

# Program Risk Assessment

This document has been developed to assist with the development of HIRAC's (Hazard Identification, Risk Assessment and Control) for programs delivered by the Ballarat Tech School.

To fill out the Risk Assessment either highlight all applicable cells or use the drop down arrow to select relevant options.

Then click complete on the page and click "Next" to proceed.

**Program Title:**

**Escape Box**

<b>Risk assessment prepared by:</b>	Matty Chaplin	<b>Reviewed by:</b>	Liam Mudge	<b>Date of Assessment:</b>		22/03/2023	
<b>Select type of activity:</b>	Normal Program Delivery			<b>Date due for reassessment:</b>			
<b>Location of Activity</b>	Advanced Manufacturing	Breakout 1	Presentation Space	Science	Class Room	Food and Fibre	Off Site
	New Energies	VR	Foyer Space	Breakout 2	Studio Space	Cafeteria Space	

## Activities Performed and level of supervision required:

The intention is that this document is to be working through in an interview style with the Safety Officer and those developing/delivering the program. To assist with the identification of any pre-existing HIRACs relevant to the program being delivered, complete the sections below by selecting the activities and hazards involved with your activity/program.

### Location(s)

Identify the workspace required to deliver this program e.g. The Chocolate program may require the Food & Fibre lab as well as the Advanced Manufacturing lab.

### Workflow

Identify the steps involved with carrying out the program, including the location of step, resources & materials required, as well as any specialized personnel required for the step and identify if this is covered by a pre-existing HIRAC report

### Activities/Equipment

Identify all equipment required for delivery of the program e.g. Laser Cutter, tools, chemicals and consumables.

### Hazard Identification

Identify the types of Hazard applicable to the program.

### Exposure

Identify all groups who will be exposed to risks associated with this activity as well as any staff/specialist skills required to deliver this program e.g. Chocolate may require the assistance of some lab technician and personnel trained to operate the 3d printers/CNC machine.

### Chemical Hazards

List any chemicals to be used and generated during this activity. Acquire, review and identify key hazard information from applicable material safety data sheet (MSDS), control measures to be undertaken and disposal requirements.

### Biological Hazards

List any Biological Agents to be used and/or generated during this activity. Acquire, review and identify; key hazard information from applicable data sheets, control measures to be undertaken and disposal requirements.

### Risk Controls

Identify the potential risk associated with undertaking this program (using the work space, operation of equipment, conducting experimentation etc.)

### Approval

After reviewing all relevant MSDSs and HIRACS by supervising staff seek approval of Manager.

### Reference Material

List all reference materials, MSDS's and HIRACS used to complete this form.

**Workflow**

Identify the steps involved with carrying out the program, including the location of step, resources & materials required, as well as any specialized personnel required for the step and identify if this is covered by a pre-existing HIRAC report

#	Step	Location	Equipment/Materials	Specialist Personnel	Hazard	Notes
1	2 min Mars Video to set the task	Breakout 2	PP and Screen			Laptop needs to be setup, volume needs to be tested
2	50 min Escape Box Challenge	Science	Polarised LCD monitor, All Escape box bits, Locks, Lock boxes, answer sheets, pen, calculator and Escape Box Diaries		Slips/trips/falls	
3	Task 1 - Ferro Fluid	Science	Magnets, stand, Boss Clamp and Premade Ferro Fluid bottles	Lab	Chemical	Ferro Fluid not to be ingested or inhaled. Bottles have been sealed tight, warning labels at all areas.
4	Task 2 - Test tube sorting	Science	Plastic disposable test tubes, Food dye and Phenylpthaleine	Lab	Chemical	High flammable - pre setup and in sealed test tubes
5	Task 3 - Polarised LCD	Science	Cool looking glasses, 1 Polarised pair of glasses, LCD monitor and VGA compatible laptop		Electrical	
6	Task 4 - 4 small puzzles set around the Science Room	Science	Escape box Diary			
7	5 min reflection - What was easy, what was hard etc	Breakout 2	PP and Screen			
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Activities and Equipment

Identify all equipment required for delivery of the program e.g. Laser Cutter, tools, chemicals and consumables.

List equipment being used	Location & Quantity			HIRAC
Ferro Fluid	Science			Laboratory
Phenylpthaleine	Science			Laboratory



<b>Biological hazards</b>	
Are there any biological hazards involved with this activity? If YES, please complete the following form	No

<b>Biological Hazard Controls</b>	
Recommended banned and restricted hazardous biological agents will not be used?	
Biological agents used are recommended for the age group undertaking the practical experiment?	
I understand the risks of the practical experiment and will undertake this practical in a 'wet area'?	
I have obtained relevant safety data sheets for agents being used and understand the accidental spillage or exposure, emergency response and first aid information?	
All hazardous agents and mediums are labelled appropriately?	
List any additional activities or equipment being undertaken/used that require an additional risk assessment to be developed	

[List other measures here](#)

Check: If you answer 'No' to any of the above questions, do not carry out practical experiments until the matter has been resolved.

