

Days 1, 2, 3

Intro to Circuit Playground Express (CPX), a microprocessor

Discussion: What do you see on the CPX?

[Overview of CPX](#)

Watch : [Limor Fried - inventor of CPX](#), explaining CPX

([Video Limor Fried](#) discussing how she started the company)

Getting Started Programming:

[Makecode Adafruit blocks](#) / Javascript (text)

[Overview of the Makecode blocks](#)

Learn how to download the code

Explore and Program:

Outputs -

LEDS -explore all the LED blocks: animation, pixel to pixel, set random (math block) colors

Watch: [Images, Pixels, RGB](#)

Music - explore all the music blocks

Inputs - Start with:

Buttons, Light Sensor, Sound sensor, Slide Switch
Accelerometer,
Temp Sensor,

Watch videos describing science behind the sensors

Pins & Infrared Communication

Reading Sensors

DOCUMENT YOUR CODE with explanatory notes

[Fill in the Chart](#): Keep a record of your exploration with the code

Program music

Program LEDs to make pictures, to write words

Use button inputs

Temp Sensor

Light Sensor

Accelerometer

Sound Sensor

Pins

Brainstorm potential real life applications

Watch Videos:

[Light Sensor and the CPX](#)

[How does the Accelerometer work?](#)

[The science behind the speaker](#)

[The science behind the microphone](#)

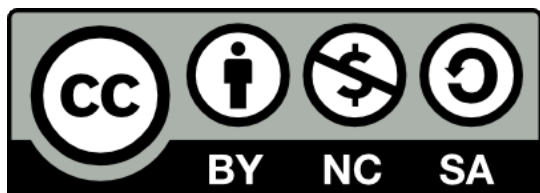
[The science behind the Infrared signals](#)

Exit ticket / End of session reflection: Executive function

Did you have an aha moment?

What did you struggle with?

What did you figure out?



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