Brace yourself, Saabs workshop is coming

During our workshop, you will be programming a small microcontroller.
This requires the latest Arduino IDE and some drivers (Windows only).

This is optional, but we recommend and are grateful if so many of you as possible can bring your own laptop with following preparations.

Bring to workshop:

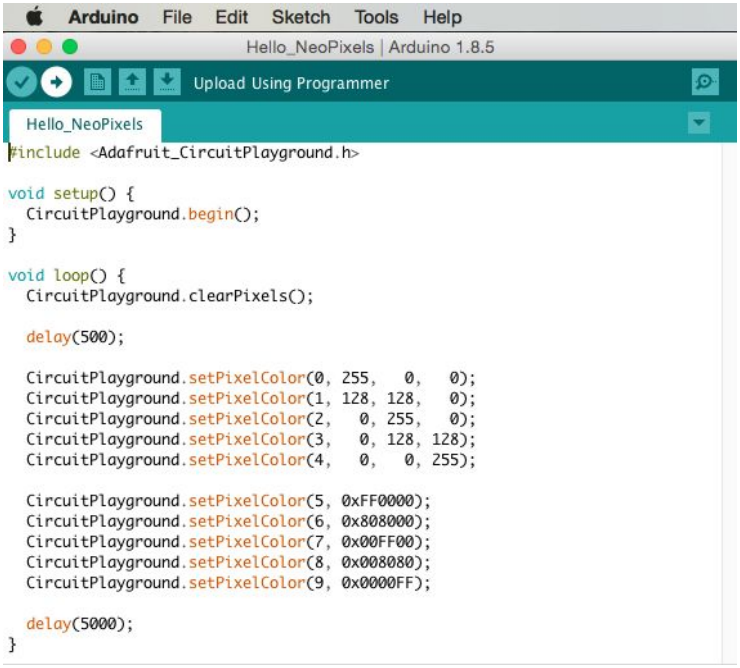
- Laptop
- Micro-B USB cable (common android charger cable)

To prepare at home before Workshop:

1. Download Latest Arduino IDE (version 1.8.5 or greater is required)
    a. Download for Windows, Mac and Linux: https://www.arduino.cc/en/Main/Software
2. Install drivers (Mac and Linux do not require drivers)
    a. https://github.com/adafruit/Adafruit_Windows_Drivers/releases/download/2.2.0/adafruit_drivers_2.2.0.0.exe
    b. If something doesn't work or if there is something you don't understand, check following link: (Windows 10 may not need this driver installation) https://learn.adafruit.com/introducing-circuit-playground/windows-driver-installation
3. Make sure that you have the latest version of the Circuit Playground Library:
    a. Open Arduino IDE
    b. Go to Sketch/Skiss → Include Library → Manage Libraries...
    c. Type *Circuit* in the search box. You should see *Adafruit Circuit Playground* listed.
    d. Then click Update to get the very latest version!

