

SMG Risk Assessment Form

Nature / type of task being assessed and location/s		Out of this World			
Date of Assessment	19/9/18	Date by when assessment must be reviewed	19/9/19	Assessment Completed by / Department	Alex Butler – 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	
Whoosh Bottle: Use of methanol as flammable substance	Ensure all safety equipment is set up prior to demo Presenter must wear safety goggles Fire blanket on standby in a reachable distance	2	1	2	Y		Tolerable	All staff	Ongoing	
Bottle becoming hot and melting	The experiment is only done once and bottle is allowed time to cool	2	1	2	Y		Tolerable	All staff	Ongoing	
Flame burning people or objects	Experiment is done with audience standing 3+ metres away Bottle is stood on flat and stable surface. Only a little methanol is used and the rest is kept away from experiment. Bottle is lit with match on the end of long pole.	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	
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	
Shaving foam could cause eye irritation or illness if ingested.	The shaving will only be put in Mtr Potato Head before the show by trained members of staff,	1	1	1	Y		Tolerable	All staff	Ongoing	

Cloud in a bucket: Audience could come in contact with nitrogen, resulting in frost burns	Presenter will take extra care when moving around holding the bucket. Clear safety warning will be given, instructing audience not to trip presenter and to keep hands away from the bucket. Staff will ensure that children under 7 are closely supervised by an adult if taking part.	1	2	2	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	
Ice Moon: Touching ice ball is it is removed from Liquid Nitrogen	Use tongs and gloves to ensure there is no contact with the wet ice	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	

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.

Manager's Name:.....Laura Meade.....

Date:.....19/09/18.....