

Curriculum activity risk assessment

Machines, Fixed

clever • skilled • creative

Activity scope

This document relates to student use of Fixed Machines as a curriculum activity.

'Fixed machines' refers to machines that are fixed permanently or that need to be fixed (secured) for their safe operation.

All fixed machines are covered in the [Code of Practice for Plant](#) and teachers should refer to this code

This document must be read in conjunction with [Managing a Practical ITD Workspace](#).



Teachers/leaders:		
Activity description:		
Start date:	Finish date:	No of students (approx.):
Class groups:		Supervision ratio (approx.):

Risk level

The actual risk level will vary according to the specific circumstances of the activity and these **must** be considered when assessing the inherent risk level and planning the activity. As a starting point, ask the following questions:

- Which students will be involved?
- What will the students be doing?
- What will the students be using?
- Where will the students be?
- Who will be leading the activity?

Inherent risk level		Action required / approval
<input type="checkbox"/>	Low Little chance of incident or injury: Includes fixed machines, swaging machines, pedestal and bench drills, bench folding machines, manual pipe-bending machines, linishall machines, sanding discs, burring machines, curving rollers and other machines with a low potential risk	<input checked="" type="checkbox"/> Manage through regular planning processes.
<input type="checkbox"/>	Medium Some chance of an incident and injury requiring first aid: Includes fixed machines such as lathes, metal cutting saws, power hacksaws, bandsaws, pan brakes, bench shears, wood lathes and other machines with a medium potential risk	<input checked="" type="checkbox"/> Record controls in your planning documents and/or complete this <i>Curriculum Activity Risk Assessment</i> . <input checked="" type="checkbox"/> Consider obtaining parental permission.
<input type="checkbox"/>	High Likely chance of a serious incident and injury requiring medical treatment: Includes fixed machines such as bench grinders, router tables, milling machines, shaping machines, hydraulic pipe-bending machines, hydraulic presses, guillotines and other machines with a high potential risk	<input checked="" type="checkbox"/> A <i>Curriculum Activity Risk Assessment</i> must be completed. <input checked="" type="checkbox"/> Principal or delegated Deputy Principal or Head of Program (i.e. HOD, HOSES, HOC) to review and approve risk assessment. <input checked="" type="checkbox"/> Obtaining parental permission is recommended. <input checked="" type="checkbox"/> Once approved, activity details are to be entered into the <i>School Curriculum Activity Register</i> .
<input type="checkbox"/>	Extreme High chance of a serious incident resulting in highly debilitating injury: Includes fixed machines such as cut-off saws (friction wheels), drop saws, radial arm saws, combination saw bench planers, thicknessers and other machines with a very high potential risk	<input checked="" type="checkbox"/> Consider conducting an alternative activity <input checked="" type="checkbox"/> A <i>Curriculum Activity Risk Assessment</i> must be completed. <input checked="" type="checkbox"/> Principal approval prior to conducting this activity is required. <input checked="" type="checkbox"/> Parental permission must be obtained for student participation. <input checked="" type="checkbox"/> Once approved, activity details are to be entered into the <i>School Curriculum Activity Register</i> .

Listed below are the minimum recommendations for this type of activity. For any items ticked 'No', provide further information regarding the additional or alternate controls to be implemented for the safe conduct of the activity.

Minimum supervision	
Adequate adult supervision is to be provided. In determining what is adequate, consider the number of students, their individual needs, and the nature of the activity. If an adult other than a registered teacher is engaged for instruction, a teacher should be present to take overall responsibility. Blue Card requirements must be adhered to.	
<input type="checkbox"/>	Registered teacher with minimum qualifications as outlined below
OR	
<input type="checkbox"/>	An adult with minimum qualifications as outlined below, in the presence of a registered teacher
Further information:	

Minimum qualifications

The qualifications listed in this section are minimums for each type of situation. Leaders are encouraged to seek training to raise their qualification level above the minimum listed.

Current first aid qualifications including Cardio Pulmonary Resuscitation (CPR) or ready access to first aid facilities, including qualified personnel.

[Blue Card](#) requirements met

Low — Little chance of incident or injury:

Includes fixed machines, swaging machines, pedestal and bench drills, bench folding machines, manual pipe-bending machines, linishall machines, sanding discs, burring machines, curving rollers and other machines with a low potential risk

For a registered teacher:

experience (previous involvement) in the use of this type of equipment or similar equipment
OR

For a leader other than a registered teacher:

experience (previous involvement) in using this type of equipment or similar equipment.

