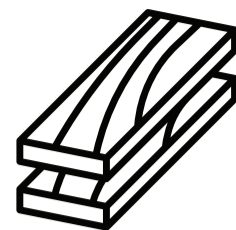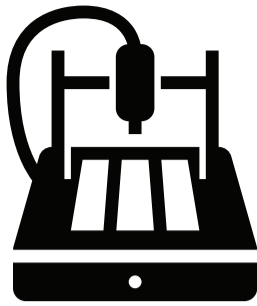# CNC & CAM

## 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**

**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)

- Build your own CNC Machine
- Use an automatic toolchanger
- Make a 3D art piece
- Teach a CNC class
- Design something and upload instructions online for others to use
- Machine a mountain range
- Use a CNC Lathe
- Change tool in a G-Code Program
- Retrofit an old CNC machine
- Use a vacuum table
- Sell something you've made
- Use an XYZ Probe
- Tram your CNC machine
- Accidentally set fire to a wooden part
- Use a fixture plate
- Visit your local makerspace or woodworking club
- Use a Z probe
- Make multiple parts in the same program
- CNC a printed circuit board
- Accidentally misalign the second side of a job
- Make something as a gift
- Fill an engraving with resin or paint
- Use a non-standard cutter
- Modify a post-processor
- Make a part in titanium
- Accidentally use the wrong tool
- Use a vise
- Fill an engraving with wax
- Drill an array of holes (eg. speaker grill)
- Use cutting oil or spray
- Make a part in steel
- Accidentally run a tool through your nearly finished part
- Make a custom part-holding jig
- Engrave a picture
- Drill a hole using a drill cycle
- Use a finishing pass
- Make a part in Aluminium
- Try to make a part larger than your stock
- Make mechanical parts that fit together
- Machine a hole with an endmill
- Make a part with a fillet
- Make a part in plastic
- See "chatter" in your part
- Fix stock with clamps
- Make a mechanical part
- Teach a friend CNC skills
- Make a two-sided part
- Make a 3D part with curves in the z axis
- Make a part in wood
- Fix stock with screws
- Use a facing tool
- Engrave text
- Add tabs to a part
- Use a feeds & speeds calculator
- Break a tool
- Fix stock with glue
- Find Z zero on your part
- Make a 2.5D part with pockets
- Cut out a circle
- Fix stock with double-sided sticky tape
- Use a V-Cutter
- Use an endmill
- Make a 2D flat part
- Generate your first G-code file
- Use a ball mill
- Use a CNC for the first time
- Cut out a square
- Cut a pocket

1 tile = 1 point

**START HERE**

Total Score

Name: _____

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