

STEM TEAM DUXFORD 2015

Young Investigators Day

30th JUNE 2015



RISK IDENTIFICATION

Imperial War Museum Duxford provide a general Risk Identification for School Groups attending events at the Museum.

You can download this from <http://www.iwm.org.uk/learning/iwm-duxford/visits/risk-identification>

Risk Identification

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM Team East		
Activity Description	Hands On STEM Fair at Imperial War Museum Duxford		
Who will be exposed to the hazards	School pupils and adults taking part in the activity		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Overcrowding	Low	This event is a pre-booked. Participants will be asked to sign in on arrival and room capacities will not be exceeded.	low
Working with Children	Low	All STEM Team East Staff and STEM Ambassadors volunteers are fully CRB cleared for working with young people and have public liability insurance, professional indemnity insurance and employer liability insurance and personal and travel insurance. No STEM Team East staff or STEM Ambassador will work alone with a young person.	low

Risk Identification: Engineers without borders - Water for the World

Risk Identification – Water for the World

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	Engineers Without Borders		
Activity Description	Engineers without Borders – Providing Clean water EWB is an international charity which takes engineers to developing countries to help with engineering projects. Water for the World is a cross curricula activity where student make a water filter in a bottle using sand and gravel and discuss development issues		
Who will be exposed to the hazards	School students and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Water	medium	Mops and buckets will be available to clear up any water spills immediately to prevent slip hazards.	low

Risk Identification – 3D Solids

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM TEAM East
Activity Description	3D solids – Symmetry and tessellations all around us. Mathematics is all around! Using images from nature and different cultures we explore symmetry, tessellations and 2D and 3D shapes. Pupils make the cubohemioctahedron from card and rolled paper tubes.

Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Cuts from scissors and paper	low	Students will be provided with safety scissors and warned to take care using the paper to make their structure.	low
Use of nuts and bolts	low	Students will use nuts and bolts to join rolled paper tubes together. They will tighten them using their fingers. They will be warned not to put the nuts and bolts in to their mouths	low

Risk Identification –Acid and Alkali

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.


Provider	STEM TEAM East		
Activity Description	Acid and Alkali Pupils learn about the pH scale and identify acids and alkalis from among a selection of food ingredients and investigate how effective they are for cleaning coins.		
Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Allergies	high	Staff will be briefed at the start of the session about the safety requirements of the activity including awareness of allergies. Teachers will be advised of the resources and asked to assess suitability for any child in the class with an allergy. No nut based liquids will be used at any time.	low
Food ingredients Cleaning liquids.	low	Pupils will test the pH of a range of cleaning liquids and food ingredients using pH paper. Liquids will include ketchup, vinegar, lemon juice, washing up liquid and bicarbonate of soda. Pupils will be advised not to taste any of the liquids and asked to wash their hands at the end of the activity.	low
Spills	medium	Any spills will be cleaned up immediately to prevent a slip hazard.	low

Risk Identification – Understanding Cells, Crystallography, The Science of the Cell

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM TEAM East		
Activity Description	Edible Cell Students make model cells from a range of sweets. Understanding cells – cell models made from a range of foodstuffs		
Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Allergies	high	Staff will be briefed at the start of the session about the safety requirements of the activity including awareness of allergies. Teachers will be advised of the resources and asked to assess suitability for any child in the class with an allergy. No nut based sweets will be used at any time.	low
Hygiene	low	Prior to the activity all sweets will be handled with gloves. They will then be stored in cleaned containers so they are fit for human consumption. Pupils will be asked to wash their hands both before and after this activity and surfaces will be cleaned with antibacterial spray.	low
Sharps (cocktail sticks)	medium	Pupils will be reminded that cocktail sticks have sharp points and to handle them carefully	low

