

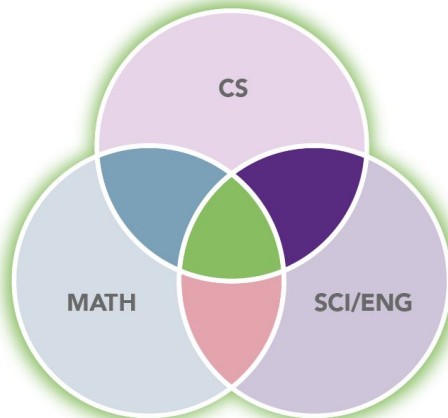


Building A Middle School Computer Science Program

Martin Luther King Middle School - Berkeley
Beth Cornwell & Amy Talley



RELATIONSHIPS BETWEEN COMPUTER SCIENCE,
SCIENCE AND ENGINEERING, AND MATH PRACTICES



CS + Math + Sci/Eng

• **Model**

- S2. Develop and use models
- M4. Model with mathematics
- CS4. Developing and Using Abstractions
- CS6. Testing and Refining Computational Artifacts

• **Use computational thinking**

- S5. Use mathematics and computational thinking
- CS3. Recognizing and Defining Computational Problems
- CS4. Developing and Using Abstractions
- CS5. Creating Computational Artifacts

• **Define problems**

- S1. Ask questions and define problems
- M1. Make sense of problems and persevere in solving them
- CS3. Recognizing and Defining Computational Problems

• **Communicate rationale**

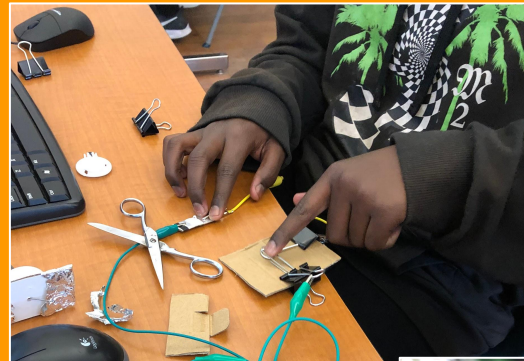
- S7. Engage in argument from evidence
- S8. Obtain, evaluate, and communicate information
- M3. Construct viable arguments and critique the reasoning of others
- CS7. Communicating About Computing

Current
recommended
Computer
Science
Standards
intersect with
Math, Science,
and
Engineering

