

Learning without Limits (LWL) – Door Plaque – **Modern Technologies: Precision Making with Specialist Tools and Equipment**

Skill Set	Developing	Secure	Extending
Using computer-based tools: Front & Back Plate Drawings using 2D Design.	1. Simple design <input type="checkbox"/> 2. The drawing is neat but may only have partly completed outlines <input type="checkbox"/> 3. Lines &/or shapes quite smooth <input type="checkbox"/> 4. There are straight or curved lines, with student having remembered and selected some tools <input type="checkbox"/> 5. Some boundary fill has been used for engraving but may not have been coloured black <input type="checkbox"/> 6. Bitmaps were used but help was needed to vectorise images correctly. 7. The lines are mostly the correct colours for cutting and engraving <input type="checkbox"/> 8. Text contour was used for the front plate with minor errors <input type="checkbox"/> 9. Lots of support was needed <input type="checkbox"/>	10. More detailed design, e.g. modelled after a character from popular culture <input type="checkbox"/> 11. The drawing is very neat, and has completed outlines <input type="checkbox"/> 12. The lines and/or shapes are smooth & show increasing precision <input type="checkbox"/> 13. There is a varied mixture of straight and curved lines used <input type="checkbox"/> 14. A lot of black boundary fill has been used for engraving <input type="checkbox"/> 15. Some bitmaps are Included, correctly vectorised <input type="checkbox"/> 16. The lines are the correct colours for cutting and engraving <input type="checkbox"/> 17. Text contour was used for the front plate with no errors <input type="checkbox"/> 18. Little support was needed <input type="checkbox"/>	19. Much more detailed design, e.g. an original creation, precisely drawn <input type="checkbox"/> 20. The drawing is very neat and has completed outlines <input type="checkbox"/> 21. The lines are very smooth, showing fine precision <input type="checkbox"/> 22. There is an attractive mixture of straight and curved lines used, possibly creating some patterning <input type="checkbox"/> 23. Black boundary fill has been used for engraving to creative artistic effect <input type="checkbox"/> 24. A variety of different bitmaps are edited and arranged to create an original drawing <input type="checkbox"/> 25. The lines and/or shapes are the correct colours for cutting and engraving, with increased complexity <input type="checkbox"/> 26. Text contour was used for multiple text plates with no errors <input type="checkbox"/> 27. No support needed – student worked independently <input type="checkbox"/>
Making using tools and equipment: Acrylic Rod Cutting, Finishing front and back face plates, test assembly Joining to Plates	28. The rods are cut to within 5mm of the required length <input type="checkbox"/> 29. The cut ends of the rod have a rough finish <input type="checkbox"/> 30. The ends of the rods are sanded quite smooth <input type="checkbox"/> 31. The front and back plate face edges of the ends have been sanded down <input type="checkbox"/> 32. The rods fit loosely into the holes <input type="checkbox"/> 33. The rods may only be joined loosely to the plates with Dichloromethane Solvent <input type="checkbox"/> 34. Much Dichloromethane Solvent may be seen on the front of the plates <input type="checkbox"/> 35. The student did not evaluate the quality of this work unless prompted <input type="checkbox"/>	36. The rods are cut to within 2mm of the required length <input type="checkbox"/> 37. The cut ends of the rod have a clean finish but may be angled slightly <input type="checkbox"/> 38. The ends of the rods are sanded and very smooth <input type="checkbox"/> 39. The front and back plate face edges of the ends have been sanded down to a good finish <input type="checkbox"/> 40. The rods fit quite snugly into the holes <input type="checkbox"/> 41. The rods may only be joined loosely to the plates with Dichloromethane Solvent <input type="checkbox"/> 42. Little Dichloromethane Solvent may be seen on the front of the plates <input type="checkbox"/> 43. The student evaluated the quality of this work as they went along, to guarantee a high quality outcome <input type="checkbox"/>	44. The rods are cut to precisely the required length <input type="checkbox"/> 45. The cut ends of the rod have a clean finish and are cut cleanly at exactly 90° <input type="checkbox"/> 46. The ends of the rods are smoothed to a shine with wet and dry paper <input type="checkbox"/> 47. The front and back plate face edges have been sanded down to a very smooth finish <input type="checkbox"/> 48. The rods fit precisely and firmly into the holes <input type="checkbox"/> 49. The rods are joined strongly to the plates with Dichloromethane Solvent <input type="checkbox"/> 50. No Dichloromethane Solvent on the front of the plates <input type="checkbox"/> 51. The student made changes to the work to deal with quality issues which arose from their own evaluation of it as they worked <input type="checkbox"/>
Making using tools and equipment: Assembled Product - Overall Quality	52. The two plates are lined up roughly parallel <input type="checkbox"/> 53. An eyelet has been stuck to the rear of the back plate, though the two pieces may not have been glued on the correct way up <input type="checkbox"/> 54. The surfaces of the plastic are mostly clean despite some minor scratches, Dichloromethane Solvent/plastic residue, &/or teeth marks from vices <input type="checkbox"/> 55. The rods fit but may stick out from or fall under the surface level of the text plate <input type="checkbox"/> 56. Lots of support was needed from the teacher <input type="checkbox"/> 57. The student did not check quality issues unless prompted <input type="checkbox"/>	58. The two plates are lined up almost exactly parallel <input type="checkbox"/> 59. An eyelet has been applied to the rear of the back plate, assembled the correct way up <input type="checkbox"/> 60. The surfaces of the plastic are mostly very clean <input type="checkbox"/> 61. The rods fit and are nearly flush with the surface of the text plate <input type="checkbox"/> 62. Little or no Support was needed from the teacher <input type="checkbox"/> 63. The student evaluated the quality of this work as they went along, to guarantee a high quality outcome <input type="checkbox"/>	64. Multiple text plates are exactly parallel <input type="checkbox"/> 65. An eyelet has been applied to the rear of the back plate, assembled the correct way up and precisely aligned both vertically & horizontally <input type="checkbox"/> 66. The surfaces of the plastic are spotless <input type="checkbox"/> 67. The rods fit and are seamless with the surface of the text plate <input type="checkbox"/> 68. No support was needed from the teacher – worked independently <input type="checkbox"/> 69. The student made changes to the work to deal with quality issues which arose from their own evaluation of it as they worked <input type="checkbox"/>