

DESIGN ENGINEERING PATHWAYS

YEAR 7 LED TORCH LP

DECLARATIVE KNOWLEDGE I know			PROCEDURAL KNOWLEDGE I can do		
K1	Workshop safety rules		C1	Work safely in a workshop following the workshop safety rules.	
K2	That Ohm's Law shows that voltage, current and resistance are linked.		C2	Carry out calculations using Ohm's law	
K3	The system used for colour coding resistor		C3	With help and support use Circuit Wizard to: <ul style="list-style-type: none"> • Build circuits • Build PCBs 	
K4	How an LED works and that a resistor is required to protect it in a circuit		C4	With help and support make a housing for a PCB	
K5	How to identify the positive and negative legs on an LED by three methods, leg length, shape of the top and the internal structure.		C5	With help and support use the following tools: <ul style="list-style-type: none"> • a soldering iron • wire strippers • side cutters • solder pump • pliers • countersink tool • screwdriver • hot glue gun 	
K6	The following Circuit Wizard tools: Drag and place, rotate left and right, play and stop, add track, add pad, normal – real world – artwork – current views and the circuit – PCB tabs		C6	With help and support, use progression over time, independently evaluate the quality of the product, related research and design tasks.	
			C7	With help and support, identify targets for improvement in future products.	