- Human Computer Interaction
- Hardware
- Troubleshooting

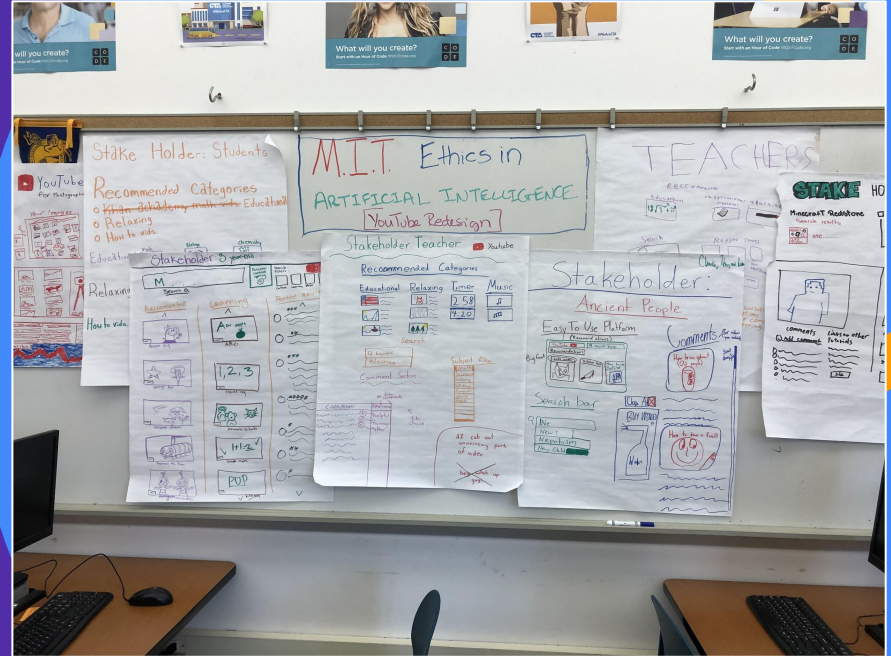


Computing Systems



IMPACTS OF COMPUTING

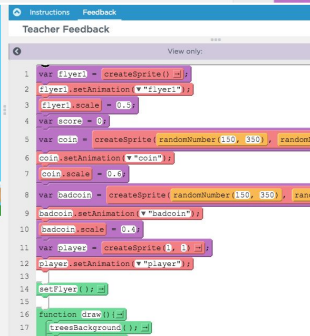
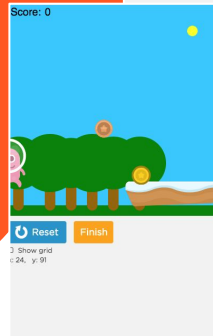
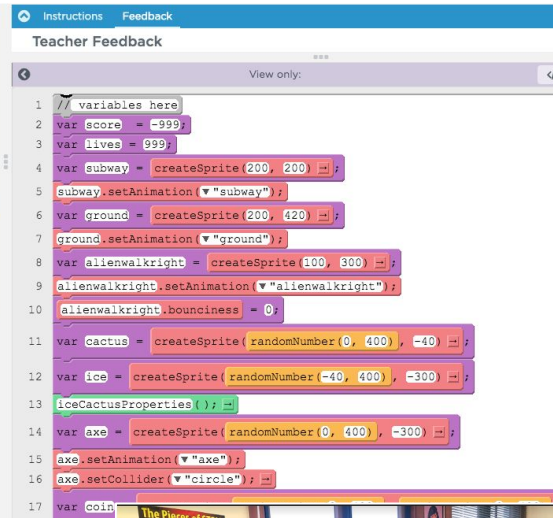
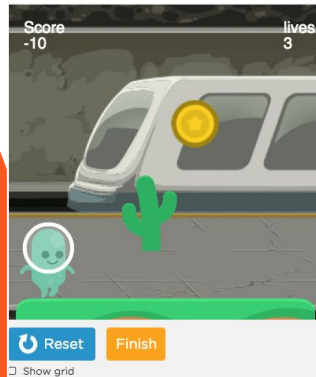
- Culture
- Social Interactions
- Safety, Law, & Ethics



MIT Ethics In Artificial Intelligence

Algorithms & Programming

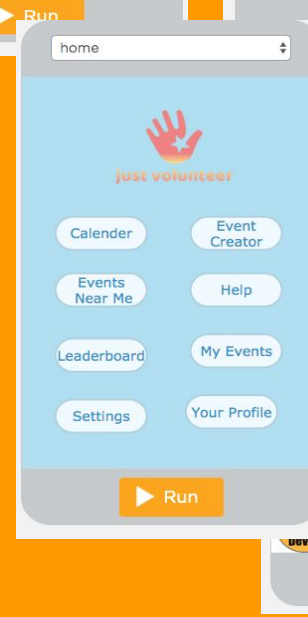
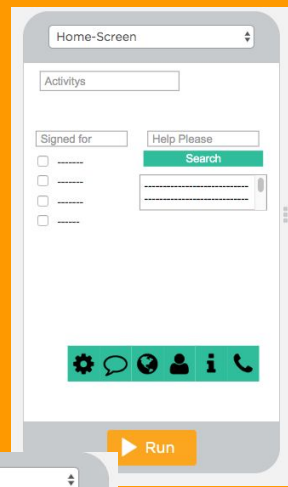
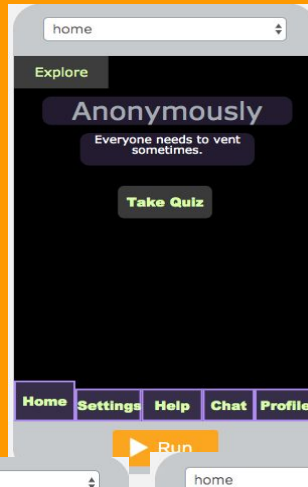
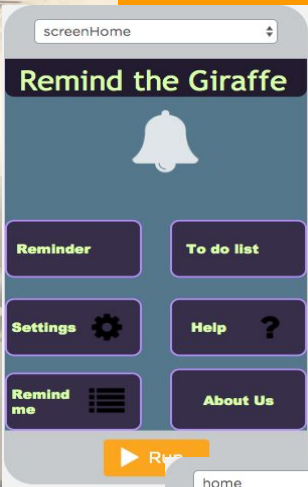
Javascript



AppLab

IWE List
of paper recycle
organize book-shelf
choose 1 subject
& create a hyperdoc

What can you do in
Open Lab?
5pm-4pm (Here?)
Join our lab classroom!
colazov
Coding in Scratch
Membital
Sketching
Tinker Cad
Fire Robots
Circuit Playgrounds
Tectrix
We Video
Pixel Art (Pixel
Conversation?)



“

You can't be what
you can't see.

Equity in Computer Science



Snap the Gap & Girls Who Code

Jillian Ross Marley Pierce

*2nd Year Students of King Computer
Science*

