
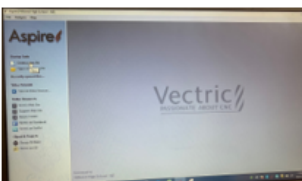
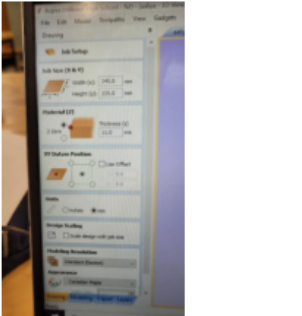
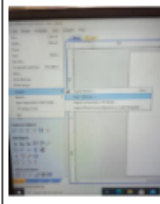
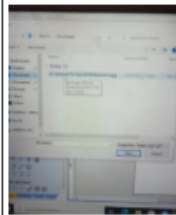


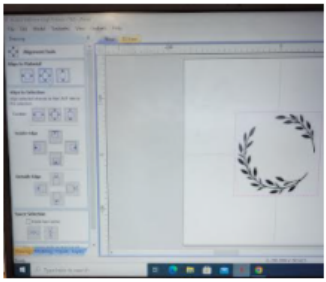
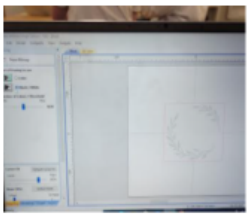
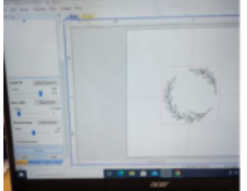


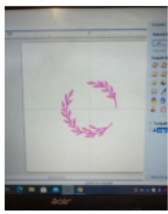
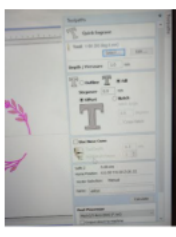

High Not Achieved
NZQA Intended for teacher use only







Vector Modelling software	Aspire
Machining software	Mach3 Loader
Tools used	Drill bit V-Bit (60-degree 6 mm)
Toolpaths used	Pocket pathway

Image	Step description
	Find an image for what I am looking to have engraved on my serving board.
	Create 'new file' on Aspire (Vectric Modelling software)
	Set the size of the material being used. This includes the width, height and thickness. Also click the circle in the middle for XY Datum Position before continuing to the next step.

	Import bitmap by going to file > Import > Import Bitmap
	Select the downloaded image you have saved previously and click 'Open'
	The selected image with now appear in the middle
	Change the size of the image

	Centre the image by choosing the centre option for 'Align to material'
	Choose the Black/white option for 'type of tracing to use' and then click proceed. The black outline of the image will then appear.
	

	Click on the pink outline and then click on 'toolpaths'.
	Select tool - V-Bit (60-degree 6 mm) and apply. Calculate before clicking 'Mach 3 Arcs (mm) (*.txt)'. Save toolpath onto a USB stick
	Position the base of my serving tray

	<p>Set up the computer and press the 'reset' button. Use the keyboard to move the bit to the middle of the serving tray and place a piece of paper between the bit and the board. Move the bit vertically down so that just a bit of the tip touches the board. Click 'Zero X', 'Zero Y' and 'Zero Z'</p>		<p>Click open after selecting the correct document</p>
			<p>Click 'go to zero' before clicking 'cycle start'</p>
	<p>Click on 'File' and open 'Load G-Code'</p>		<p>When the machine is finished with engraving my serving tray, it will look like the image on the left</p>

Evaluation

Write a brief evaluation of the process you undertook to achieve your outcome, be sure to include how your final product represents the graphic model (in Aspire) you have created

During the process I took to achieve my outcome, I had no difficulties apart from finding a suitable design to cnc onto my serving tray. The hardest part of this process was finding a detailed design that would not chip when being engraved. I wanted a circular floral/ greenery themed design in the middle of my serving tray but had to change my design a few times to find one that was suitable. I had originally planned to have a mandala design engraved on my board but after a test run on spare wood laying around, it was clear that the design was not going to give me a great outcome due to its complexity. There are so many lines on this design, and they were so close together that the pieces in between began chipping away. After coming across this limitation, I decided to find a less complex design that can be filled in so that the small details won't chip away like it did during my practice run using the mandala design. I decided to fill in my final design instead of having an outline to avoid chipping as there are some small details on it. By the time that I found a design that was suitable, I had gotten the steps to create the toolpaths fully memorised in my head which made it quick and easy for me to create the toolpaths for my final design. My final product represents the graphic model (in Aspire) that I created as the final engraved

