Program Risk Assessment

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Completed By: Liam Mudge **Date Completed:** 06/03/2025

Reviewed by: Albert Ferguson **Date of next review:** 06/03/2026

Location of Activity:	***HAZARDS***	***Control***
• Science K215	• Electrical • Slips/trips/falls • Chemical • Pinch/Crush	• Isolation/workspace inspection. • Safe work zones. • Chemical storage cabinet • MSDS • Supervision • Training/Induction • Lab Coats

Based on the Risk Assessment this activities level of risk is considered:	**LOW**

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Workflow

The Escape Room activity operates in the Science Lab where participants work in team to solve puzzles using standard science equipment such as microscopes, magnets, and computing components. The set up of chemical/clean agents is done by Tech School staff prior to students/participants taking part in the activity.

Chemical Hazards

Are there any chemical hazards involved with this activity? If YES, please answer the following form.	Yes
Chemical Hazard Controls	
• I have consulted the Victorian Department of Educations Guidance Sheet 3 Prohibited and Restricted Chemicals.	NA
• Banned and restricted hazardous chemicals will not be used?	NA
• No explosive reactants will be used or explosive products generated.	NA
• I understand the risks of the practical experiment and will undertake this practical in a 'wet area'?	NA
• I have obtained the safety data sheets for reactants and understand the accidental spillage or exposure, emergency response and first aid information?	NA
• Quantities of flammable reactants are kept to minimum and ignition sources are eliminated?	NA
• All hazardous chemicals and decanted products are labelled appropriately?	NA

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If you answer 'False' 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.
- I have located and linked all relevant MSDSs for Chemicals used in this activity.

Chemical Agent	Concentration	Flammable	Gases Under Pressure	Oxidising	Corrosive	Chronic	Health Hazard	MSDS
Ferrofluid								Ferrofluid_MSDS.pdf
Phenolphthalein								PHENOLPHTHALEIN.pdf

Biological Hazards

Are there any chemical hazards involved with this activity? If YES, please answer the following form.	NO
Biological Hazard Controls	
• Recommended banned and restricted hazardous biological agents will not be used?	True

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• Biological agents used are recommended for the age group undertaking the practical experiment?	True
• I understand the risks of the practical experiment and will undertake this practical in a 'wet area'?	True
• I have obtained relevant safety data sheets for agents being used and understand the accidental spillage or exposure, emergency response and first aid information?	True
• All hazardous agents and mediums are labelled appropriately?	True

If you answer 'False' 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 biological risks exist.
- I have considered all chemical exposure routes of the eyes, skin, inhalation, ingestion, and injection to be used and generated.

List the biological agents to be used and generated.

Identify key hazard information from safety data sheets, control measures to be undertaken and disposal requirements.

Risk Assessment Matrix

	LIKELIHOOD

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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.

**Assessment of risk level based on likely severity and probability of harm*

		Very Unlikely Could happen, but probably never will	**Unlikely** Could happen, but very rarely	**Likely** Could happen sometime	**Very likely** Could happen any time
SEVERITY	Death or permanent disability	MEDIUM	HIGH	EXTREME	EXTREME
	Long-term illness or serious injury	LOW	MEDIUM	HIGH	EXTREME
	Medical attention and short-term incapacity	VERY LOW	LOW	MEDIUM	HIGH
	First aid needed	VERY LOW	VERY LOW	LOW	MEDIUM

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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.

- Program Staff
- Technical Staff
- Students
- Teachers

STEM Educator Notes	Reviewer Notes
• Chemical agents such as ferro fluid are housed in specialized containers to restrict direct access to the solution. • Electrical devices are regularly maintained and tested. • Housekeeping instructions keep workspaces free from objects clutter that may cause slips, trips or falls. • Toolboxes may cause pinch/crush if not properly used. • Participants are instructed in correct operation of equipment and supervised while participating in the program activity.	

HAZARDS

- Electrical
- Slips/trips/falls
- Chemical
- Pinch/Crush

Based on the Risk Assessment Matrix, identify the level of hazard	**LOW**

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RISK CONTROLS

List major hazards identified and their control measures to be implemented.

Hazards	Control	Type
• Electrical • Slips/trips/falls • Chemical • Pinch/Crush	• Isolation/workspace inspection. • Safe work zones. • Chemical storage cabinet • MSDS • Supervision • Training/Induction • Lab Coats	• Isolation • Administration • PPE •

Notes: Students are verbally/visually instructed on safe and best practice for laboratory activities. The activity is demonstrated, students are then observed in completing procedure safely. All students are then supervised while conducting activities.

Based on the Risk Assessment this activities level of risk is considered.	**VERY LOW**

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Reference Documentation

List all reference documentation, HIRACs and MSDS forms applicable to this activity. If HIRAC does not already exist, the creation of a new HIRAC may be required.

HIRACs

- BTS Laboratory Activities HIRAC
-

MSDSs

- Ferrofluid_MSDS.pdf
- PHENOLPHTHALEIN.pdf

Other Activity/Reference Material

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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.

Completed By: Liam Mudge

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Reviewed by: Albert Ferguson

Date of next review: 06/03/2026