## Risk Assessment for School Science Activities

<table>
<thead>
<tr>
<th>Name and nature of activity</th>
<th>Gas cylinders in school science areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location and date of activity</td>
<td></td>
</tr>
<tr>
<td>Name of teacher/technician</td>
<td>Science ASSIST example risk assessment</td>
</tr>
<tr>
<td>Activity type</td>
<td>☑ Technician procedure ☐ Teacher demonstration ☐ Student activity – Student year group</td>
</tr>
</tbody>
</table>

### Physics and general equipment

#### Type of hazard

- ☑ Radiation
- ☑ Ionising
- ☑ Laser
- ☑ Electrical
- ☑ Thermal
- ☑ Projectiles
- ☑ Sharps
- ☑ Other – Manual handling and storage

#### Controls and other measures

- ☑ Relevant signage
- ☑ Perspex safety shield
- ☑ Sharps container
- ☑ Glassware free from cracks or chips
- ☑ Safety glasses
- ☑ Thermally insulated gloves
- ☑ Other – see comments below

### Chemicals used and produced

#### Type of hazard

- ☑ Explosive
- ☑ Flammable
- ☑ Oxidising
- ☑ Gases under pressure
- ☑ Corrosive
- ☑ Acute toxicity
- ☑ Health hazards
- ☑ Chronic health hazards
- ☑ Gases under pressure
- ☑ Environmental
- ☑ Other – possible oxygen depletion hazards

#### Controls and other measures

- ☑ Limit quantity/concentration
- ☑ Perspex safety shield
- ☑ Ventilation: natural/exhaust
- ☑ Fume cupboard
- ☑ Safety glasses
- ☑ Laboratory coat/apron
- ☑ Gloves: latex/nitrile/neoprene/PVC
- ☑ Safety shower
- ☑ Other – consider the contents of the cylinder to apply relevant controls

### Biological/geological materials used

#### Type of hazard

- ☑ Biohazard
- ☑ Dust/aerosols
- ☑ Sharps
- ☑ Manual handling
- ☑ Other – specify

#### Controls and other measures

- ☑ Steriliser
- ☑ Disinfectant
- ☑ Sharps container
- ☑ Dust mask
- ☑ Safety glasses
- ☑ Gloves
- ☑ Other – specify

### Waste produced

#### Waste disposal procedure

- ☑ Pre-treatment of waste –
- ☑ Sink with water –
- ☑ Regular waste – specify
- ☑ Licensed hazardous waste company –
- ☑ Other – label cylinder as empty, store away from full cylinders and return to supplier.

### Standard Operating Procedures

- ☑ I have read the relevant Standard Operating Procedure.
- ☑ I am experienced/trained in using all the equipment listed.
- ☑ All chemicals used and produced are approved for use.
- ☑ I have read the current SDSs for all hazardous chemicals used and produced.
- ☑ I am aware of safety guidelines for using all chemicals, materials and equipment.
- ☑ I will follow local guidelines for waste disposal (water authority, local council, EPA).
- ☑ I am aware of first aid procedures if required.

### Other comments

Ensure secure restraint of gas cylinders in an upright position and proper storage, transport and use of gas cylinders to prevent personal injury as well as the remote possibility of cylinder falling over, breaking the valve stem and becoming a projectile.

### Conclusion

- ☑ Risks not significant now and not likely to increase.
- ☑ Risks significant but effectively controlled at the moment.
- ☑ Risks significant and not adequately controlled at the moment.
- ☑ Uncertain about risks; more detailed assessment required.

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**Assessment carried out by:** Science ASSIST  
**Signature:**  
**Date:** Sept 2015

**Assessment approved by:**  
**Signature:**  
**Date:**

**Next assessment due:**

This Risk Assessment assumes that the activity will be conducted in a science teaching area with the following facilities: electricity, running water, emergency shut-offs for electricity, gas if applicable, and water, regular testing and tagging of portable appliances; emergency contingencies such as evacuation/emergency plans, appropriate fire extinguishers, spill kits, hand washing facilities, eyewash/safety shower and first aid supplies. It is also assumed that all the necessary licencing requirements and approvals are obtained prior to the activity.