Risk Identification – TWI Welding

Risk Assessment:		Welding with Chocolate workshop at the STEM Fair 2013.							
Site:				Original Assessment					
Project Number:	N/A				Date:	28th May 2013			
Location:	Imperial War Museum, Duxford on 12 June 2013.			Safe System of Work					
Revision No:				No:	#				
Risk Assessment No:	####				Review Date:	28 May 2013			
To Be Reviewed On:	28 May 2014								
Description of Task:	Demonstration of welding, joining and structural integrity by using chocolate as the construction medium.								
Significant Hazard and Adverse Effects	Person/ Equipment at Risk	Existing control measures	Risk Rating			Additional Action required (by whom & when)	Revised Risk Rating		
			C	L	Total		C	L	Total
Electrical (electric shock) from appliances (extension leads and kettles).	Volunteers, TWI employees	All appliances PAT tested before use. All appliances visually inspected and checked for electrical safety before use.	4	1	4				
Slips, trips and falls from trailing cables and water spills.	Volunteers, workshop attendees and TWI employees	All cabling where exposed will be fastened down with tape, etc. Good housekeeping standards will be maintained at all times. All water spills will be cleaned up immediately.	3	1	3				
Hot water – scalding and burns.	Volunteers, workshop attendees and TWI employees	Water will be heated in a kettle to no more than 60 deg. C. Water will be contained in glass bottles. Appropriate trays will be used to contain any spills and leaks during workshop. Use of the hot bottles by workshop attendees will be supervised by a volunteer. Volunteers will fill the bottles prior to the start of the workshop using a funnel.	3	1	3				
Food safety – (hygiene)	Volunteers, workshop attendees and TWI employees	Hygiene cannot be guaranteed, chocolate used for demos will not be permitted to be eaten. A bar of unopened chocolate will be provided to attendees if permitted by their teacher. Hand wet wipes will be provided for all volunteers and attendees.	3	1	3				

Risk Identification – K’NEX Engineering Challenge

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM Team East		
Activity Description	Building a Bridge using K’Nex		
Who will be exposed to the hazards	School pupils and adults taking part in the activity		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
K’Nex Components	low	To prevent choking hazard, pupils will be warned at the start of the activity not to put small pieces of K’Nex into their mouths.	low
String	low	Pupils will be warned at the start of the activity not to wrap string around any parts of their body.	low

Risk Identification –Satellite (Philae Lander)

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM TEAM East
Activity Description	Satellites - IT and Communication. Circular motion and projectiles teach us all we need to know to understand the science of the solar system and how we put satellites into orbits. We will examine how much we rely on information from satellites and make a model satellite to identify key features.

Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Trip Hazard	medium	All electrical cables will be securely attached to the floor to reduce the likelihood of people tripping over.	low
Electric Circuit	low	Pupils will make an electric circuit using a LED, wires, batteries and battery holder. They will follow instructions under adult supervision.	low
Batteries	low	Safety advice will be given at the start of activity. The satellite features a flashing LED powered by 2 AA batteries in a battery holder. Adults will ensure these are attached correctly before pupils operate their satellite model.	low
Screwdrivers	medium	Pupils will use small screwdrivers during the activity to attach wires and complete an electric circuit. Pupils will be advised on the safe use and transport of screwdrivers at the start of the activity.	low

Risk Identification – Wind Tunnel (aerodynamics in vehicle design)

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM TEAM East		
Activity Description	Aerodynamics and drag in vehicle design using a wind tunnel. Students learn about the friction force drag and how it affects vehicle movement and fuel efficiency. They then make a model vehicle, test it in a wind tunnel and make an assessment of the amount of drag generated using weights. Students then redesign their vehicle to minimise drag and re-test it in the wind tunnel.		
Who will be exposed to the hazards	School Students and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Risk of trapped fingers/hair/clothing	low	The wind tunnel is designed so that it is not possible to access moving parts while the fan is running. However as a precautionary measure, ties must be tucked into shirts and students with long hair will be asked to tie their hair back.	low

from fan in wind tunnel. Use of mains power.		The wind tunnel will be connected to a circuit breaker and is PAT tested. All adult users will be briefed on the safe use of equipment prior to the activity.	
Trip Hazard	medium	All electrical cables will be securely attached to the floor to reduce the likelihood of people tripping over.	low
Rohacell Foam	medium	Shaping of Rohacell foam will be done in a well ventilated space. Face masks will be available to students who suffer from asthma. Safety spectacles will be available for use during the construction part of the activity.	low
Injury from hacksaw and sandpaper	medium	Students will be given advice on the safe use of hacksaws and sandpaper before the start of the activity. Students will be working under adult supervision using workbenches to ensure blocks of Rohacell foam are securely held while they are cut.	low

