

Risk Assessment – School & Public Activity

ACTIVITY ASSESSED Rocket Launching at the Planetarium & Observatory or School location		ASSESSMENT DATE May 2006 (last reviewed: January 2010 , EJR)	
ACTIVITY LOCATION Wynyard Woodland Park		ASSESSED BY Ed Restall Planetarium Director	
HAZARD	Who's at risk?	PRECAUTIONS	RISK LEVEL
Making Pop Bottle Rockets	Supervising adults & children	<ol style="list-style-type: none"> 1. Use of Sharp Scissors to cut up 2 litre water & fizzy drink bottles. Extreme care required while handling scissors to cut plastic & 'Gaffa' tape. 2. Caution is required when handling cut pieces of plastic bottle and tidying up discarded pieces as some have sharp edges. 	Medium
Launching a rocket	Supervising adults, children & casual observers	<ol style="list-style-type: none"> 1. Rockets are launched using a mixture of water & compressed air at very high pressure (about 80 pounds per square inch, or psi). Children and accompanying adults launching a particular rocket must stay well back while the rocket is fuelled and will only be called forward to launch it. 2. Astronomical Society members and planetarium staff have destructively tested pop bottles to 150psi, so all launch pressures are well within the safety limit. Nonetheless goggles and a hardhat will be provided as a precaution for each child who wants to launch their own rocket. 3. Not all rockets will launch straight upwards, there is a slight unpredictability in their take off, usually governed by prevailing winds. All observers and launchers will stand upwind of the rocket when launching 4. When a rocket returns to earth it can do so with some speed as they can reach over 200 foot in height during flight. All observers are advised to carefully follow the rocket and to avoid running around in excitement in case an unpredictable wind current drags it back towards the spectators. 5. If prevailing wind speeds were high it would be too dangerous to try and rush to launch all of the assembled rockets in the allotted time. In such circumstances lots would be drawn to launch rockets between any lulls in the wind. Launch pressures will also be reduced under such circumstances. 	High

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Retrieving a rocket	Supervising adults & children	<ol style="list-style-type: none"> 1. Children usually want to retrieve their rocket and take it home after its flight. Hunting for it in the terrain of the launcher can be hazardous and must not be attempted whilst other rockets are being launched (see above). 2. The terrain is uneven & slippery so care must be taken when hunting for a rocket (see below) 	Low
Tripping, Slipping & other hazards at rocket launch site	Supervising adults & children	<ol style="list-style-type: none"> 1. The rockets are launched in a large expanse of field known as "The Arboretum Field". This is maintained as a wild flower meadow for most of the year and is not mown on a regular basis. The terrain is uneven & when it rains the ground under-foot can become very slippery so no running about is advised. 2. A safe distance must be kept from the rocket launcher at all times – to aid in this an area designated for observers and children waiting to launch their rocket, will be demarked with hazard tape at a safe distance from the launchers. All people not involved with an individual rocket launch must stay within this area. 	Low / Medium