



Job Safety Analysis

Macau Pui Ching Middle School

The Phoenix



| Job Safety Analysis | | | |
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| In the workshop | | | |
| Equipment | Job Steps | Potential Hazards | Recommended safety procedures |
| Welder | <ol style="list-style-type: none"> Heat the welder Start welding Welding ends | <ol style="list-style-type: none"> Burns, heat Flying particles | <ol style="list-style-type: none"> Wear gloves and use pliers when needed Wear goggles and masks Make sure welder is turned off before leaving |
| 3D Printer | <ol style="list-style-type: none"> Pre-heat the printing platform Use a USB to convert the file to 3D printer Start printing Printing ends Collect printed components | <ol style="list-style-type: none"> Heat, jammed extruder Heat Breakage of component, hand injuries | <ol style="list-style-type: none"> Do not touch heated platform, use gloves and pliers when removing jammed filament Do not remove USB when 3D printer is working, make sure the file is converted correctly (with support) Make sure the platform is cooled down before touching Use shovel to remove component, wear gloves if necessary |

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| <p>CNC Machine, Laysar cutter</p> | <ol style="list-style-type: none"> 1. Start up the CNC machine 2. Start cutting 3. Cutting ends | <ol style="list-style-type: none"> 1. Overheat, breakage of blade 2. Objects swirling into machine, noise 3. Sharp edges | <ol style="list-style-type: none"> 1. Make sure there is cooler, and use the appropriate blades 2. Tie up long hair and long sleeves, wear ear protection 3. Wear gloves before removing component from machine, use a file to un-sharpen sharp edges |
| <p>In the Pit</p> | | | |
| <p>Power supply</p> | <ol style="list-style-type: none"> 1. Set up power supply 2. Start using power supply 3. After using the power supply | <ol style="list-style-type: none"> 1. Electric shock | <ol style="list-style-type: none"> 1. Make sure the positive and negative ports are separated 2. Turn on supply when everything is ready, keep out of water 3. Make sure supply is turned off after single use |
| <p>Hand drill</p> | <ol style="list-style-type: none"> 1. Install drill 2. Start drilling 3. After using the drills | <ol style="list-style-type: none"> 1. Hand injuries 2. Objects swirling into drill | <ol style="list-style-type: none"> 1. Lock the hand drill when inserting drill 2. Tie up long hair and long sleeves, do not wear gloves 3. Make sure power is off, lock the drills if possible |