

Demonstration Risk Assessment Form

**SCIENCE IN SCHOOLS- Primary CPD**  
**APRIL 2021**

This is a CPD training session for Primary School teachers. It will mostly contain activities that do not need any safety mitigations (apart from common sense) however the below demonstrations/ activities do require a risk assessment:

1. Film canister rockets
2. Floating Water Trick

Likelihood		Severity of impact		Current risk
Certain	5	Death or total destruction	5	<b>Multiply Likelihood and Severity of impact to get Current Risk rating</b>
High	4	Major injury or damage	4	
Medium	3	Serious injury or damage	3	
Low	2	Minor injury or damage	2	
Very low	1	Negligible	1	

<b>Action Rating</b>	
<b>10 and above</b>	<b>The work is too dangerous and should not be undertaken</b>
<b>8 or 9</b>	The work is high risk. Those undertaking the work must be fully competent and experienced for the type of work, equipment to be used and fully understand all risks present.
5 or 6	Moderate risk Workers must be fully competent for the type of work and risks present, or under competent supervision.
4	Low risk. Those undertaking the work must be aware or be made aware of the risks and mitigation measures required.
2 or 3	Slight risk. Those undertaking the work should be aware or be made aware of the risks and mitigation measures required.
1	Insignificant risk. Activity suitable for all workers

**Risk assessed by:** Fran Scott  
**Date of last review:** 09/04/2021  
**Review date:** 08/04/2022

**Demonstration:** Alka seltzer rockets

Those at risk (please tick)	Ri Staff	On-Stage Volunteers	Audience	Non-Ri Workers	Others
	Y	Y	Y		

Method Statement	Hazards	Mitigation	Likelihood	Severity of impact	Current Risk
<p>Small containers are filled with a small amount of water and then an alka seltzer tablet is added and the container sealed.</p> <p>The alka seltzer reacts with the water to produce carbon dioxide gas, as this builds up eventually there will be enough pressure to fire the container into the air.</p>	<p>The container go into the air and presents a striking hazard to people or furniture. Once the containers land they may be a trip hazard.</p>	<p>Ensure all participants who load the containers step back from the launch zone.</p> <p>The containers are so light that if they do contact people (anywhere but the eye) they will not cause damage. As those conductive the demonstration are adults no goggles are needed. But if this is done with children, goggles will be provided.</p>	2	1	2
	<p>Water from the demonstration is a potential slip hazard</p>	<p>All spillages to be wiped up as soon as possible.</p>	1	2	2
	<p>The chemicals in the alka seltzer are toxic if consumed in large quantities.</p>	<p>Warn adults not to drink contents of the bottles or to consume alka seltzer tablets. Alternatives can also be used such as Vitamin C tablet, or dental cleaning tablets.</p>	1	1	1

**PPE Requirements**

Item	Item	Item	Item
Flameproof overalls	Gloves contact	High visibility	Waterproof clothing
Hardhat	Dust Mask	Gloves chemical	Wellington boots
Hearing protection	Mask chemical vapour/mist	Safety shoes	
	Laboratory Coat	Eye protection	Y

**Demonstration:** Floating Water Trick

Those at risk (please tick)	Ri Staff	On-Stage Volunteers	Audience	Non-Ri Workers	Others
	Y	Y	Y		

Method Statement	Hazards	Mitigation	Likelihood	Severity of impact	Current Risk
<p>There are 2 glass kilner-type jars. One has a tight mesh over its opening, the other does not. Both are filled with water, a waterproof piece of card (either from a cereal packet or some foamex) is placed over the opening of each jar and then each is upturned. The piece of card will stay in place and prevent any water from falling out. When the card is removed from the jar WITHOUT the mesh, the water will then fall out. When the card is removed from the jar WITH the mesh the water will NOT fall out.</p>	<p>Cutting/stabbing hazard from sharp edge of cut lid of jar.</p>	<p>Presenter to warn volunteer of sharp edge of jar lid and to instruct volunteer not to touch it. Ideally the edge of the jar will be filed smooth</p>	2	2	4
	<p>Slip on wet floor caused by the water spillage</p>	<p>The demonstration is to be carried out over either a washing up bowl or another suitable container which can catch the falling water. All spillages to be mopped up at the earlier convenience</p>	2	1	2

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	Laboratory Coat	Eye protection	