

DESIGN ENGINEERING PATHWAY

YEAR 9 PIR SENSOR LP

DECLARATIVE KNOWLEDGE I know			PROCEDURAL KNOWLEDGE I can do		
K1	The following electronic components and tools: Components: PIR sensor, transistor, resistors, buzzer, LEDs and battery snap. Tools: Soldering iron, side cutter, wire stripper, solder station, long nose plier and safety goggles.		C1	Independently, I know how to place and solder the following components on a PCB (which way around they should be placed): PIR sensor, transistor, resistors, buzzer, LEDs and battery snap	
K2	Passive infra red sensors are used in burglar alarms		C2	Explain how a simple transistor circuit works	
K3	That a Fresnel lens is used to shatter the light to increase the range of use of an alarm		C3	Independently use Circuit Wizard to design the basic circuit and PCB for the components needed for the PIR sensor project.	
K4	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		C4		