

SMG Risk Assessment Form

Nature / type of task being assessed and location/s		Out of this World			
Date of Assessment	02/03/20	Date by when assessment must be reviewed	02/03/21	Assessment Completed by / Department	Hazel Rimmer – Outreach & Resources
How many people could be at risk?	30+	What category of person may be at risk (e.g. employee, contractor, public, young, old, special needs?)	Employee Contractor/Volunteers Public Young Old Special needs		

Hazard (What is the hazard, who might it harm and how?)	Current controls (what is already in place to reduce the likelihood of harm or make any harm less serious)	L	S	LxS	Risk Acceptable (Y/N)	Further actions required (what else is required to reduce risks to as low as is reasonably practicable)	Residual risk	Action by	Time scale	Complete
Water Rocket: Water from rocket may cause slip hazard and injuries due to slips and falls.	Tissue to be placed under water rocket to absorb excess water. Area cleaned of any excess water before continuing.	2	1	2	Y		Tolerable	All staff	Ongoing	
Water Rocket: Rocket may fire into audience causing minor injury due to impact	Make sure floor is flat and level. Ensure area above rocket is free of obstructions. Ensure the audience is seated at a safe distance. Ensure rocket is only filled up to marked level. Tape Phil the Frog to rocket to ensure soft impact.	2	1	2	Y		Tolerable	All staff	Ongoing	
Plasma rocket launcher: Experiment cause burns to the presenter. Experiment may harmful to hearing sound.	Presenter is required to be trained in the correct operational procedure for use of the power torch. Appropriate PPE (goggles and ear defenders) to be worn by presenter at all times. Clear warning to be given to audience to cover ears during experiment. Adequate clearance to be evaluated before shows for rocket launch (ceiling and audience), select rocket head accordingly. When not in use by presenter torch head and gas to be stored securely and separately in appropriate containers. Apparatus to be stored safely and checked before use.	1	2	2	Y		Tolerable	All Staff	Ongoing	

Water Filter: Water from filter may cause slip hazard and injuries due to slips and falls.	Tissue to be placed under water filter to absorb excess water. Area cleaned of any excess water before continuing.	2	1	2	Y		Tolerable	All staff	Ongoing	
Hydrogen balloon: Hydrogen may ignite unexpectedly. Explosion may ignite surroundings. Explosion may damage hearing.	All presenters will be trained in using hydrogen. Correct equipment will be used (flame-retardant string and latex balloon) and venue checked for suitability – high ceilings and enough space for flame. Presenter will wear ear defenders and ignite from a distance. Audience will be instructed to put fingers in their ears. Hydrogen cylinder may be delivered to the venue by courier in advance of the show. If so, it will be delivered in a portable gas cage, which the client should lock up in a secure, well-ventilated area (preferably outside), away from oxidant gases, other oxidants, any sources of ignition or children. Method statement document and MSDS are available on request.	1	3	3	Y		Moderate	All staff	Ongoing	
Liquid nitrogen: Contact with nitrogen could cause frost burns	Proper storage and handling equipment to be used at all times. All staff trained on proper usage. Follow transportation guidelines as listed on COSHH form. When moving a dewar, choose route to minimise manual handling risk. Do not allow untrained persons access unless supervised. Audience must be seated a minimum of 3 m away from where the nitrogen will be used. Protective screen must be placed around area where nitrogen is used. Gloves and goggles to be worn at all times. Nitrogen may be delivered by courier to the venue in advance of the show. If this is the case, the client should direct the courier to put the dewar in a secure, well-ventilated area, out of reach of children.	1	2	2	Y		Tolerable	All staff	Ongoing	
Liquid nitrogen could spill while being transported from van to stage area and cause frost burns	Dewar will be firmly strapped to a wheeled trolley and escorted by at least two members of staff. Staff will move slowly and pay close attention to movement of the dewar. Any public approaching the dewar will be politely asked to stand back.	1	2	2	Y		Tolerable	All staff	Ongoing	
Liquid nitrogen ice cream – liquid nitrogen could be ingested, causing freezing of internal organs	All staff trained on correct liquid nitrogen handling and how to make the ice-cream. They will stir the mixture for long enough for the nitrogen to evaporate so it is safe to eat.	1	3	3	Y		Moderate	All staff	Ongoing	

