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

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

Design a 3+ layer PCB
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
Design a SAO or badge for a conference
Build a Radio Frequency (RF) Project
Make a PID circuit with Op-Amps
Order a PCB with your design
Apply solder paste to a PCB with a stencil
Use a frequency analyzer for a project
Use automatic gain control
Repair a mistake on a PCB
Filter unwanted noise from a signal
Use a MOSFET instead of a relay in a project
Learn PCB Design Software
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 your own USB cable
Build a robot
Use a 555 timer in a circuit
Make a wearable tech project
Build and simulate an Arduino in TinkerCAD
Accidentally let out the magic smoke
Make a project with a Raspberry Pi
Learn to solder surface mount parts
Use addressable RGB LEDs in a project
Make something with Arduino
Use a relay to switch something on at a higher voltage
Use a diode to protect your circuit from reverse voltages
Amplify a sound or signal
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
Learn to solder

BASICS

START HERE

1 tile = 1 point

Total Score

Name: _____

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