Risk Identification – Meet the Medics

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM TEAM East		
Activity Description	Meet the Medics - Find out how amazing our bodies are with healthcare professionals		
Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Peak Flow Meter	medium	Pupils will record their peak flow rates by breathing into a peak flow meter. All pupils will be informed at the start of this part of the activity to stop if they feel unwell at any time. Pupils with asthma will be asked to have their inhaler with them or not complete this part of the activity.	low
Exercise		Pupils will use record their pulse using a pulse oximeter before and after 1 minute exercise.	low

		Pupils will be informed at the start of this part of the activity to stop if they feel unwell at any time. Pupils with asthma will be asked to have their inhaler with them or not complete this part of the activity. .	
			low

Risk Identification – GSK Medicine

Activity:	GlaxoSmithKline	Date of Risk Assessment:	3/6/14
Location:	AirSpace Hangar, IWM Duxford	Person responsible for Risk Assessment	Amanda Campbell
Age of participants:	KS3, 4 & 5 (aged 11-18) plus adults		

Potential Hazard	Nature of harm	Who is at risk?	Seriousness of Hazard (Low/Med/High)	Risk Rating – how likely? (Low/Med/High)	Control Measures	Who is responsible?	Risk Rating after Control Measures
Transporting workshop equipment from car to venue	Back injuries from lifting & carrying	Staff	Medium	Medium	Use wheeled trolleys to avoid carrying loads where possible. Use correct method for lifting items.	Exhibit leader	Low
Electrical equipment	Electrocution - death	Staff & participants	High	Low	Regular visual inspection by leader. PAT testing annually.	Leader & trained staff	Low
Tripping on equipment eg trailing wires	Trip injuries	Staff & participants	Medium	Low	All equipment & materials not being used at the time are stored in a safe area. Trailing wires to be stuck to floor using mats/duck tape which can be easily removed at the end of the day.	Leader	Low
Chemical agents (hazardous to health)	may be harmful if the chemical agents spill and come in contact with skin or eyes.	Staff & participants	medium	low	Careful handling and supervision, use of lab coats, gloves and eye protection as necessary, thorough washing of skin if any contact does occur, keep volumes and concentrations as low as possible	Leader & trained staff	Low

Risk Identification –Animatronics

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.


Provider	STEM TEAM East		
Activity Description	Animatronics Arduino Workshop– a micro-controller board-school projects.		
Who will be exposed to the hazards	School pupils and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Trip Hazard	medium	Any leads, wiring for power cables will be taped down securely to reduce trip hazard	low
Falling equipment	Low	Computers will be used on tables and participants asked to take care when moving around the room.	Falling equipment
Robotic kit	Low	The kit will be assembled in advance and is built to educational standards. The pupil activity is focused more on programming the model.	low

Risk Identification – DNA Extraction

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	STEM Team East
Activity Description	DNA - In this activity, pupils extract DNA from strawberries using diluted cleaning up liquid and alcohol

