

# Rocket Workshops

## Risk Assessment

<b>Rocket Workshops</b>		Working Area	School Premises
		Task/Process:	Workshop for Schools
		Risk Assessment File Name:	workshop.doc
		Assessor(s):	I. Johnston
		Signed:	
		Issue No. and Date:	13/01/04

List hazards here:	List groups of people who are especially at risk from the significant hazards you have identified.	List existing controls here or note where the information may be found	List the risks which are not adequately controlled and the action you will take where it is reasonably practicable to do more.
Superglueing skin to skin or other surface	School pupils attending workshop	<ol style="list-style-type: none"> <li>Pupils instructed in dangers of superglue, and correct use</li> <li>Talc provided to soak up spills</li> <li>Proprietary Super Glue release agent always available</li> </ol>	Superglue on eyelids will not be treated - medical help will be sort. Fingers etc will be treated with soapy water and as a last resort - release agent.
Cuts from craft knives	School pupils attending workshop	<ol style="list-style-type: none"> <li>Pupils instructed on dangers of craft knives</li> <li>Knives issued as required</li> <li>Knives used under supervision</li> </ol>	Basic first aid is expected to be provided by school.
Burns from unauthorised ignition of rocket motor	School pupils attending workshop. Workshop team and school staff attending launch	<ol style="list-style-type: none"> <li>Motors controlled by Workshop team</li> <li>Once live motors are fitted, rockets are removed from pupils and kept secure</li> <li>Firing box is fitted with an arming key, that is attached to the designated Workshop Team member acting as firing officer.</li> </ol>	

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		Key is retained in the arm position and can only be removed in the safe position.	
Motor ignited by static discharge during loading	School pupils and staff attending workshop. Workshop Team member attending launch	1. Earthing point provided beside launcher. Earthing will be required before handling motors or igniters 2. Launches will not be undertaken during lightning storms	
Eye, face injury caused by leaning over launch rod	School pupils attending workshop Workshop Team member attending launch	Launch rod is positioned sufficiently high to stop people leaning over it Launch rod end is protected with a cap when not in use	
Burns from normal launch, or demonstration (static) firing.	School pupils firing rocket Workshop Team member attending launch	Firing box is 20% further from launcher than manufacturers recommendation Spectators are corralled at least 15m from launch point.	Proprietary firing leads are 10m long, Ours is 12m
Impact injury from rogue rocket	School pupils and staff attending workshop. Workshop Team member attending launch	1. Rockets are made from well proven kits 2. Kits are built in accordance with makers instructions	Motors are produced by "Estes" or "Quest" and are CE approved.

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Impact injury from descending rocket	School pupils and staff attending workshop. Workshop Team member attending launch Passing motorists	<p>3. All rockets are carefully examined prior to launch by a Workshop Team member experienced in model rocketry. Parachutes and other recovery systems are packed by Rocket Workshops staff, or, under their direct supervision</p> <ol style="list-style-type: none"> <li>1. Rockets descend slowly on parachute or streamer.</li> <li>2. Rockets are very light - typically 50-100g</li> <li>3. Rockets directed towards vacant area for landing away from roads</li> <li>4. Should parachute fail to open rocket is still unstable aerodynamically and will not descend fast</li> <li>5. Rockets not fired during windy conditions (Force 5 and above)</li> <li>6. Low powered rockets launched first to assess wind conditions</li> <li>7. Manufacturers safety areas are strictly observed, as a minimum. Minimum dimension of launch site 120m for C type motors,</li> </ol>	<ol style="list-style-type: none"> <li>1. Rocket under parachute drifts in wind and lands on public road - “startling” a motorist. In itself the rocket will not cause damage.</li> <li>2. Nose cone fails to separate, rocket will be aerodynamically stable on descent - may cause minor injury</li> </ol>

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Pupil injured while retrieving rocket from dangerous location, eg in a tree, river bank etc	School pupils attending workshop.	150m for D type motors Pupils instructed not to attempt recovery from rocket in dangerous place. Recovery under supervision of Workshop Team member and school staff	Unauthorised retrieval of abandoned rocket after workshop closes
Aircraft damaged by rocket	Aircraft occupants	1. Rockets reach a maximum of 1500 ft. Very few aircraft fly this low 2. Rockets are too small and light to damage an aircraft 3. Rockets are not launched when aircraft are in the launch area	
Impact injury from Stomp rocket	School pupils and staff attending workshop. Workshop Team member attending workshop	“Stomp” rockets are CE approved toy - propelled by stamping on bladder. Rockets, are lightweight plastic construction with soft, impact absorbing nose. They contain no stored energy. Users are instructed not to direct rockets at themselves or others.	