

Robert C. Fisler School Model Programs and Practices

School Information

CDS (County District School) Code: 30665060102582

County: Orange

District (Local Educational Agency): Fullerton Elementary

School: Robert C. Fisler School

Demographics

Enrollment: 934 students

Location Description: Suburban

Title I Funded: No

School Calendar: Traditional

Charter: No

Overview

Robert C. Fisler School is located in the Western section of the City of Fullerton in Orange County. Beyond state mandated requirements for Common Core instruction, Fisler School offers a wide range of unique educational opportunities to students grades K–8, including a Computer Science Pathways Program. Staffed with highly qualified and well-trained teachers, students are well-prepared for high school, college, and future entry into the workplace.

As an Apple Distinguished School for ten straight years, the technology program at Fisler School focuses on project-based learning and design thinking, integrated with curriculum. First and second grade students use 1:1 iPads and third through eighth grade students use 1:1 laptops to master rigorous content and performance standards and extend their learning.

Fisler has a school-wide focus on progressive coding skills across the grade levels. Kindergarteners learn about coding through Kibo and Beebots; first graders program Ozobots, second graders program Dash robots; third graders use block coding to

program Lego Mindstorm EV3 robots; fourth graders use Little Bits coding to create inventions; fifth graders use language-based coding to program artificial intelligence through Amazon AWS; six graders learn about cybersecurity and network systems; seventh and eighth grade students build websites through advanced html coding, learn language based coding through Java, and have an opportunity to compete in a Vex Robotics competition. Additionally, Sixth–eighth grade students are offered forensics, video production, animation, html coding, photography, robotics, and web design through technology class and/or electives. Students learn relevant, real world skills and how these skills impact the world today.

Staff, students and parents promote a positive and welcoming environment with excellent customer service. The Positive Behavioral Intervention and Supports (PBIS) Team, comprised of administration, teachers, counselor, support staff, and students, works towards a positive school climate. Additionally, Fisler's counselor leads two student leadership teams (Peer Navigators and Starbound) that aid with conflict resolution on campus.

Administration and teachers work closely with PTSA and the Foundation to support school-wide events and assemblies to celebrate talents and diversity through events such as Celebrating All the Arts Night, Fisler Spirit Rally, Read Across America, Family Science Night, Family Film Festival, and The Best Party Ever.

At Fisler School, technology becomes a critical and integrated part of learning and is used to solve problems, especially problems that are undefined. Students become makers, not mere consumers. Students become programmers, engineers, inventors, and designers: specialist and leaders in their field.

Model Program and Practices

Name of Model Program/Practice: Computer Science Pathways Program

Length of Model Program/Practice: 8+ years

Target Area(s): Career Technical Education, Use of Technology

Target Population(s): American Indian, Asian, Black or African American, Filipino, Hispanic, Pacific Islander, White, Two or More Races, Socioeconomically Disadvantaged, English Learners, Students with Disabilities

Strategies Used: School Climate, Small Learning Communities, Parent Engagement, Data-Driven Decision Making, Professional Development, Implementation of Academic Standards Basics (Teachers, Instructional Materials, Facilities)

Description

Laptops for Learning Program (est 2004) evolved to meet needs of a changing learning environment, focusing on students' development of 21st Century skills. Over the course of 14 years, the Laptops for Learning Program transformed into the Computer Science Pathways Program. In 2016, we were the only school in the district to pilot the program.

Our focus is not just progressive coding skills, but understanding a greater purpose in utilizing tools/skills to discover pathways towards a passion, accelerated academics, and future careers. Coding principles are integrated with content-rich instruction in K–2. 3rd graders program Lego Mindstorm EV3 robots; 4th graders use Scratch to build inventions using Little Bits; 5th graders program artificial intelligence through Amazon Alexa; 6th graders learn Cyber Security and language based coding through Python; 7th and 8th graders learn HTML coding to create websites. To maximize the program's effectiveness, state-of-the-art equipment, such as EV3s and Vex Robotics, is essential. An Apple Certified technician is needed on-site for support to ensure stability of our digital platform. In 2016, we received over \$50,000 through site written grants to support the program.

Staff receives technology training in specialized areas from community partners such as Apple and Cod.Ed. Our goal is to provide on-going professional development to integrate specialized skills and best practices with technology. With specialized trainings, teachers are empowered to be leaders in their professional field and share best practices with a wider educational community. The program's goal is expressed in our vision statement, created by students, teachers and parents. "The Fisler community comes together to develop students into the innovators of today. Students become forward-thinkers, strategists, and leaders who transform their future and innovate solutions for a better world."

Students are actively engaged and take ownership in the learning process. Students become problem solvers and apply knowledge to novel situations. We serve a diverse student population, including ELLs, at-risk, and GATE learners. Computer science offers all students opportunities to apply critical thinking skills in collaborative learning environments. Social emotional/behavioral concerns decreased in 2 years of the program's implementation due to the high level of engagement and hands on experiences.