Who will be exposed to the hazards	School pupils and adults taking part in the activity		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Allergies	medium	Pupils will be briefed at the start of the session about the safety requirements of the activity including awareness of allergies. Teachers will be advised of the resources and asked to assess suitability for any child in the class with an allergy.	low
Cleaning up Liquid	Low	Pupils will be advised not to ingest any liquid or any of the Strawberry paste.	low
Use of Methylated Spirit –Highly Inflammable – Harmful by inhalation and if swallowed	Medium	The activity is carried out in a well ventilated room. Participants will be well supervised - ratio of pupils to staff 1:8. Pupils will be briefed at the start of the session about the safety requirements of the activity. No pupil will be allowed to handle the methylated spirit unsupervised- the methylated spirits will be used in quantities of 5 mls using pipettes . Laboratory coats, gloves and safety glasses will be available. The supervisor will hold the meths container while pupils pipette to reduce the risk of spills. Spills will be wiped up with Paper towel and safely disposed of	low
Spills	Medium	Any spills will be cleaned up immediately to prevent a slip hazard.	low
		Pupils will be asked to wash their hands after the activity.	

Supervisor:	Elizabeth Crilly <i>Name</i>	 <i>Signature</i> 15/01/2014 <i>Date</i>
Dates of review:			


RISK ASSESSMENT Paper Tube Bridge

Brief outline of work/activity:	Rolled Paper Tube Bridge Children learn about different types of bridges and the forces that act on them. They then make their own bridge from rolled paper tubes connected together with nuts and bolts. They then test the strength of their design using weights.
Location:	Imperial War Museum - Duxford
Significant hazards:	Choking hazard if materials put in mouth Scissors Split dowel tube rollers Weights (food cans are used in this activity)
Who might be exposed to the hazards:	Children and adults during the making and testing of the bridge.
Existing control measures:	Safety advice will be given at the introduction to the activity. This will cover the safe use of screwdrivers and scissors. Load testing of the bridges using weights is supervised at all times by adults and carried out in a designated space away from the bridge manufacturing area.

Are risks adequately controlled?: YES / NO

If NO, list additional controls and actions required:	Additional controls:	Action by:

Completed by:	Name	Signature	Date
	Lucinda Spokes		01/06/09

Supervisor:	Name	Signature	Date
	Elizabeth Crilly		01/06/09

Review Date:	27/05/10	11/11/10		
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Risk Identification – Microscopes

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	Dr Chris Thomas, Milton Contact Ltd
Activity Description	<p>Microscopes: Activity 1: Setting up a microscope Activity 2: Looking at pre-prepared microscope slides Activity 3: Preparing own slides from Leek cell epidermis and going on Microscope safari with pond samples</p> <p>Equipment: 4 Tables – 3 for microscopes at either end, 1 for water handling 6 microscopes (2 students per microscope, provided by STEM EAST) Prepared microscope sample slides (Milton Contact collection) Leek (for cell mono-layer – Milton Contact Ltd) Pond sample (Collected by Milton Contact on day before event) Tray (STEM EAST) to contain spills Pipettors (STEM EAST) Small yoghurt pots/plastic containers to hold 1 to 10 mls of individual samples (Milton Contact Ltd)</p>

	<p>Paper Towelling to mop up minor spills (STEM EAST) Clean 3” x 1” microscope slides (Milton Contact Ltd) Clean cover slips (Milton Contact Ltd) Sheets of A4 paper to prepare slides on Hand Hygiene gel (Milton Contact Ltd) Reference books (Milton Contact Ltd) Dust pan and brush (Milton Contact Ltd) Container for used slides (Milton Contact Ltd)</p>		
Who will be exposed to the hazards	School students and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Prepared microscope slides (glass) breaking if accidentally dropped	Low, Low	Brush up broken glass and place in container for used slides	Negligible
Pond water	Low, Low	Dr Thomas will collect and handle the pond water (Milton Country Park). Children will use pipetters to take small samples and prepare own slides. If water drops do touch hands. Mop with paper towel and rinse hands with small dollop of hand hygiene gel. When finished, slides placed in Container for used slides	Negligible
Preparing microscope slides – glass breaking	Low, Low	Microscope slides and cover slips are made of robust glass, but breakages can occur if slides dropped. Brush up broken glass and place in container for used slides	Negligible
Falling microscope	Medium, Very low	Microscopes are solid pieces of equipment and could cause severe bruising if dropped onto a foot. Microscopes will be set out on tables prior to the students arriving. Once set up on a table, their solidity and stability minimises the risk of falling	Negligible
Electrical supply to microscopes for lighting.	High, Very low	Power will come via an extension and then distributed to 2 microscopes per table for the students to work on. The pond water sample will be on a separate table, in a tray.	Negligible

