

<b>Work Activity:</b>	British Science Week Experiments	<b>Number:</b>	BSW Issue 1
<b>Persons at Risk:</b>	Young persons and others in the vicinity	<b>Issue date:</b>	Jan 2019



**Comments and Relevant Documents:**

This risk assessment covers the British Science Week experiments which are detailed in the accompanying booklet. Supervising adults must ensure that they know how to use any equipment and understand risks in the use of chemicals that are involved. Responsible adults must be present and supervise the young people at all times during the experiments.

**Work Area:** The experiments should take place in a suitable working space – ideally somewhere that has wipe-clean surfaces. Always work on a stable, level surface and make sure that there are no trip hazards, such as trailing cables, in the working area. It is preferable for the young people to perform these experiments whilst standing up – if anything does spill or get knocked over, it is less likely to contaminate clothing if the young person can quickly step back from the working surface.

**Spillages:** All spillages to be cleaned up immediately and disposed of carefully and in accordance with the local Waste Disposal Policy.

**Personal Protective Equipment:** For some of these experiments it is advisable for young people to wear nitrile gloves (for example when using acids, solvents or colourings) and suitable eye protection if there is a risk that products could splash into the eyes.

**Fire and First Aid:** Where there is a risk of fire or injury, the responsible adult who is supervising these experiments should make sure that appropriate precautions are in place – for example, have a bucket of water on hand for the experiments which require a naked flame and have basic first aid supplies available to treat any minor injuries that may occur.

**General:** Long hair must be safely tied back; and any loose clothing should be tucked in. For general advice on health and safety see Health and Safety Executive web site: [www.hse.gov.uk/](http://www.hse.gov.uk/)

<b>Hazard / Activity</b>	<b>Persons at Risk</b>	<b>Risk rating (FF x SF)</b>	<b>Controls and Safe Working Procedures</b>	<b>Additional Controls Recommended</b>
Use of glitter – potential to get into eyes	Person undertaking experiment	2 x 2 = 4	If there is a danger of glitter getting into the eyes, for example if these experiments are done by young children, adult assistance is advised. It is possible to do these experiments without the use of glitter!	Use suitable eye protection if available or do not include glitter in the experiments
Potential for allergic reaction	Person undertaking experiment	1 x 6 = 6	The supervising adult must check prior to commencing these experiments that nobody present has known allergies to any of the substances.	In some children there are contact allergies to egg and kiwi fruit so adults must be vigilant in their checks.
Unauthorised or untrained operators	Person undertaking experiment	2 x 3 = 6	Operators must have received suitable and sufficient training for any task or use of equipment Supervising adults must familiarise themselves with the operator's handbook for all equipment	The supervising adult must ensure that the young people understand what they are doing, how they are doing it and how any equipment used works.
Handling of liquids and substances	Person undertaking experiment	1 x 3 = 3	Correct method of use explained at start and practice provided with safe liquids Supervision of process by responsible adult Spillages should be cleaned up immediately Suitable PPE to be worn which may include nitrile gloves and eye protection when handling chemicals	

<b>Hazard / Activity</b>	<b>Persons at Risk</b>	<b>Risk rating (FF x SF)</b>	<b>Controls and Safe Working Procedures</b>	<b>Additional Controls Recommended</b>
Use of candles, lighters or matches	Person undertaking experiment	4 x 2 = 8	Direct adult supervision when handling hot/heated items and working with naked flames – candles/matches/lighters Awareness of individual young people’s capability and suitability If any question and risk of injury, this part of the experiment should be undertaken by the supervising adult Have suitable extinguishing medium (water) to hand in case of problems	Several of the experiments involve the use of a naked flame – if there is any concern, the responsible adult should do these experiments or leave them out of your project
Handling of hot items	Person undertaking experiment	4 x 2 = 8	Direct adult supervision when handling hot/heated items Awareness of individual young people’s capability and suitability If any question and risk of injury, this part of the experiment should be undertaken by the supervising adult	Several of the experiments involve the use of a naked flame – if there is any concern, the responsible adult should do these experiments or leave them out of your project
Use of glassware	Person undertaking experiment	1 x 3 = 3	Supervision of process by responsible adult Responsible adult to ensure that young people are instructed not to touch any broken glass Young people must be supervised to ensure glassware is handled correctly to prevent breakage. All breakages to be cleared up immediately and glass to be disposed of safely	
Storage and use of chemicals	Person undertaking experiment	1 x 3 = 3	All spillages to be cleaned up immediately All chemicals to be used under the supervision of a responsible adult Chemicals to be stored appropriately Minimum quantities of chemicals to be stored/used Chemicals to returned to storage when not in use Suitable PPE to be worn, which may include nitrile gloves and eye protection when handling chemicals	Waste chemicals to be disposed of in accordance with local council rules – read the labels and follow the guidance given.

Hazard / Activity	Persons at Risk	Risk rating (FF x SF)	Controls and Safe Working Procedures	Additional Controls Recommended
Use of flammable substances (white or methylated spirits)	Person undertaking experiment and any others in the vicinity	1 x 4 = 4	<p>Ensure that the responsible adult has read the information supplied with the product</p> <p>Ensure that only minimal amounts are used</p> <p>Keep the lid in place to prevent escape of vapours from the product</p> <p>Use only in a well ventilated area</p> <p>Ensure that the product is dispensed by a responsible adult to avoid spillages or splashes</p> <p>Do not use in any area where a naked flame or source of ignition is present – some of the experiments use flame so make sure that anything used earlier is definitely extinguished prior to opening any flammable substance containers</p>	In the event of ignition of the substance/vapours, do not use water to extinguish. Instead use a fire blanket, damp towel or suitable fire extinguisher.

**Risk Assessment Conclusion:**

The controls identified are accepted as being suitable and sufficient to allow this task to proceed.

**Risk Level Rating**

**Threshold Values for Risk Ratings**

0 – 8	LOW RISK	Acceptable risk within existing control measures
9 – 11	MODERATE RISK	Put on hold and Investigate further controls
12 +	HIGH RISK	Stop immediately and reassess process

**Assessor/s:** Danielle Keel / Lucy Haywood  
**Approver:** Yvonne McCann  
**Review:** N/A – this Risk Assessment is event specific