The program distinguishes itself from the district's LCAP Goal #2 in technology. Extended apps are fully funded by PTSA. Equipment/tools are funded through grants written by teachers/administration in 2017. We integrate ISTE tech standards into the curriculum through an elevated approach to computer science, exceeding State Board of Ed adopted academic/performance standards and district LCAP goals. We hold the best attendance rate in the district at 98.5%. Chronic absenteeism is address through parent conferences. Suspensions went down from 5 to 0.

Implementation and Monitoring

The Computer Science Pathways Program has overwhelming support from the parent community. Dedicated parents and staff members meet regularly to review and revise Fisler's plan to ensure alignment with its vision of 21st Century learning. In 2008, F2AST (Fisler Foundation for the Advancement of Science and Technology) was founded to support us in its pursuit of leading edge technology and education. They provide after school enrichment classes such as robotics, MinecraftEdu, web design, and app development. Additionally, Fisler's School Site Council oversees the funding for programs. With approximately $\frac{1}{3}$ of the student population being second language learners, Fisler's English Language Advisory Committee also works closely with administration, parents, and teachers to learn how to serve the needs for the English Learners through technology integration.

Fisler has an extensive website that shares pertinent information with the school community and showcases technology projects per grade level. The principal sends out monthly e-newsletters to highlight upcoming events and herald achievements. Social media (Instagram and Twitter) is also used to celebrate learning in the classrooms and keep the community informed about upcoming/current events. In addition, the foundation has an informational website and sends out a newsletter to apprise the community of Fisler's technology program. Feedback is collected through parent organizations such as PTSA, School Site Council, and English Language Advisory Committee. Needs assessments are completed at the beginning of the year to address community needs on parent trainings, especially in technology.

Teachers and administrators are trained in specialized areas of technology integration on topics such as design thinking, digital storytelling, and language based coding. Trainings are open to all non-instructional staff members as well. Teachers open classroom doors through Instructional Rounds and tours for technology observation to learn from colleagues' best practices. A coaching model is practice with the support of a site Cotsen mentor.

A variety of assessment methods are used daily to evaluate the effectiveness of learning activities. Teacher created Proficiency Scales are used to monitor and assess student understanding, level of cognitive skills and proficiency of technology integrated tasks. Administration consistently conducts observations and walk-throughs to collect evidence and provide feedback to the teachers via Evernote. Engagement of student learning is captured through pictures, videos, digital portfolios and work sample analysis.

In order to ensure impartial evaluation its program, Fisler engages outside researchers to study and evaluate the program. Dr. Cindy Bak asserts that technology at Fisler School improved student engagement, differentiation, collaboration between teachers and students, more hands-on experiences, and projects at various levels of the SAMR model.

Results and Outcomes

Teachers meet in leadership teams and use qualitative/quantitative data as well as student/teacher input as a part of a consistent feedback cycle to improve Fisler's Computer Science Program.

Recent CAASPP scores reveal that we exceeded District and County averages by scoring in the top 1% in English Language Arts and top 5% in math in the state. 89% of students met ELA proficiency and 84% met Math proficiency. From 2016 to 2017, there was an overall increase in proficiency by 3% in ELA and 1% in Math. (34% above the district, and 32% above the county average for ELA/Math proficiency resulted 35% over district average and 36% over county average.) PBIS data shows that in the past 2 years, discipline referrals and suspensions decreased significantly. Fisler received a Gold Statewide Recognition for implementing PBIS with fidelity to the national framework in 2015/16 and 2016/2017. Fisler's Average Daily Attendance was recognized by Fullerton School District in 2016/17 for achieving the highest attendance record at 98.5% in the district.

Fisler continues to be recognized for their innovative technology and student achievement.

- 2016/17 and 2017/18 Congressional App Challenge winners for 4th–5th grade apps
- 2016 and 2017 California Media Festival Winner for Best Animation/Music Video
- 2016 and 2017 Festival of the Arts: Pageant of the Masters Photography Winners
- 2017–2019 Apple Distinguished School
- 2016/17 Common Sense Digital Citizenship Certified School
- 2018 Twenty student created codes/applications in the Alexa Skills Challenge published on Amazon

Fisler consists of multiple leadership teams to monitor progress in all areas contributing to student growth. The wide representation of teachers in decision making attributes to the evident improvement in students' overall academics and socio-emotional well being. Administrators give written input by providing validation and support to teachers and encouraging them to reflect upon their practice through weekly walkthroughs. The school's leadership team analyzes input collected from all staff members on the effectiveness of all technology programs and devices on an ongoing basis. All stakeholders analyze results from qualitative and quantitative data to determine improvements, modifications and acceleration of the Computer Science Pathways Program.

Being a Cotsen Foundation School plays a great role in improving our reflective and evaluative practices schoolwide. In February 2018, administrators and teachers from neighboring districts participated in a school tour where they observed Fisler teachers integrate coding skills with curriculum to elevate student learning and engagement. Fisler also hosted Cotsen's 2018 STEAM Ahead Conference, where professionals from local and neighboring districts were invited to learn about technology implementation with a meaningful and artful purpose.