		Students can take a small volume of 1 to 10 ml sample in a small pot to their tables to make their slides. Small spillages on their tables can be mopped up from the table with paper towelling and are unlikely to enter the microscope lamp.	
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Risk Identification: Wellcome Genome Campus Public Engagement / Wellcome Trust Sanger Institute AND Parasites

Risk Identification – Parasites workshop

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	Wellcome Genome Campus Public Engagement / Wellcome Trust Sanger Institute
Activity Description	Students will use microscopes to look at different parasites, make either a sequence bracelet (young investigators) or take part in a disease diagnosis activity where they follow medical clues to correctly identify the cause of different patient symptoms.
Who will be exposed to the hazards	School students and adults taking part in the activity.

Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Electrical cables – risk of tripping	Medium	<ul style="list-style-type: none"> • Tables placed over power supplies. • Electrical cables to be taped down to avoid risk of tripping. 	Low
Electrical cables – risk of electric shock	Medium	<ul style="list-style-type: none"> • All equipment PAT tested. • No liquid to be used in the vicinity of electrical sockets, cables or equipment. 	Low
Glass slides – risk of finger cuts if broken	Low	<ul style="list-style-type: none"> • Limited handling of glass slides will be allowed. • Any handling of glass slides will be supervised by an adult. 	Low
Immersion oil – risk of skin irritation	Low	<ul style="list-style-type: none"> • Immersion oil only to be used by the adult leading the activity. • Wear gloves when handling the immersion oil to minimise risk of skin irritation. • Keep out of reach of children 	Low
Plastic beads – choking hazard	Medium	<ul style="list-style-type: none"> • Young children are to be supervised by an adult at all times. 	Low
Plastic beads – risk of slipping	Medium	<ul style="list-style-type: none"> • All beads will be stored in pots on the table tops to prevent them from falling onto the floor. • Activity leader and volunteers briefed to check the floor for beads at regular intervals. • Any beads spilt on the floor will be picked up immediately. 	Low
Scissor use – risk of cuts	Low	<ul style="list-style-type: none"> • Child friendly scissors will be provided for use. • All cutting activity will be supervised by an adult. 	Low

Risk assessment – *Learning is infectious: pass it on!*

Provider	Dr. Bethany Dearlove, University of Cambridge
Activity description	First, we discuss different types of microbes, using plushie microbes and a game as an icebreaker. We will then discuss what features would make a good microbe, before designing our own bacteria models which can be taken home.
Who will be exposed to the hazards	School pupils and adults partaking in the workshop.

Hazard	Severity and likelihood	Control measures	Risk rating after control measures applied.
Small parts - choking	Low	Students will be using plasticine with small beads, straws (and similar) to make the antigens on their microbe. They will be reminded not to put small items in their mouth.	Low
String	Low	String will be pre-cut by a staff member in to short lengths, and pupils will be warned at the start of the activity not to wrap string around any parts of their body.	Low

Risk Identification: NAME OF PROVIDER Sarah Driver / Chris Hulme-Smith

Risk Identification – NAME OF WORKSHOP Polymers/materials

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider	Activity Description		
	Colouring plastic cups with permanent marker pens Melting of plastic cups with hot air gun		
Who will be exposed to the hazards	School students and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control Measures	Risk rating after control measures applied.
Burning due to hot air gun	High	Only STEM Volunteers will use hot air gun and ensure that the hot air will not be blown on anybody or any flammable material Pupils will be advised of the dangers of the hot air gun The air gun will be in a cordoned off area There will be bold print safety message	Low

