Course Overview

Through a variety of offline and online activities, students will learn core computer science and programming concepts. Students will use the free Code Studio provided by code.org to practice coding basics taught in class. Students will learn what computer science is and why it is important to know computer science skills in order to be successful now and in the future. We will have class discussions about how computer science has helped solve problems in a variety of areas and students will be asked to think of problems they would like to try to solve using computer science. Some of the specific computer science topics covered in class will include computational thinking, algorithms, functions, conditional statements, abstraction, and relay programming.

After learning about each basic coding principal offline in small groups, the students will use Code Studio to practice their new skills. Students will using the online environment as a means of learning coding language, pair programming, problem solving skills, and computational thinking.

Why Have Someone Teach You Rather Than Learn on Your Own?

• It works out great because the students rely on each other for help, rather than on the teacher or other teachers, and it’s great to see the students working collaboratively across grade levels!
• Students are able to act as pair programmers with other students.
• Students are able to work together creatively rather than alone.

Reading That Might Help You Prepare for this Course

Computational Thinking: A Digital Age Skill for Everyone - [https://www.youtube.com/watch?v=VFcUgSYyRPg](https://www.youtube.com/watch?v=VFcUgSYyRPg)

Support from our Favorite Technology Visionaries

Tech superstars such as Microsoft's Bill Gates, Facebook's Mark Zuckerberg, Susan Wojcicki of Google (GOOG), Jack Dorsey of Square, Reid Hoffman of LinkedIn, investors John Doerr and Ron Conway and powerhouse companies including Google, Microsoft, LinkedIn, Amazon and Salesforce.com have all signed on with Code.org, a nonprofit that started just over a year ago as the dream of Iranian immigrants and tech investors Hadi and Ali Partovi.

"It's been amazing, collecting this group we've assembled," Hadi Partovi, a Seattle-based angel investor, said at a San Francisco news conference to kick off the effort. The group aims aimed to expose more kids to a rapidly growing field that is fast becoming one of the most important in the U.S. economy. "This is incredible support from the tech industry," he said.

Importance of Computer Science

"Computer science drives job growth and innovation throughout our economy and society. Computing occupations make up two-thirds of all projected new jobs in STEM fields, making
Computer Science one of the most in-demand college degrees. And computing is used all around us and in virtually every field. It’s foundational knowledge that all students need. But computer science is marginalized throughout education. 75 percent of U.S. schools don’t even offer computer science and only 8% of STEM graduates study it. We need to improve access for all students, including groups who have traditionally been underrepresented.” From Code.org website

**Instructor:** Rachael Tarshes, Ed. D., Science Teacher at San Diego Unified School District

**Prerequisites:**
- The course is open to students in grades 7-8.
- A basic understanding of computers
- A keen interest in computer science

**Course fee:** $260.00

Registration is open until filled. Register early as space fills quickly. Space is limited.

If you have any questions regarding this workshop or the online application process, please contact Ange Mason via phone at 858 534-5064 or via email at amason@ucsd.edu.