



**BLOODHOUND ALUMINIUM DESERT WHEELS
DESIGN & TECHNOLOGY CHALLENGE**

– Risk Assessment: Making Wheels from Aluminium Cans[†] –

[†]This risk assessment is meant to be used as a guide only and offers controls relating to generic risks identified. Each teacher/leader must take into consideration local student ability and their local environment in determining any additional specific risks.

ACTIVITY	PERSON AT RISK	SIGNIFICANT HAZARDS	RISK*			RISK CONTROL MEASURES	RESIDUAL RISK**		
			L	S	DR		L	S	DR
Pre activity preparation	Young people and adults	Cross contamination due to dirty cans	3	3	9	<ul style="list-style-type: none"> Ensure all cans which are used are thoroughly cleaned prior to use to ensure hygiene 	2	1	2
Cutting can	Young people and adults	Abrasions and lacerations.	3	1	3	<ul style="list-style-type: none"> Use a magnet to ensure you use only Aluminium cans. Steel cans are tougher and awkward to cut which would make lacerations from scissors more likely. Pupils carry scissors with blades closed. Adults to make first awkward cut into the can for pupils who find cutting tricky. Cut can cleanly, removing swarf / pointy edges as you go. Pupils given space when cutting so they are not nudged. Pupils use classroom scissors with rounded edges to avoid skin punctures. Pupils may wear rough handling gloves such as those for gardening. Use a bradawl, or hand held drill bit to make holes in the aluminium can to avoid stabbing actions with the scissors. Use dustpan and brush or wear gloves to dispose of swarf and debris carefully into the recycling bin. 	2	1	2



ACTIVITY	PERSON AT RISK	SIGNIFICANT HAZARDS	RISK*			RISK CONTROL MEASURES	RESIDUAL RISK**		
			L	S	DR		L	S	DR
Moving around work area.	Young people and adults	Slips, trips and falls.	3	2	6	<ul style="list-style-type: none"> Ensure all electrical cables are clear of the floor. Tuck chairs under the desks when not in use. Keep materials off the floor. 	2	2	4
Using Hand drill	Young people and adults	Abrasions and lacerations	3	2	6	<ul style="list-style-type: none"> Hand drill is checked before use to ensure drill bit is inserted firmly; young people briefed to keep hands away from turning parts and to turn the handle slowly and smoothly. Ensure material to be drilled is held firmly so it cannot slip. Ensure manufacturer's guidelines are followed when using any other tool. 	2	1	2
Using junior hack saw	Young people and adults	Abrasions and lacerations	3	2	6	<ul style="list-style-type: none"> Pupils use a bench grip to avoid the material slipping. They are briefed to saw slowly and smoothly, with hands out of the way. 	3	1	3
Drilling the material.	Young people and adults	Abrasions and lacerations	3	1	3	<ul style="list-style-type: none"> Ensure material is held tightly or clamped onto a suitable worktop surface. Using a bradawl or metal drill bit, screw into the metal by hand. 	1	1	1

LIKELIHOOD (L) = Frequent (5) - Probable (4) - Occasional (3) - Improbable (2) - Remote (1)
SEVERITY (S) = Catastrophic (5) - Major (4) - Reportable (3) - Serious (2) - Minor (1)
Degree of Risk (DR) = LIKELIHOOD x SEVERITY

* Numbers used are for illustrative purposes only.

** Residual risk is the level of risk that remains after suitable and sufficient control measures are introduced.



Signature sheet

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