PCB DESIGN

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

Use for individuals or as a group by picking a colour 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)

Use a pick & place machine
Register a design with OSHWA
Use a reflow oven to solder a PCB
Teach a class on PCB Design
Contribute to someone else's open source project
Sell a product on something other than tindie
Sell a PCB online

Design a PCB with a speaker or buzzer
Mill a PCB from a copper sheet
Design a flex or flex-rigid PCB
Design a PCB with a display
Use a solderpot
Design a PCB with a real time clock

Use an Autorouting tool
Use 0402 size parts on a PCB
Order an Aluminium PCB
Design a PCB with EEPROM
Use a BGA in a PCB
Design a PCB with a non standard shape
Use gold fingers in a design

Chemically etch a PCB yourself
Use 0603 size SMD parts on a PCB
Use thermal vias in a project
Design a PCB including both SMD and through hole parts
Document your PCB Design
Design an enclosure for a PCB
Order a PCB in any colour but Green

Design a PCB with an embedded controller
Use 0805 size SMD parts on a PCB
Design a multilayer PCB with more than 2 layers
Use a hotplate to rework a PCB
Use USB in a PCB design
Use a vacuum pen to assemble a PCB
Design a PCB Badge or business card

Panelize a design with multiple parts
Use an ultrasonic cleaner to clean a PCB
Assemble something with a QFN
Use a solder paste stencil to assemble lots of PCBs
Design with CMOS or TTL Logic with no firmware
Get a PCB assembled by the factory
Debug a project with a logic analyzer

Repair a broken PCB
Make a design with RGB LEDs
Assemble something with a QFP
Design an SMD PCB
Calculate trace width for power capacity
Use ENIG finish on a PCB
Debug a project with an oscilloscope

Design a simple PCB
Design a PCB with Art on the Silkscreen layer
Learn SMD component codes
Order a PCB for the first time
Get something wrong and re-order a board
Get something wrong and apply a hot fix to the board
Teach a friend how to design a PCB

Watch tutorials or read a book on PCB design software
Find a footprint from a library
Export Gerber Files
Use alcohol to clean a PCB
Use SMD tweezers in a project
Desolder / Resolder Through hole parts on a PCB
Create your own footprint

Install PCB design software
Import Schematic file to PCB
Learn to read a schematic
Use hot air for soldering SMD
Learn to Solder
Test a PCB with a Multimeter

BASICS

START HERE

1 tile = 1 point

Total Score

Name: _____

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