



Middle School Computer Science

The Next Few Years



Current Offerings - Digital Media and Literacy (DML)

The DML course typically focuses its units on Scratch, handheld computers, web development, how computers work, coding websites that introduce additional languages, and ethical and safety issues.

- Currently offered to sixth grade students as a mandatory course
- 85% of sixth graders are actually enrolled in the course
- 90-day course

Current Offerings - CS Explorations (CSE)

CSE focuses on Python, a text based language, as the core language. Students' focus is in algorithmic thinking, problem solving, collaboration, and design.

- Currently offered to eighth grade students as an elective
- 13% of eighth graders are enrolled
- 45-day course

The Transition Year - Sixth Grade

Students will focus on Scratch programming (games and animations), robotics, and an introduction to 3D printing with TinkerCAD

- 30-day course
- Would like a 15-day integrated unit within Project Block
- Between 95% and 100% of students will have the course

The Transition Year - Seventh and Eighth Grade

Students will extend previous learning in Scratch programming to include more complex structures and functions; explore physical computing by programming robots to make intelligent decisions about navigating terrain; and learn Python, a text-based language.

- 45-day course
- Mixed grade course
- Draw from students enrolled in Directed Study
- Accommodate students from BCO with a semester version

The Long Term Plan - Sixth Grade

Students will learn Scratch (games and animations), robotics, and 3D printing, working on interdisciplinary projects with core curriculum, art, and tech classes

- 30-day course
- 15-day integrated unit within Project Block
- All students will have access to the course - mandatory enrollment

The Long Term Plan - Seventh and Eighth Grade

Introduce functions in Scratch, work in Python, and extensions for students who have mastered these ideas. I haven't asked Matt L about this. Students taking the class a second time will mostly work independently on projects they choose. Web development will be offered as a fourth topic.

- Two 45-day courses
- Grade based course - A seventh grade and an eighth grade course
- All students would have access to the course - elective enrollment
- Integrate the courses with other domains - robotics, 3D printing,