Professional Development

Two year model:

2 Summer week long institutes
+ quarterly PDs throughout the year

- Three focus areas of PD: equity, inquiry, and CS content
- Designed around educational research findings that describe characteristics of effective STEM professional development
- Connected directly to supporting ECS course implementation
- ECS Teacher-Learner-Observer Model: teachers co-plan and co-teach ECS lessons, followed by lesson debrief discussion to discuss lesson strengths and areas for growth
- *Stuck in the Shallow End* (MIT 2008; Updated version 2017) research shapes discussions on equity and belief systems in computing classrooms and how this relates to equitable teaching practices in ECS
- Teacher leadership development opportunities provided

"The ECS PDs showed me that reflection and conversation with colleagues is one of the most important contributors to professional growth."

ECS Teacher

"I was inspired further to pursue computer science and computer engineering as my college major."

ECS Student

Supported by,

National Science Foundation

For More Information

Please, visit us at *www.exploringcs.org*

Follow us on Twitter *@exploringcs*

What is Exploring Computer Science?

Exploring Computer Science

Exploring Computer Science is...

A high school introduction to the world of computer science and problem solving. ECS aligns well with college preparation coursework as well as Career and Technical Education (CTE) pathways including: Information Technology, Engineering and Design, and Arts, Media and Entertainment Technology among others.

ECS is a K-12/University national program (curriculum + professional development) committed to democratizing computer science knowledge by increasing learning opportunities at the high school level for all students, with a specific focus on access for traditionally underrepresented students.

"Because of ECS, I recognize I am a problem solver and problems can be solved in a variety of ways."

ECS Student

ECS Curriculum

ECS is an introductory year-long high school computer science course focused on foundational computer science concepts and computational practices.

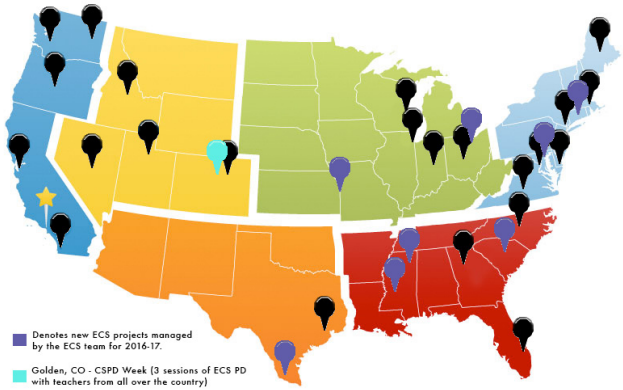
Instructional Units:

1. Human Computer Interaction
2. Problem Solving
3. Web Design
4. Introduction to Programming
5. Computing and Data Analysis
6. Robotics

- Daily instructional lesson plans for teachers + supplemental extension resources
- An inquiry-based approach to teaching and learning frames the instructional design of the curriculum
- Culturally relevant lessons designed to be inclusive for all learners
- ECS has been mapped to a variety of standards. For additional information, please visit: *http://pact.sri.com/standards-mapping.html*
- ECS and AP® CS Principles courses are conceptually and pedagogically aligned

ECS National Expansion

In recent years, with support from the NSF, Code.org, and Teach For America, ECS has rapidly expanded across the country. **Over 25,000 students** participated in ECS courses nationwide in 2015-2016. ECS is currently in the 7 largest school districts in the country, along with multiple additional sites and partners.



The program's home base is in the Los Angeles Unified School District, the second largest school district in the country. **Over 14,700 students** have enrolled in the course from 2008-2009 school year to present in Los Angeles. LA ECS students mirror the larger LAUSD population. In 2016-2017, ECS students are 83% Latino/a, 5% White, 6% African-American, 5% Asian, and 1% other. Female enrollment for the last several years has been between 42-45%.