts, and math become a bigger focus in today's job market, the <u>Ventura Unified School District</u> was looking for an easy to implement STEAM program that allowed for student-led investigation in an engaging manner.

<u>Lemon Grove School</u>, a TK-8th grade school in the district, decided to integrate SAM Labs in August 2023 to help middle school students grow their STEAM skills. This transformative approach aimed to demystify programming for students, especially girls, and foster an interest in computer science.

Engaging Young Minds: The SAM Labs Experience

The easy-to-use <u>Learn to Code</u> and <u>Maker</u> kits from SAM Labs captivated students' interest, encouraging exploration and creativity. The hands-on experience with these kits led to a surge in enthusiasm for learning complex computer science concepts.

The CSTA standards-based coding lessons guide 6-8th grade students through increasing complex programming and building activities, developing essential 21st-century skills. <u>Students even flexed their creative coding by programming a little tune</u> utilizing SAM Studio.

Students, particularly girls, found a new confidence in programming, breaking down traditional barriers in STEM education.

Teacher Insights: The Transformative Power of SAM Labs

Teachers at Lemon Grove School praised SAM Labs for its simplicity and effectiveness. The platform's ease of integration with existing technology and its minimal preparation time were significant highlights.

"It is so simple," said Darcy Duffy, a STEM teacher at Lemon Grove that has been leading implementation. "We should really do it for all our after-school programs."

Duffy also noted that the robust resources reduced her prep time, allowing her to easily execute her vision of student-led station activities. After a few SAM Labs lessons, Duffy knew her vision of success was executed because she saw an increase in student engagement, student independence, and collaboration in the classroom.

"Students love SAM Labs," she said. "After our first introduction they looked online for more blocks and asked me to get the Maker kits."

Beyond the Classroom: The Lasting Impact on STEM Learning

SAM Labs has not only enhanced the learning experience for middle school students at Lemon Grove School, but also set a precedent for integrating innovative STEM tools in an easy manner.

"SAM Labs is super user-friendly," Duffy said. "The kit is well organized and the lessons are well done. Some products are difficult to get started with and just sit on the shelves and don't get used. This is not true with SAM Labs."

The success story at Ventura Unified School District is a testament to the potential of such technologies in shaping future generations of STEM enthusiasts.