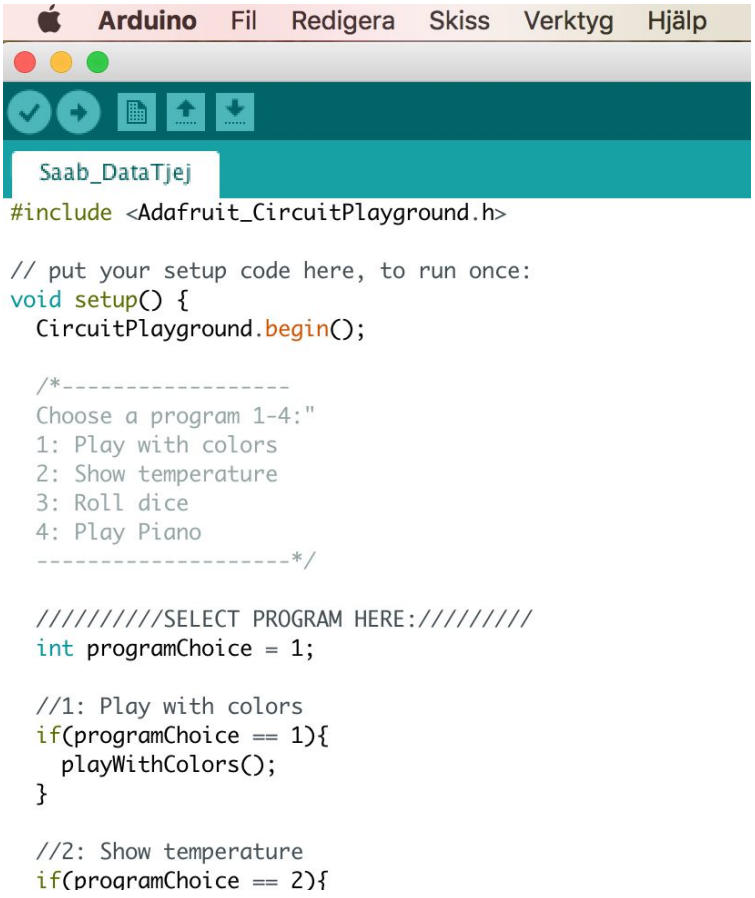
First check for everyone on workshop

1. Open Arduino IDE and plug in the Circuit Playground
2. Open the “Blink example” in File → Examples → Adafruit Circuit Playground → Hello_CircuitPlayground → Hello_NeoPixels
3. Setup in Tools
    a. Board: “Adafruit Circuit Playground”
    b. Port: …(Adafruit Circuit Playground)
    c. Programmer: USBtinyISP
4. Click upload!



WORKSHOP - CASE 1-4 + Extra

Find Saab_DataTjej.ino here:
https://github.com/JuliaAnnaNilsson/Saab_DataTjej/blob/master/Saab_DataTjej.ino
Copy to your computer, but in a folder with same name “Saab_DataTjej”.
Open Saab_DataTjej.ino in Arduino.



Select program/case by changing the value of “programChoice” 1-4. See picture above.

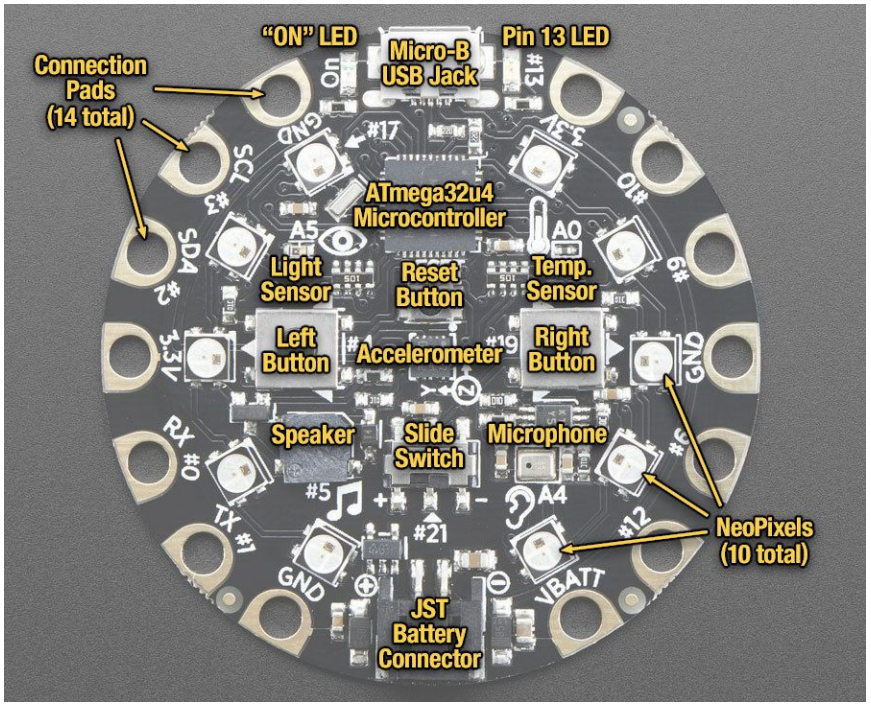
1. CASE 1: Play with colors
    a. Learn about the switch and buttons
    b. Try to change color of the pixels when you push the button
2. CASE 2: Show Temperature
    a. Open Tools → Serial Monitor in Arduino to be able to see current temperature
    b. “Breathe” on the temperature sensor on the Circuit Playground to reach above 30 degrees (which is the temperature limit) and the circuit will make a noise.
    c. Try to change the temperature limit
    d. Try to display the current temperature using the diods (binary representation)
3. CASE 3: Roll Dice
    a. Shake the circuit playground to roll the dice
    b. Try to change the color of the dice pixels

    c. Try to make a dice with “10 sides” (possible heads 1-10)
4. CASE 4: Play Piano
    a. Play sound on the Circuit Playground by touching the pads #0, #1, #2, #3, #6, #12, #9 and #10 on the circuit.
    b. Try to change noise for each pad.

- EXTRA: “Simone” says game
    - Find simone_says.ino here: https://github.com/JuliaAnnaNilsson/Saab_DataTjej
    - More information: https://learn.adafruit.com/circuit-playground-simple-simon/playing-the-game https://learn.adafruit.com/circuit-playground-music/simon-says-game

Play around

Just check around what you can do with the Circuit Playground.



https://learn.adafruit.com/introducing-circuit-playground/guided-tour

There are many different available functions especially made for Adafruit Circuit Playground, check here.