Medium — Some chance of an incident and injury requiring first aid:

Includes fixed machines such as lathes, metal cutting saws, power hacksaws, bandsaws, pan brakes, bench shears, wood lathes and other machines with a medium potential risk

For a registered teacher:

competence (demonstrated ability) in using this type of equipment or similar equipment

A teacher could demonstrate their competency through their:

- knowledge of the activity and the associated hazards and risks
- experience (i.e. previous involvement) in undertaking the activity
- demonstrated ability and/or expertise to undertake the activity
- possession of qualifications related to the activity.

OR

For a leader other than a registered teacher:

competence (demonstrated ability) in using this type of equipment or similar equipment.

High — Likely chance of a serious incident and injury requiring medical treatment:

Includes fixed machines such as bench grinders, router tables, milling machines, shaping machines, hydraulic pipe-bending machines, hydraulic presses, guillotines and other machines with a high potential risk

For a registered teacher with qualifications in Industrial Technology Design (ITD):

competence (demonstrated ability) in using this type of equipment or similar equipment

A teacher could demonstrate their competency through their:

- knowledge of the activity and the associated hazards and risks
- experience (i.e. previous involvement) in undertaking the activity
- demonstrated ability and/or expertise to undertake the activity
- possession of qualifications related to the activity.

OR

For a leader other than a registered teacher:

any relevant qualifications and competence (demonstrated ability) in using this type of equipment or similar equipment.

Extreme — High chance of a serious incident resulting in highly debilitating injury:

Includes fixed machines such as cut-off saws (friction wheels), drop saws, radial arm saws, combination saw bench planers, thicknessers and other machines with a very high potential risk

For a registered teacher with qualifications in Industrial Technology Design (ITD):

expertise (formal qualifications) in using this type of equipment or similar equipment; The teacher is deemed to have formal qualifications for this type of equipment if the equipment was used during the course for which the qualification was obtained, e.g. tradesperson or TAFE certificate of competency

OR

relevant documented qualification: trade or units of competency related to the activities (eg. VET staff profile, Currency of Industry Experience.)

OR

For a leader other than a registered teacher:

expertise (formal qualifications) as outlined above.

Further information:

Minimum equipment/facilities <i>If 'No' is ticked, provide further information.</i>	Yes	No
The Design Technology Workspace should meet all the safety requirements outlined in Managing a Practical ITD Workspace .	<input type="checkbox"/>	<input type="checkbox"/>
First aid kit suitable for activity	<input type="checkbox"/>	<input type="checkbox"/>
Communication system: <input type="checkbox"/> phone-line at location <input type="checkbox"/> mobile phone <input type="checkbox"/> walkie talkies/UHF radio <input type="checkbox"/> student/adult messenger Other:		
Appropriate and maintained fire safety equipment (extinguisher, blanket, evacuation plan)	<input type="checkbox"/>	<input type="checkbox"/>
Drinking water (students should not share drinking containers)	<input type="checkbox"/>	<input type="checkbox"/>
Safety glasses and appropriate fully-enclosed footwear that protects against falling sharp tools, equipment or project materials	<input type="checkbox"/>	<input type="checkbox"/>
Standard Operating Procedures clear and present for ALL equipment used; If certification that the equipment for any medium or high risk activity conforms to Australian Standards specifications is unavailable, the appropriate procedure for testing and examination should be carried out during the course of its design. The procedure is outlined in the Code of Practice for Plant .	<input type="checkbox"/>	<input type="checkbox"/>
Guards and safety devices designed for the portable equipment	<input type="checkbox"/>	<input type="checkbox"/>
Fixed residual current device on all portable equipment; For further information refer to: quick reference guide for specified electrical equipment .	<input type="checkbox"/>	<input type="checkbox"/>
Adequate lighting and ventilation	<input type="checkbox"/>	<input type="checkbox"/>
Suitable non-slip floor surface	<input type="checkbox"/>	<input type="checkbox"/>
Material safety data sheets (MSDS) for all chemicals stored in the workshop	<input type="checkbox"/>	<input type="checkbox"/>
Clearly marked work areas delineated with yellow paint or similar material	<input type="checkbox"/>	<input type="checkbox"/>
Suitable and sufficient waste bins	<input type="checkbox"/>	<input type="checkbox"/>
Emergency stop buttons on equipment where required	<input type="checkbox"/>	<input type="checkbox"/>
Properly installed guards and safety devices on all equipment where necessary	<input type="checkbox"/>	<input type="checkbox"/>
Further information:		

Hazards and suggested control measures

All persons engaging in this activity should:

- identify the hazards, including any additional hazards not mentioned here
- assess their significance
- manage the potential risks.

