

Wearable Electronics DRAFT

On Saturdays 1st and 8th November 2014 family teams will visit the Department to make badges or brooches with 2 fixed LEDs powered by a CR2032 cell. The circuit is assembled on fabric using conducting thread. No soldering is used in this activity although cutting tools, cool melt glue guns and a sewing machine may be used, see below.

Time	Activity	Venue	Possible hazard	Control measures	Likelihood	Severity	Risk rating = likelihood x severity
0930	Volunteers arrive at the department Set up furniture in LR4 and Reception, put up signs Organise kit into trays and distribute it around the room Event briefing – hazards and roles	LR4, Reception foyer	Injury while moving furniture	Use at least 2 people per table to move them, slide the chairs instead of lifting stacks	1	2	2
1000	Families start to arrive. Check families off against the booking sheet, record the number of males and females Give a card of bits to every child with a pre-booked space. There are no spares. Hand kitchen scissors to the responsible adult with verbal request: adults only	LR4, Reception foyer	The card of parts contains needles. The scissors are strong and sharp	Verbal request that kitchen scissors are 18+ only Warn all about not losing needles and not stabbing selves	1	1	1
1030	Formal start. MK indicates fire exits and loos Reiterate 18+ only for kitchen scissors Set the powerpoint instructions rolling	LR4	None	None			
1050	Family teams commence design-	LR4,	Sewing over fingers	Glue guns and craft knives are all physically tied	1	1	1

	build-test cycle Volunteers act as design advisers, supervise the Stanley (craft) knives, sewing machine and hot glue guns, take photographs.	courtyard (16 th Nov), LTO (23 rd Nov)	with the machine Burns from the glue guns	to a cutting area with string or electric flexes. This area is supervised at all times by friendly but assertive volunteers who offer to help participants who appear to be under 18 The sewing machine is a handcranked model, which limits the energy in the system. At all times, it will be the responsibility of a named volunteer who is a confident machinist and will operate the machine on behalf of children and the unconfident.			
1200	Families go home, we eat lunch then reset the room for the second group Event briefing – hazards and roles for those working the afternoon session only	LR4	Food hygiene	All food is bought wrapped or peelable. Perishable foods are stored in a cold box with cold bricks during the morning	1	2	2
1230	Families start to arrive. Check families off against the booking sheet, record the number of males and females Give a card of bits to every child with a pre-booked space. There are no spares. Hand kitchen scissors to the responsible adult with verbal request: adults only	LR4, Reception foyer	The card of parts contains needles. The scissors are strong and sharp	Verbal request that kitchen scissors are 18+ only Warn all about not losing needles and not stabbing selves	1	1	1
1300	Formal start. MK indicates fire exits and loos Reiterate 18+ only for kitchen scissors Set the powerpoint instructions rolling	LR4	None	None			
1320	Family teams commence design-	LR4,	Sewing over fingers	Glue guns and craft knives are all physically tied	1	1	1

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1430	Families go home Pile all the kit onto trolleys and move it up to the DPO office or put it into bin bags as rubbish Move all the furniture back to where we found it Take down the signs Count donations in front of several witnesses	LR4, Reception foyer	Injury while moving furniture	Use at least 2 people per table to move them, slide the chairs instead of lifting stacks	1	2
1500	Go home. Clearing up is much faster than setting up.					

Risk Assessment Key:

Likelihood:	This should be assessed on a scale of 1 - 3 as follows:
1 = Unlikely	No risk to health and safety of individual
2 = Likely	If the control measures depend on an individual using them or adjusting them.
3 = Certain/imminent	Exposure to the hazard is continuous

Severity:	Assessed on a scale of 1 - 3 as follows: 1 = Minor injury / lost time/illness 2 = Serious injury / disablement 3 = Death / fire / explosion
Calculation of risk:	Likelihood x Severity = Risk rating
Risk rating:	Please specify the risk rating by completing the above calculation and indicating below: 1 to 3 = Low Risk 4 to 6 = Moderate Risk 7 to 9 = High Risk

Signed: _____ Date: 22nd October 2014 Maria Kettle, Outreach Officer, Department of Engineering, University of Cambridge

Signed: _____ Date: 22nd October 2014 Mr Ian Slack, Safety Officer, Department of Engineering, University of Cambridge