Smashing Astronaut: Plasticine may fly into eye causing laceration	All volunteers must wear eye protection and cryogloves. Safety screen must be used to prevent pieces going towards audience.	1	2	2	Y		Tolerable	All staff	Ongoing	
Mr. Potato Head vacuum chamber Shaving foam could cause eye irritation or illness if ingested.	The shaving foam will only be put in Mr Potato Head before the show by trained members of staff.	1	1	1	Y		Tolerable	All staff	Ongoing	
Build a Solar System: Trip hazards with Volunteers	Keep performance area clear and ensure volunteer is monitored when approaching and leaving the stage	1	2	2	Y		Tolerable	All staff	Ongoing	
Tin Foil: Using blowtorch	Only trained members of staff will use blowtorch, with full PPE	1	2	2	Y		Tolerable	All staff	Ongoing	
Tin foil melting could cause fire	Tin foil will be held in tongs until it cools down and poses no fire risks	1	2	2	Y		Tolerable	All staff	Ongoing	
Heat Tile Re-entry: Tile cracking under heat	Tile will only be heated for a short time to demonstrate its effectiveness as a heat shield compared to tin foil. The tile will be replaced after each show.	1	2	2	Y		Tolerable	All staff	Ongoing	
Pringles rocket: Pringles rocket may ignite other sources of hydrogen on stage	Hydrogen bladders should be stored well under benches and other balloons stored as far away from the stage right bench as possible.	1	3	3	Y		Moderate	All staff	Ongoing	
Pringles rocket: Hydrogen may dissipate from Pringles rocket causing it to explode prematurely when lit	Presenter must be correctly trained in the use of the rocket and must leave the minimum of time between filling and igniting the rocket. Presenter should ensure that they are not leaning over the rocket when lighting it.	1	2	2	Y		Tolerable	All staff	Ongoing	
General hot works Precautions: Risk of fire from demonstrations involving heat	Presenters will be trained in the use of a large fire blanket that will be on the table during demonstrations that involve heat. Presenters will also make themselves aware of the location of the nearest fire extinguishers in the performance space and be trained in their use.	1	2	2	Y		Tolerable	All staff	Ongoing	

You must ensure all actions are prioritised according to the level of risk. The higher the level of risk the higher priority the action/s should be given. Prioritisation should be reflected in the assigned time scale for completion. The table below provides further guidance.

Version 1; 03.2014

assessment values		classification of risk rating (LxS = score)		action from risk rating	
likelihood (L)	Severity (S)	score	risk rating	action	Example time scales
unlikely - 1	Marginal - 1 (slight injury, minor first aid)	1	Trivial	No further action required	-
likely - 2 (to occur at some time)	Dangerous - 2 (serious injury or damage)	2	Tolerable	Keep control measures under review	within 3 months
very likely - 3	Very dangerous - 3 (could cause death or widespread injuries)	3-4	Moderate	Where possible fine tune control measures	within 1 month
		6	Substantial	Urgent control measures needed	within 7 days
		9	Intolerable	Stop activity until risk reduced	immediately

- **NOTE:** Where the activity or task is a one off event – the ‘time scales for action’ may need to be amended to ensure that safety controls are implemented before the activity takes place.
- Your assessment will need to consider who may be affected by the hazard/s – i.e. children or the elderly may be most at risk.
- Please remember you are not expected to risk assess activities that are outside of your knowledge, expertise or experience.
- Further information and assistance can be obtained from the SMG Health & Safety Advisor.

Remember

Hazard means anything that can cause harm.

Risk is the chance, high or low that somebody will be harmed by the hazard

Five Steps to Risk Assessment

- 1) Look for the hazards:
- 2) Decide who might be harmed

- 3) Evaluate the risks and decide whether the existing precautions are adequate or whether more should be done
- 4) Record your findings.
- 5) - 5 -Review your assessment and revise it if necessary