

Risk Assessment Tool For Practical Activities

Practical Investigation - Reference:

HAZARD (tick the hazard)				ALL PRACTICALS REQUIRE SAFETY INSTRUCTIONS AND OTHER CONTROLS (tick control measures used)			
Chemical							
Solids	<input type="checkbox"/>	Product of Practical	<input type="checkbox"/>	MSDS Available	<input type="checkbox"/>	MSDS requirement followed	<input type="checkbox"/>
Liquids	<input type="checkbox"/>			SOPs*	<input type="checkbox"/>	Safety Equipment	<input type="checkbox"/> PPE <input type="checkbox"/>
Gas/es	<input type="checkbox"/>			Clean Up	<input type="checkbox"/>	Spillage	<input type="checkbox"/> Disposal <input type="checkbox"/>
				Storage	<input type="checkbox"/>		
Biological							
Insects	<input type="checkbox"/>	Microbes	<input type="checkbox"/>	SOP*	<input type="checkbox"/>	Safety Equipment*	<input type="checkbox"/> PPE <input type="checkbox"/>
Plants	<input type="checkbox"/>	Zoonoses	<input type="checkbox"/>	Clean Up	<input type="checkbox"/>	Spillage	<input type="checkbox"/> Disposal <input type="checkbox"/>
Animal	<input type="checkbox"/>	Parasites	<input type="checkbox"/>	Storage	<input type="checkbox"/>		
Thermal							
Hot	<input type="checkbox"/>	Cryogenic	<input type="checkbox"/>	Heat Mats	<input type="checkbox"/>	PPE	<input type="checkbox"/> Tongs <input type="checkbox"/>
Cold	<input type="checkbox"/>			Insulated Gloves	<input type="checkbox"/>		
Sharps							
Pipettes	<input type="checkbox"/>	Scalpels/Blades	<input type="checkbox"/>	PPE	<input type="checkbox"/>	Clean Up	<input type="checkbox"/>
Scissors	<input type="checkbox"/>	Glass	<input type="checkbox"/>			Disposal (e.g. broken glass bin)	<input type="checkbox"/>
Other	<input type="checkbox"/>						
Electrical							
240 Volt	<input type="checkbox"/>	High Voltage	<input type="checkbox"/>	Visual inspection (current appliance tag)			<input type="checkbox"/>
				RCD required available			<input type="checkbox"/>
				RCD tested per requirements (portable – before use, hard wired)			<input type="checkbox"/>
Radiation							
Laser	<input type="checkbox"/>	Ionizing (e.g. Gamma)	<input type="checkbox"/>	Code of Practice – safe use of Ionizing Radiation in Sec Schools			<input type="checkbox"/>
				Code of Practice – for the use of Lasers in Schools			<input type="checkbox"/>
				PPE	<input type="checkbox"/>	Appropriate signage/storage	<input type="checkbox"/>
Excursions							
Refer to Excursion Procedure				Instructions and safety material for experiments			
				Consent Forms	<input type="checkbox"/>	Mobile Phone	<input type="checkbox"/>
				First Aid Kit	<input type="checkbox"/>	Medical Info checked	<input type="checkbox"/>
						Staff Ratio – Duty of Care	<input type="checkbox"/>
Machinery							
Vibration	<input type="checkbox"/>	Rotational Motion	<input type="checkbox"/>	Guarding		Correct Equipment	<input type="checkbox"/>
		Linear Motion	<input type="checkbox"/>	SOP*		PPE	<input type="checkbox"/>

PPE = e.g. gloves, apron, goggles Safety equipment = e.g. eyewash/shower, ventilation, fume cupboard, safety screen
SOP = Safe Operating Procedure

This document can be used to identify the level of risk and help to prioritize any control measures.
Consider the **consequences** and **likelihood** for each of the identified hazards and use the table to obtain the risk level.

To determine the level of RISK consider:

LIKELIHOOD (likelihood of harm caused given the circumstances)
CONSEQUENCE (death/disable, several days off work, first aid)
RISK (assessment using the risk management framework matrix)

Hierarchy of Control Controls identified may be a mixture of the hierarchy in order to provide minimum operator exposure.

Elimination	Eliminate the hazard.
Substitution	Provide an alternative that is capable of performing the same task and is safer to use.
Engineering Controls	Provide or construct a physical barrier or guard.
Administrative Controls	Develop policies, procedures practices and guidelines, in consultation with employees, to mitigate the risk. Provide training, instruction and supervision about the hazard.
Personal Protective Equipment	Personal equipment designed to protect the individual from the hazard.

			Consequences				
			1 – Insignificant Dealt with by in-house first aid, etc	2 – Minor Medical help needed. Treatment by medical professional/hospital outpatient, etc	3 – Moderate Significant non-permanent injury. Overnight hospitalisation (inpatient)	4 – Major Extensive permanent injury (eg loss of finger/s) Extended hospitalisation	5 – Catastrophic Death. Permanent disabling injury (eg blindness, loss of hand/s, quadriplegia)
Likelihood	A -	Almost certain to occur in most circumstances	High (H)	High (H)	Extreme (X)	Extreme (X)	Extreme (X)
	B -	Likely to occur frequently	Moderate (M)	High (H)	High (H)	Extreme (X)	Extreme (X)
	C -	Possible and likely to occur at some time	Low (L)	Moderate (M)	High (H)	Extreme (X)	Extreme (X)
	D -	Unlikely to occur but could happen	Low (L)	Low (L)	Moderate (M)	High (H)	Extreme (X)
	E -	May occur but only in rare and exceptional circumstances	Low (L)	Low (L)	Moderate (M)	High (H)	High (H)

Once the level of risk has been determined the following table may be of use in determining when to act to institute the control measures.

Extreme	Act immediately to mitigate the risk. Either eliminate, substitute or implement engineering control measures.	Remove the hazard at the source. An identified extreme risk does not allow scope for the use of administrative controls or PPE, even in the short term.
High	Act immediately to mitigate the risk. Either eliminate, substitute or implement engineering control measures. If these controls are not immediately accessible, set a timeframe for their implementation and establish interim risk reduction strategies for the period of the set timeframe.	An achievable timeframe must be established to ensure that elimination, substitution or engineering controls are implemented. NOTE: Risk (and not cost) must be the primary consideration in determining the timeframe. A timeframe of greater than 6 months would generally not be acceptable for any hazard identified as high risk.
Medium	Take reasonable steps to mitigate the risk. Until elimination, substitution or engineering controls can be implemented, institute administrative or personal protective equipment controls. These "lower level" controls must not be considered permanent solutions. The time for which they are established must be based on risk. At the end of the time, if the risk	Interim measures until permanent solutions can be implemented: <ul style="list-style-type: none"> Develop administrative controls to limit the use or access. Provide supervision and specific training related to the issue of concern. (See Administrative Controls below)
Low	Take reasonable steps to mitigate and monitor the risk. Institute permanent controls in the long term. Permanent controls may be administrative in nature if the hazard has low frequency, rare likelihood and insignificant consequence.	

Record your risk assessment by ticking the appropriate risk rating box

☐ X = Extreme Risk ☐ H = High Risk ☐ M = Medium Risk ☐ L = Low Risk

Note: Documented Control options for all practical activities. Emergency procedures must be established.

- ☐ I have received training/instruction/supervision necessary to prepare the materials required for this practical/task, and have implemented the control measures identified above.
- ☐ Instructions for this practical activity include safety information.

Science teacher Date Signature

Date Reviewed					
Initials					