

OCTELAB SAFETY NET

APPENDIX A - PROJECT / LEARNING ACTIVITY MATERIALS, PHYSICAL RESOURCES

PROJECT / LEARNING ACTIVITY TITLE: __Logic Gates and Digital Math_____

COURSE CODE AND TITLE: __TEJ2O or TEJ3M Computer Technology_____

VERSION PREPARED DATE: __April 2012_____

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PROJECT / LEARNING ACTIVITY MATERIALS LIST FOR THIS PROJECT / LEARNING ACTIVITY

MATERIAL	QUANTITY	DESCRIPTION	SOURCE	WHMIS MSDS ATTACHED	SAFE STORAGE	WASTE DISPOSAL												
Logic Gates: 74LS00 74LS02 74LS08 74LS32 74LS86	50 each	<p>These logic gates require a regulated 5 volts for them to operate properly.</p> <p>These gates can be purchased from an electronics supplier called Digi-Key.</p> <table border="1"> <thead> <tr> <th>Part</th> <th>Part Number</th> </tr> </thead> <tbody> <tr> <td>74LS00</td> <td>296-1626-5-ND</td> </tr> <tr> <td>74LS02</td> <td>296-1627-5-ND</td> </tr> <tr> <td>74LS08</td> <td>296-1633-5-ND</td> </tr> <tr> <td>74LS32</td> <td>296-1658-5-ND</td> </tr> <tr> <td>74LS86</td> <td>296-1669-5-ND</td> </tr> </tbody> </table>	Part	Part Number	74LS00	296-1626-5-ND	74LS02	296-1627-5-ND	74LS08	296-1633-5-ND	74LS32	296-1658-5-ND	74LS86	296-1669-5-ND	<p><input checked="" type="checkbox"/> new, purchased</p> <p><input type="checkbox"/> new, donated from community, industry</p> <p><input type="checkbox"/> recycled from inside school</p> <p><input type="checkbox"/> recycled from outside school</p> <p>PREPARATION REQUIRED FOR USE: DETAILS:</p>	<p><input type="checkbox"/> Y</p> <p><input checked="" type="checkbox"/> N</p>	Logic gates are kept in a vertical pullout storage bin in a cupboard in the tubes the ICs came in.	Over time the legs will break off and will become unusable. Just dispose of them in the garbage.
Part	Part Number																	
74LS00	296-1626-5-ND																	
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Solid Wire	#22 Solid Wire in different colours (Red, Black, Green, Yellow,	Hook-Up Wire- 22AWG. This AWG is the best for use on a breadboard. Wire is sold in 1000 ft. rolls. It is best to have several colours for the students to wire up their circuit, especially when trouble shooting. Assign a colour for a specific task. E.g. Black - negative, Red – positive, Yellow – inputs, Green – outputs... and so on.	<p><input checked="" type="checkbox"/> new, purchased</p> <p><input type="checkbox"/> new, donated from community, industry</p> <p><input type="checkbox"/> recycled from inside school</p> <p><input type="checkbox"/> recycled from outside school</p>	<p><input type="checkbox"/> Y</p> <p><input checked="" type="checkbox"/> N</p>	Wire dispensing rack in storage room.	Over time the wires get too small. Just put them in the garbage.												

and White	You can purchase the wire from the following supplier. ABRA Electronics:		PREPARATION REQUIRED FOR USE: DETAILS: The wire must be cut to workable lengths (8 to 15mm) and then both ends must be stripped (5 to 7mm) using a wire stripper. After you insert the wire into the breadboard, there should not be any bare wire showing as this leads to wires shorting and the circuit not working properly.			
	Order#	Color				
	22HW1000-1	White				
	22HW1000-2	Black				
	22HW1000-3	Red				
	22HW1000-4	Green				
	22HW1000-5	Yellow				
	22HW1000-6	Blue				
	22HW1000-7	Brown				
	22HW1000-8	Orange				
	22HW1000-9	Gray				
22HW1000-10						

PHYSICAL RESOURCES USED FOR THIS PROJECT / LEARNING ACTIVITY

EQUIPMENT, TOOL, MACHINE	SUBJECT – SPECIFIC NEEDS	INSPECTED FOR SAFETY FEATURES	STUDENT TRAINING PLAN IDENTIFIED	MAINTENANCE SCHEDULE
<p>NOTE: TEACHER EXPERIENCE AND SAFETY PROFICIENCY IS ASSUMED.</p> <p>DETAIL EQUIPMENT:</p> <ul style="list-style-type: none"> Digital Trainer or Breadboard with power supply Wire Strippers Diagonal Pliers <p>MANUAL APPLICABLE / AVAILABLE (LOCATION):</p>	<p>MACHINE GUARDING AND SHIELDING APPLICABLE</p> <p>[] YES [] NO [X] N/A</p> <p>EMERGENCY STOP / PANIC BUTTON APPLICABLE</p> <p>[] YES [] NO [X] N/A</p> <p>LOCK-OUT TAG APPLICABLE</p> <p>[] YES [] NO [X] N/A</p>	<p>[X] Teacher DATE: __Daily__</p> <p>[X] Board DATE: __Yearly?__</p>	<p>DETAIL STEPS:</p> <p><u>PowerPoint</u></p> <ul style="list-style-type: none"> Logic Gate <p><u>Video</u></p> <ul style="list-style-type: none"> http://www.youtube.com/watch?v=apCLHmPsC68 http://www.youtube.com/watch?v=8DnyirbCEjA http://www.youtube.com/watch?v=cDMJvFT-Afc&feature=fvwrel <p>SIGNAGE:</p> <ul style="list-style-type: none"> Safety Glasses <p>RESOURCES:</p> <p><u>General Safety</u></p> <ul style="list-style-type: none"> Passport to Safety - 	<p>DAILY:</p> <p>WEEKLY: Hand Tools</p> <p>MONTHLY: 6V Wall adapters</p> <p>ANNUALLY:</p> <p>CONTACT FOR REPAIR: Most tools are replaced if they are unsafe or break down.</p>

	<p>OTHER (SUBJECT-SPECIFIC)</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A</p>		<p>www.passporttosafety.com</p> <p><u>Chemical</u> N/A</p> <p><u>Tools and Parts</u></p> <ul style="list-style-type: none">• Dublin City University Series Starting with Power Supply Circuit http://www.youtube.com/watch?v=howQ05z4v7Q&feature=relmfu• How to Use Wire Strippers http://www.youtube.com/watch?v=MqOnnoMWTk <p>FREQUENCY OF RETRAINING ADVISED:</p>	
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