I will **not** carry out the practical experiment if extreme or high chemical risks exist.

I have considered all chemical exposure routes of the eyes, skin, inhalation, ingestion and injection to be used and generated.

List the chemicals to be used and generated. Identify key hazard information from safety data sheets, control measures to be undertaken and disposal requirements.

<b>Hazards</b>
Electrical
Slips/trips/falls
Entanglement
Temperature
Noise
Crush
Ergonomic
Atmospheric
Human
Chemical
Radiation
Shear
Biological
Fumes
Food Safety
Collision
Other

Identify all groups who will be exposed to risks associated with this activity as well as any staff/specialist skills required to deliver this program e.g. Chocolate may require the assistance of some lab technician and personnel trained to operate the 3d printers/CNC machine.

Program Staff	Technical Staff	Students	Teachers	Volunteers	Cleaning Staff	Other
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Notes:

**Risk Assessment Matrix**

*Assessing OHS Risks*

Risk assessments in matters of Occupational Health and Safety\* are based on 2 key factors:

- The severity of any injury/illness resulting from the hazard(s), and
- The likelihood that the injury/illness will actually occur.

Based on the Risk Assessment Matrix, identify the level of hazard
MEDIUM
<b>If the initial risk is LOW or VERY LOW you do not need to complete a full Risk Assessment</b>

Assessment of risk level based on likely severity and probability of harm		LIKELIHOOD			
		Very Unlikely Could happen, but probably never will	Unlikely Could happen, but very rarely	Likely Could happen sometime	Very likely Could happen any time
<b>SEVERITY</b>	Death or permanent disability	<b>MEDIUM</b>	<b>HIGH</b>	<b>EXTREME</b>	<b>EXTREME</b>
	Long-term illness or serious injury	<b>LOW</b>	<b>MEDIUM</b>	<b>HIGH</b>	<b>EXTREME</b>
	Medical attention and short-term incapacity	<b>VERY LOW</b>	<b>LOW</b>	<b>MEDIUM</b>	<b>HIGH</b>
	First aid needed	<b>VERY LOW</b>	<b>VERY LOW</b>	<b>LOW</b>	<b>MEDIUM</b>

Notes:	
STEM Educator	Reviewer Comments
Misuse of equipment would represent the greatest opportunity to exposure of hazardous elements.	

Hazards
Electrical
Slips/trips/falls
Entanglement
Temperature
Noise
Crush
Ergonomic
Atmospheric
Human
Chemical
Radiation
Shear
Biological
Fumes
Food Safety
Collision
Other

Hazard	Control	Control Type	Notes
Electrical	Electrical isolation Workplace inspections	Isolation Administration	Electrical equipment undergoes regular test & tag inspections.
Slips/Trips/falls	Relocate work area Safe work zones	Elimination Isolation	Removal of unnecessary obstructions part of standard operation
Chemical	Chemical storage cabinet Hazardous chemicals register Material Safety Data Sheets Eye protection Supervision Training/Induction	Isolation Administration Administration PPE Administration Administration	

If the initial risk is **LOW** or **VERY LOW** you do **NOT** need to complete a full Risk Assessment

Notes:

Chemical agents such as ferro fluid are housed in specialized containers to restrict direct access to the solution.

Risk controls				
Initial Risk Level	MEDIUM			
<b>Elimination</b>	Alternate type of practical	Relocate work area	Removal of hazard	
<b>Substitution</b>	Alternative equipment to be utilized	Alternative chemical to be used	Specialized equipment	
<b>Isolation</b>	Electrical isolation	Safe work zones	Mechanical isolation	Security
	Restricted areas	Chemical storage cabinet		
<b>Engineering</b>	Locking	Guarding	Fume cupboard	Spill trays/ bund wall
<b>Administration</b>	Hazardous chemicals register	Training/Induction	Workplace inspections	Risk assessment
	Safe work procedures	Material Safety Data Sheets	Supervision	First aid kit
<b>PPE</b>	Eye protection	Sun Screen	Hand protection	Hearing protection
	Lab coat or apron	Face Shield/Mask	Safety footwear	Enclosed footwear
<b>Emergency facilities</b>	Eye wash	Spill kit		
<b>COVID-19</b>	<b>Note COVID-19 specific controls, especially shared equipment or resources</b>  Example: Restrict sharing between students. Replace paper resources with digital. Cleaning processes (including resources in plastic pockets) Students work in pairs or groups of 5-6. These students will be restricted to a single table, and will not share resources between tables. All equipment will be sprayed/wiped/cleaned after use.			
<b>Residual Risk Level</b>	VERY LOW			





## Activity Approval

This activity has been reviewed and determined that it can be carried out safely. Where risks have been identified appropriately mitigation measures will be implemented.

Date

Completed By

Matty Chaplin

22/03/2023

Reviewed by:

Liam Mudge

23/03/2023

Reviewed by supervisor, where high risks are involved.

Damon Minotti

24/03/2023

Changes that need to be considered next time: