

Equipment / Activity / Area being assessed	The Energy Show	Risk Assessment No	ED-I265
Location	Theatre	COSHH assessment	Propan-2-ol Strontium Chloride Lithium Chloride Calcium Chloride Butane/Propane Mixture
Who is exposed?	Visitors, Staff		
Date of assessment	8/11/2018		
Assessor's name and job title	Chris Snowden – STEM & Public Engagement Manager		

Risk = Likelihood of injury x Severity of injury	R = L x S	Low risk = 0 – 6	Medium risk = 7 - 12	High risk = 13 - 25
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		S = Severity of injury					
		No injury or illness (0)	Minor injury or illness (1)	First aid injury or illness (2)	"3 day" injury or illness (3)	Major injury or illness (4)	Fatality, disabling injury, etc (5)
L = Likelihood of injury	Zero to very low (0)	0 = Low	0 = Low	0 = Low	0 = Low	0 = Low	0 = Low
	Very unlikely (1)	0 = Low	1 = Low	2 = Low	3 = Low	4 = Low	5 = Low
	Unlikely (2)	0 = Low	2 = Low	4 = Low	6 = Low	8 = Medium	10 = Medium
	Likely (3)	0 = Low	3 = Low	6 = Low	9 = Medium	12 = Medium	15 = High
	Very likely (4)	0 = Low	4 = Low	8 = Medium	12 = Medium	16 = High	20 = High
	Almost certain (5)	0 = Low	5 = Low	10 = Medium	15 = High	20 = High	25 = High

	Hazard	Control Measures already in place to control the risk	What additional Control Measures are required?	Risk rating (High, Medium, Low)	Completed/ Escalated to:
1	General room set up: Props on tables could present trip hazard.	Those stated in Electrical RA & General Electrical Precautions risk assessment Any props and resources to be set up to minimise hazards and placed at suitable distance from the audience. Fire exits to be kept clear at all times. First aider on site at all times during museum opening hours.	Parents/guardians/teachers to remain in close supervision of the children in their care at all times.	L = 1 S = 1 R = 1 Low Risk	Chris Snowden/Duty Manager

2	Unsupervised room	Theatre doors should be locked when the room is not in use. Overnight, equipment should be packed away and returned to projection room. Hazardous chemicals to be stored in COSHH cupboard upstairs when not in use. Key to the cupboard to be signed out and in by CS or DM.		L = 2 S = 4 R = 8 Medium Risk	Chris Snowden/Duty Manager
3	Throwing a ball	Under arm throw only without much effort behind it to prevent injury to other enabler.		L = 2 S = 2 R = 4 Low Risk	Chris Snowden/Duty Manager
4	Noisemaker	Enablers to ensure that when spinning the noisemaker at high speed they are holding it far enough from their face.		L = 2 S = 2 R = 4 Low Risk	Chris Snowden/Duty Manager
5	Volunteers	Volunteers to be guided around any trip hazards present when making their way up to stage. Volunteers to be given clear instruction by the Enabler doing the demonstration. All demonstrations involving volunteers assessed for risk beforehand and enablers trained on risks.		L = 1 S = 1 R = 1 Low Risk	Chris Snowden/Duty Manager
6	Energy Stick	Stick is low power so no effect from electric current passing through body of staff and visitors.		L = 0 S = 0 R = 0 Low Risk	Chris Snowden/Duty Manager
7	Chocolate Bar	Plain chocolate bar so allergies should not be a concern. Chocolate bar not to be eaten by enabler, it may have been in the box for a while (it's only a prop).		L = 2 S = 1 R = 2 Low Risk	Chris Snowden/Duty Manager
8	Elastic band pinging	Enabler to be careful when pinging the elastic band that the other enabler isn't facing them to prevent eye injury. Elastic band to be immediately picked up so an audience member doesn't pick it up		L = 2 S = 2 R = 4 Low Risk	Chris Snowden/Duty Manager

9	Elastic band plane	Throwing width of theatre to minimise risk of hitting audience. Audience will be aware of plane being thrown and directed to keep an eye for an errant throw by the volunteer.		L = 3 S = 2 R = 6 Low Risk	Chris Snowden/Duty Manager
10	Popsicle Stick Explosion	When setting off, the enabler is to move away from the chain reaction straight away to prevent a stick hitting them directly.	Eye protection to be worn by enabler setting off demonstration.	L = 2 S = 2 R = 4 Low Risk	Chris Snowden/Duty Manager
11	Steel balls igniting paper	Enabler to be only one to hold balls, as heavy and would hurt if dropped. Enabler will have practised beforehand to ensure that potential to catch fingers when hitting the balls together is minimised. Volunteer to hold sheet of paper well away from their body, and where the balls will connect.	Eye protection to be worn and balls cleaned beforehand to ensure no paper residue is left on them.	L = 2 S = 2 R = 4 Low Risk	Chris Snowden/Duty Manager
12	Magnetic Chain Reaction	End of chain reaction to be facing away from any people. Enabler not performing demonstration will be at other end of reaction. Fingers to be kept away from the reaction as it goes to stop finger trapping.		L = 1 S = 2 R = 2 Low Risk	Chris Snowden/Duty Manager
13	Fireballs	Lighter to be kept away when not in use. Bottles containing propanol to be kept in a box when not in use. Bottles to be clearly labelled with contents. Lighter to be held well away from body when spraying the propanol. Enablers to be trained on correct procedure for performing demonstration safely.	Protective clothing (lab coat) and lab glasses to be worn.	L = 2 S = 4 R = 8 Medium Risk	Chris Snowden/Duty Manager
14	Basketball and Tennis Ball	Tennis ball is only one with risk of flying off with added energy, quite small and light so risk is minimised. Visitors will be warned to watch out before demonstration is performed in case of tennis ball flying over the audience.		L = 2 S = 1 R = 2 Low Risk	Chris Snowden/Duty Manager

15	Catalogue Tug of War	Extremely unlikely catalogues will come apart when pulled so risk of volunteers falling over because of it very low. An enabler will be on each team to guide the volunteers when pulling.		L = 1 S = 2 R = 2 Low Risk	Chris Snowden/Duty Manager
16	Fireball in the Hand	For KS1 demonstration will be performed on Enabler or teacher's hand rather than volunteer from the class. Volunteer to be given clear instructions for procedure. All jewellery from hand and wrist removed. Sleeve up past their elbow. Long hair to be quickly tied back. Hand and wrist well covered in water to provide thermal protection. When picking up bubbles enabler will wipe bottom of hand to prevent burns. Volunteer will be instructed to keep hand flat and far out in front of them. Countdown given to prepare the volunteer so they aren't taken by surprise.	Staff and volunteer will all be wearing eye protection for the duration of the demonstration. Any signs of volunteer not taking demonstrations seriously/safely it will be stopped.	L = 2 S = 4 R = 8 Medium Risk	Chris Snowden/Duty Manager
17	COSHH Substances	Only Eureka! presenters handle the relevant substances When not part of labelled demonstration kit, kept in original containers for identification. Copies of safety data sheets kept in master file	Copies of safety data sheets & RA kept in folder in box with all workshop resources	L = 2 S = 4 R = 8 Medium Risk	Chris Snowden/Duty Manager

Sign-off of risk assessment

Reviewed by Operations Team on:	09/11/18
Next Review date:	Next time activity takes place

Signed by members of the delivery team:

Name	Signature	Date