Families Learning Together:

Building Sustainable Computational Fluency in Classrooms and Communities

The Interface Parts List

Creative computing for storytelling, animation, and art

Scratch, a free online tool for learning computer programming. https://scratch.mit.edu/
Scratch Educators Network, a resource hub for teachers learning to work with computational fluencies in their classrooms. https://scratched.gse.harvard.edu/

Interface activities do not depend on Scratch. Any coding platform that is open to external input, e.g., beyond the keyboard and mouse, are candidates for an interface.

Circuits and Microcontrollers

Note: FLT does not promote any specific products or companies. The links provided here are for convenience only. Teachers are advised to shop around before purchasing materials.

Conductive materials

Copper tape (with conductive adhesive): https://www.sparkfun.com/products/13827

Conductive thread: https://www.sparkfun.com/products/11791
Conductive paint: https://www.sparkfun.com/products/11521
Alligator clips: https://www.sparkfun.com/products/12978

(Note: these materials are widely available from other vendors as well.)

Microcontrollers (a microcontroller is an electronic circuit/switch that sends digital signals to a computer in order to activate a computational structure, for example, an animation)

Funkey Simple. http://funkey.net/

Makey Makey. https://www.sparkfun.com/products/14478
Micro:bits. https://www.sparkfun.com/products/14336
Hummingbird Robotics Kits. https://www.hummingbirdkit.com/

Many varieties of microcontrollers exist, at various price points. The ones listed here are pretty popular and easy to use. But other options exist, including DIY solutions, for example by hacking open and repurposing the circuitry from old computer mouses!

Craft Materials

Construction paper, cardboard, poster board, index cards, markers, pencils, paint, tape & glue.