

Dr Mark's INSPIREeducation™ - RISK ASSESSMENT

INSPIREmaths™ (& INSPIREscience&maths™)

COOL MATHS SHOWS, WORKSHOPS & TEACHERS' CPD

Provider Name: **Dr Mark Biddiss**
 (Dr Mark's INSPIREeducation™, INSPIREscience™, INSPIREmaths™)

Presentation: **Dr Mark's COOL MATHS (& COOL SCIENCE & MATHS) SHOWS, HANDS-ON PUPIL WORKSHOPS & TEACHERS' CPD TRAINING**

Potential Minor Hazard Sources:

SHOW:-

1. **Launch of small plastic bottle rocket from inclined plastic guttering ramp (away from audience) using water and bicycle tyre pump. Occasional launch vertically into the air out in playground or playing field area.**

PUPILS' HANDS-ON WORKSHOPS & TEACHERS' CPD TRAINING:

1. **Use of small safety scissors to cut paper**

Provider Signature:

Date: **8th September 2006**

Hazard Likelihood	Severity/Consequences	Risk Score
1	1-2	2-3
Known		
Accidents/Incidents NONE		
Existing controls Personal Control by Presenter during the show, and close supervision during hands-on workshops		Control Effectiveness High
Resultant Conclusions Negligible Risk		
Action Continuous standard monitoring by show/workshop presenter		
Hazard Likelihood	Severity/Consequences	Control Effectiveness
1. Highly Unlikely 2. Remote Possibility 3. Occasional Occurrence 4. Fairly Frequent 5. Frequent & Regular 6. Almost a Certainty	1. Negligible Injuries 2. Minor Injuries 3. Major Injuries 4. Single fatality 5. Multiple Fatalities 6. Multiple Fatalities (inc. off-site)	A. Automatic System H. High M. Medium L. Low

COSHH ASSESSMENT

(Product Safety Data Sheet to be attached to this assessment)

Name & Workshop/Lecture/Show_ **'Cool Science Shows' & 'Cool Science & Maths Shows'**

Product Information 1. Product (trade name) <u>Butane Gas (Lighter fuel)</u> 2. Container Type / Size <u>Small Pressurised Gas Canister</u> 3. Description <u>Lighter Gas</u> 4. Use <u>Fire Demonstration ('Hot Hands', 'Burning Bubbles', 'Bottled Fire' & 'Hot Drink')</u> 5. Users <u>Presenter ONLY (Audience is not told/shown what flammable substance is used)</u>	
Toxicity (tick box) <input type="checkbox"/> Very Toxic <input type="checkbox"/> Toxic <input type="checkbox"/> Harmful <input type="checkbox"/> Corrosive <input type="checkbox"/> Sensitising <input type="checkbox"/> Irritant Health Hazards: <u>Harmful while burning</u>	
First Aid Procedures Eyes: <u>Cold Water</u> Skin: <u>Cold Water</u> Ingestion: <u>N/A</u> Inhalation: <u>N/A</u>	
Control Measures <input checked="" type="checkbox"/> <u>training</u> <input type="checkbox"/> exposure monitoring <input type="checkbox"/> health surveillance <input type="checkbox"/> fume cupboard <input type="checkbox"/> local exhaust ventilation <input type="checkbox"/> gloves <input checked="" type="checkbox"/> <u>safety glasses</u> <input checked="" type="checkbox"/> <u>safety goggles</u> <input type="checkbox"/> dust mask <input type="checkbox"/> respiratory protection <input checked="" type="checkbox"/> <u>overalls/lab coat</u> Other:	
Fire Is substance flammable? <u>YES</u> / NO Explosive? <u>YES</u> / NO Extinguisher to be used: - <input type="checkbox"/> water <input checked="" type="checkbox"/> <u>foam</u> <input checked="" type="checkbox"/> <u>powder</u> <input checked="" type="checkbox"/> <u>CO₂</u> <input checked="" type="checkbox"/> <u>Fire Blanket</u>	
Disposal Procedures <u>N/A</u>	
Comments and Risk Assessment These presentations have been performed by Dr Mark Biddiss hundreds of times since 1997 and there has never been an accident. Regarding the fire, the butane gas is largely consumed within about 5-10 seconds. Therefore the hazard is negligible.	Action NONE To be completed by: _____ Date: _____ Risk Rating: <u>LOW</u> MEDIUM HIGH
Signature <u>Dr M Biddiss</u> Date 8th September 2006	

COSSH ASSESSMENT (cont)

Additional information
Details of exposure Monitoring:
Maintenance of Control Measures:
Health Surveillance Details:
General: The show, hands-on pupil workshops and teachers' CPD training sessions are very tightly controlled and monitored by the presenter. The audience and all possibly flammable materials are placed a safe distance from the fire demonstrations. A fire extinguisher is always immediately to hand.

