

Managing health and safety risks

This document briefly explains the risk management process and how it can be applied to managing health and safety risks in DoE workplaces. The information presented here should be seen as providing general risk management guidance rather than the definitive list of requirements for undertaking a specific activity. A [template](#) is available to document your health and safety risk assessment.

The risk management process

Health and safety risk management involves a four-step process:

1. **identify the hazards**
2. **assess the risks**
3. **control the risks**
4. **monitor and review the level of safety**

By implementing effective risk management, staff will be taking proactive measures to minimise the risk of harm to all involved. Risk management is best completed by more than one person identifying the hazards, assessing the risks and determining the controls. Therefore, you are encouraged to involve a team of people associated with the activity in the risk management process.

For curriculum risk management, refer to the [Managing risks in school curriculum activities procedure](#).

Step 1 – Identify the hazards

Hazards are those things that have the potential to cause harm.

Hazards come in many forms. Some are common and easily identifiable, such as: using cutting elements on machinery, falling from heights, and infectious diseases.

Other hazards may not be as common and may be harder to identify. For example, activities that would normally be low risk become much riskier when they are done in a new or unusual way, such as, with younger students, with large groups, in unfamiliar settings, or for the first time.

There are many ways to identify hazards, such as:

- think about the work you do
- legislation e.g. heights, chemicals, equipment
- annual safety assessment
- workplace inspections
- people reporting hazards
- incidents e.g. accidents and near misses

Once the hazards have been identified, the level of risk they pose needs to be assessed.

Step 2 – Assess the level of risk

Risk is the likelihood that a harmful consequence (e.g. injury) will occur when people are exposed to a hazard. As such, a risk level is made up of two elements:

- the **likelihood** of an incident happening
- the **consequence** if it did happen.

To assess the level of risk inherent in an activity, consider the likelihood of an incident happening in combination with the seriousness of the consequence.

Many factors will influence the likelihood and consequence if an incident were to occur, such as the:

- frequency and duration of exposure to a hazard e.g. sunburn, chemicals
- speed and mass of objects e.g. fast moving vehicles
- knowledge and experience of those undertaking the activity.

The nature of the activity and factors relating to your specific context should also be considered. For example:

- Who will be involved in the activity e.g. previous experience, physical capability, no. of people, etc.
- What will they be doing e.g. lifting heavy objects, etc.
- What will they be using e.g. hazardous chemicals, tools, etc.
- Where will they be e.g. outdoors, near water, at height, etc.
- Who will be leading the activity e.g. experience, qualifications, etc.

Risk factors like these make every situation different. When assessing risk, consider the risk factors that apply to your specific context, and their impact on the likelihood and consequence of an incident occurring.

The *DoE Risk Management Matrix* below can be used as a guide to assist with quantifying the risk level. To use the matrix, map the likelihood and consequence of an incident occurring with your activity to arrive at the assessed risk level.

Keep in mind that when assessing risk value judgements need to be made; and when making value judgements sometimes the risk level is not always clear cut. If undecided on a risk level for an activity, a conservative approach would be to settle on the higher risk level being considered.

Assessing the risk level is important. However, regardless of the assessed level of risk, we always have an obligation to do what is reasonably practicable to eliminate the risk, or if that is not possible, to minimise the risk.

DoE Risk Management Matrix					
Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Critical
Almost certain	Medium	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Low	Medium

Consequence	Description of consequence
1. Insignificant	No treatment required.
2. Minor	Minor injury requiring first aid treatment (e.g. minor cuts, bruises, bumps).
3. Moderate	Injury requiring medical treatment or lost time.
4. Major	Serious injury (injuries) requiring specialist medical treatment or hospitalisation.
5. Critical	Loss of life, permanent disability or multiple serious injuries.

Likelihood	Description of likelihood
1. Rare	Will only occur in exceptional circumstances.
2. Unlikely	Not likely to occur within the foreseeable future, or within the project lifecycle.
3. Possible	May occur within the foreseeable future, or within the project lifecycle.
4. Likely	Likely to occur within the foreseeable future, or within the project lifecycle.
5. Almost certain	Almost certain to occur within the foreseeable future or within the project lifecycle.

Step 3 – Control the risk

At all times, regardless of the level of risk, we are required to do what is reasonably practicable to eliminate or minimise the risk of any hazard with the potential to cause harm.

Control measures are the things we do to eliminate or lower the level of risk.

The types of control measures are categorised according to the '**hierarchy of control**'. Controls should be considered and used in this preferred order. Often, more than one control will be used in combination to minimise risk.

Hierarchy of controls		Examples
Most effective (High level)  Least effective (Low level)	Elimination: remove the hazard completely from the workplace or activity.	<ul style="list-style-type: none"> Fill in a hole to eliminate a trip hazard. Contract tasks out to experts with specialist equipment.
	Substitution: replace a hazard with a less dangerous one.	<ul style="list-style-type: none"> Use a less hazardous chemical that still does the job. Choose an alternative excursion site.
	Redesign: changing a machine or work process to make it safer.	<ul style="list-style-type: none"> Raise a bench to reduce bending. Adding guards on a machine.
	Isolation: separate people from the source of the hazard.	<ul style="list-style-type: none"> Erect safety barriers around a hazard. Using a fume cupboard to use odoriferous chemicals.
	Administration: putting rules, signage or training in place to make a workplace safer.	<ul style="list-style-type: none"> Not mowing near people. Painting trip hazards.
	Personal protective equipment (PPE): protective clothing and equipment.	<ul style="list-style-type: none"> Gloves, hats, aprons, hearing protection.

Higher level controls are considered more effective, and are therefore preferred, because they eliminate or reduce the risk of harm for everyone at all times. Lower level controls are less preferred because essentially the risk of harm still exists and they rely on people doing the right thing to provide an element of safety.

If lower level controls are to be implemented instead of higher level controls, it is important that the reasons behind the decision are explained.

Your assessed inherent risk level will determine the actions (such as documented planning) and controls required. These are detailed in the table below.

Assessed risk level	Description of risk level	Actions
Low	If an incident were to occur, there would be little likelihood that an injury would result.	Undertake the activity with the existing controls in place.
Medium	If an incident were to occur, there would be some chance that an injury requiring first aid would result.	Additional controls may be needed.
High	If an incident were to occur, it would be likely that an injury requiring medical treatment would result.	Controls will need to be in place before the activity is undertaken.
Extreme	If an incident were to occur, it would be likely that a permanent, debilitating injury or death would result.	Consider alternatives to doing the activity. Significant control measures will need to be implemented to ensure safety.

Step 4 – Monitor and review

It is important to assess the effectiveness of the control measures you have implemented as the activity is being conducted and after the activity is completed. This step of the risk management process is often overlooked.

We don't always get things perfectly right the first time. If necessary, modify or add control measures to ensure safety. This will be required if new hazards are identified, or if the existing controls are inadequate (say, for example, there was an incident that caused an injury, or even a near miss).

Record any changes to the safety measures in the *monitor and review* section of the documented risk assessment for future reference. This information will be helpful to improve the activity next time it is conducted.

Important links

- [Health and safety risk assessment template](#)
- [Creating Healthier Workplaces website: risk management](#)

Related DoE procedures:

- [Managing risks in school curriculum activities](#)
- [School excursions](#)
- [Health, safety and wellbeing incident management](#)
- [Health and safety policy and procedures register](#)

Workplace Health and Safety Queensland

- [Code of Practice: How to manage work health and safety risks](#)

For further information:

For support with risk management contact trained staff, such as your:

- Health and safety advisor (HSA)
- Health and safety representative (HSR)
- [Regional senior health and safety consultant](#).