Listed below are indicative hazards/risks and suggested control measures. They are by no means exhaustive lists. After checking these, add details of any other identified hazards/risks and additional controls you intend to implement

Hazards/risks	Control measures	Yes	No	Implementation plan / Additional controls
Environmental conditions <ul style="list-style-type: none"> • Weather • Surfaces • Surrounds 	<ul style="list-style-type: none"> • Monitor temperature levels in workshop. • Keep workspaces and floors clean and clear of debris. • Have appropriate and sufficient waste containers. • Ensure that adequate ventilation is available during sanding, painting and gluing, especially when materials are used that release fumes during use, such as contact adhesives, paints, solvents and glues. • Ensure that the location is appropriate for the activity and is considered in respect to the type of machine being used (e.g. space needed to manipulate any materials being worked in the plant, without impeding or obstructing thoroughfares). 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Gas, dust and fumes	<ul style="list-style-type: none"> • Students may need to wear respiratory protective equipment if material machining produces high levels of dust or fumes. 	<input type="checkbox"/>	<input type="checkbox"/>	
Heat <ul style="list-style-type: none"> • Friction • Elements 	<ul style="list-style-type: none"> • Handle equipment carefully during use. • Remain aware of your surroundings. • Handle materials carefully after use on equipment. • Wear appropriate personal protective equipment during use of machines. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Hazards/risks	Control measures	Yes	No	Implementation plan / Additional controls
	<ul style="list-style-type: none"> Ensure that all machines for use by students are endorsed by the school's safety committee and approved by the principal. Ensure that fixed machines being used anywhere other than in a Design Technology workspace are secured for their operation. 	<input type="checkbox"/>	<input type="checkbox"/>	

Additional control measures

These would relate to the specific student needs, location and conditions in which you are conducting your activity.

Hazards/risks	Control measures

Submitted by:

Date:

List the names of those who were involved in the preparation of this risk assessment.

Approval	
<input type="checkbox"/>	Approved as submitted:
<input type="checkbox"/>	Approved with the following condition(s):
<input type="checkbox"/>	Not approved for the following reason(s):
By:	Designation:
Signed:	Date:
Once approved, activity details should be entered into the <i>School Curriculum Activity Register</i> by administrative staff.	Reference no.

Monitor and review <i>To be completed during and/or after the activity and/or at the completion of the series of activities.</i>	Yes	No
Are the control measures still effective?	<input type="checkbox"/>	<input type="checkbox"/>
Have there been any changes?	<input type="checkbox"/>	<input type="checkbox"/>
Are further actions required?	<input type="checkbox"/>	<input type="checkbox"/>
Details:		

Important links

- SCM-PR-002: School Excursions
<http://education.qld.gov.au/strategic/eppr/schools/scmpr002/>
- HLS-PR-003: First Aid
<http://education.qld.gov.au/strategic/eppr/health/hlspr003/>
- HLS-PR-004: Infection Control and Management of Prescribed Contagious Conditions
<http://education.qld.gov.au/strategic/eppr/health/hlspr004/>
- Infection Control Guideline:
http://education.qld.gov.au/health/pdfs/healthsafety/infection_control_guideline.pdf
- HLS-PR-005: Health and Safety Incident Recording and Notification
<http://education.qld.gov.au/strategic/eppr/health/hlspr005/>
- HLS-PR-013: Developing a Sun Safety Strategy
<http://education.qld.gov.au/strategic/eppr/health/hlspr013/>
- HRM-PR-010: Working with Children Check – Blue Cards
<http://education.qld.gov.au/strategic/eppr/hr/hrmpr010/>
- HLS-PR-006: Managing Occupational Risks with Chemicals
<http://education.qld.gov.au/strategic/eppr/health/hlspr006/hs16.pdf>
- Standard Operating Procedures for Education Queensland sites
<http://education.qld.gov.au/health/safety/hazards/equip-resources.html#sop>
- Hearing Protection Fact Sheet
<http://education.qld.gov.au/health/pdfs/healthsafety/hearing-protection-factsheet.pdf>
- 2004 Noise Code of Practice
http://www.deir.qld.gov.au/workplace/resources/pdfs/noise_code2004.pdf

Further information

For further information on incorporating risk management strategies into curriculum activity planning refer to [HLS-PR-012 Managing Risks in Curriculum Activities](#) and the associated list of [Curriculum Activity Risk Assessment Guidelines](#). (See: <http://education.qld.gov.au/strategic/eppr/health/hlspr012/index1.html>)

For further support with risk management training and advice, contact trained staff in schools such as Workplace Health and Safety Officers (WHSOs) and Workplace Health and Safety Representatives (WHSRs), and regional staff such as Senior Health and Safety Consultants.