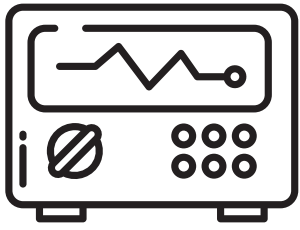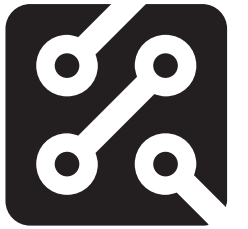# ELECTRONICS

Skill Tree: Color in the boxes and level up your skills

Use for individuals or as a group by picking a color each and coloring in a part of the box. Everyone's journey is different and you can interpret the goals flexibly. The aim is to inspire you to learn and try new things. Not everything needs to be completed.

ADVANCED

BASICS

- (set your own goal)
- (set your own goal)
- (set your own goal)
- (set your own goal)
- (set your own goal)
- (set your own goal)

- Write your own C/C++ library for a sensor from scratch
- Create an FPGA Project
- Use capacitive touch in a PCB design
- Teach a class on Electronics
- Make a switch mode power supply
- Make something with PCB Art
- Make an open source project
- Release a tutorial on a project you've made
- Make an electronic sculpture
- Learn PCB Design Software
- Build a Radio Frequency (RF) Project
- Make a PID circuit with Op-Amps
- Order a PCB with your design
- Build a robot
- Use a frequency analyzer for a project
- Use automatic gain control
- Repair a broken trace on a PCB
- Filter unwanted noise from a signal
- Use a MOSFET instead of a relay in a project
- Make your own USB cable
- Use an LED matrix in a project
- Use a surge diode to project a circuit
- Make a regulated power supply
- Make an Internet of Things (IoT) project
- Measure voltage with an oscilloscope
- Make something with a 7 segment display
- Measure capacitor equivalent series resistance
- Look at an audio input on an oscilloscope
- Make something with solar panels
- Teach a friend an electronics skill
- Use a crowbar circuit to protect against over voltage
- Make a motor controller with a H Bridge
- Make a counter with logic gates
- Make something for a friend
- Make an antenna
- Measure frequency with a multimeter or oscilloscope
- Make a wearable tech project
- Use an Op-Amp in a circuit
- Make something with Arduino
- Apply solder paste to a PCB with a stencil
- Create a circuit diagram with software
- Let the smoke out accidentally
- Make a project with a Raspberry Pi
- Learn to solder surface mount parts
- Use addressable RGB LEDs in a project
- Use a 555 timer in a circuit
- Use a relay to switch something on at a higher voltage
- Use a diode to protect your circuit from reverse voltages
- Make a sound louder with an amplifier
- Measure current with a multimeter
- Make a voltage divider to lower the voltage for a project
- Make an oscillator that makes noise
- Turn a breadboard circuit into a schematic
- Turn something on using a sensor
- Fix something that's broken
- Make something that makes noise
- Measure voltage with a multimeter
- Learn to desolder a through hole component
- Learn to read a datasheet
- Learn to control the brightness of an LED
- Get a circuit wrong and try again
- Learn Ohm's Law
- Learn to use wire strippers
- Complete an electronics kit
- Learn to use a breadboard
- Learn to read a schematic
- Light up an LED for the first time
- Learn to Solder

START | **HERE**

1 tile = 1 point

Total Score

Name: _____

MADE BY BRODIE FAIRHALL & STEPH PIPER - MAKERQUEEN AU

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