RISK ASSESSMENT – Blood and cells workshop

Brief outline of work/activity:	Making a Blood Model and a cell model
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Location:	Cambridge International School, Cambridge
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Significant hazards:	<p>choking hazard if materials put in mouth</p> <p>Allergy from foodstuffs used (adzuki beans, haricot beans, pasta and pulses, sugar cake decorations, sweets, dried fruit, icing)</p> <p>Injury from scissors.</p> <p>Paper cuts.</p>
Other Equipment	pencils and rulers, scissors, felt tip pens, pencils, luggage labels, string, paper plates, plastic test tubes

Who is exposed to the hazards:	Pupils and adults during the making of the blood model and cell model
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Existing control measures:	<p>Prior to the activity all sweets will be handled with gloves. They will then be stored in cleaned containers so they are fit for consumption.</p> <p>Staff will be briefed at the start of the session about the safety requirements of the activity including awareness of allergies. The class teacher will be advised of the resources we are using and asked to assess suitability for any child in the class with an allergy.</p> <p>Children will be using scissors under adult supervision.</p> <p>Full instructions for making the blood model and cell model will be provided and will be done under adult supervision.</p> <p>Children will be asked to wash their hands after handling the beans, pulses and sweets.</p>
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Are risks adequately controlled?: YES / NO

Additional controls:	Action by:
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If NO, list additional controls and actions needed		
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Completed by:	Name	Date
	Jane Bushen	25/11//10

Supervisor:	Name	Signature	Date
	Elizabeth Crilly	<i>Elizabeth Crilly</i>	25/11/10

RISK ASSESSMENT – Pin Hole Camera

Brief outline of work/activity:	Pin Hole Camera
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Location:	IWM Duxford
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Significant hazards:	Choking hazard if materials put in mouth Scissors High Wattage Bulbs
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Who might be exposed to the hazards:	Pupils and adults during the making and testing the pinhole camera
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Existing control measures:	<p>Safety advice will be given at the start of the activity.</p> <p>Pupils will be using scissors and under adult supervision.</p> <p>Pinhole camera is made from a cardboard tubes with a paper eyepiece.</p> <p>Tested by viewing image of a high wattage bulb. The bulb is enclosed in a cage and warning signs installed about the hot surface.</p>
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Are risks adequately controlled?: YES / NO

If NO, list additional controls and actions required:	Additional controls:	Action by:

Completed by:	Name	Signature	Date
	Elizabeth Crilly	<i>Elizabeth Crilly</i>	22March 2013

Supervisor:	Name	Signature	Date
	Elizabeth Crilly	<i>Elizabeth Crilly</i>	

Review Date:	26/06/15			
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Risk Identification: BUG YOUR BEDROOM BY THE CENTRE FOR COMPUTING HISTORY

Risk Identification – BUG YOUR BEDROOM

This assessment considers any hazards specific to the activity greater than every day hazards such as slipping, tripping or falling on stairs, trapping fingers in doors and cuts and bruises which are inherent in all environments.

Provider			
Activity Description	Bug your Bedroom Students will be using a Raspberry Pi computer to create the basis of an intruder alarm to protect their bedrooms being invaded by their parents! We will be using Raspberry Pis, breadboards, LEDs, switches, and buzzers.		
Who will be exposed to the hazards	School students and adults taking part in the activity.		
Hazard	Severity and Likelihood.	Control measures	Risk rating after control measures applied.
Trip hazard	Medium	All electrical wires will be securely attached to the floor to reduce the likelihood of people tripping over.	Low
Electronic circuit	Low	Students will be building electronic circuits using Raspberry Pis, LEDs, switches and buzzers. This will use the 3.3V/5V power supply provided by the Pi. They will follow instructions under adult supervision.	Low
Falling equipment	Low	Computer screens will be used on tables and students are asked to take care when moving around.	Low
Computer screen exposure	Low	Students will be advised to adjust screens to ensure their comfort and to take regular breaks to avoid prolonged exposure.	Low