

DESIGN ENGINEERING PATHWAYS

YEAR 8 CHALLENGES LP

DECLARATIVE KNOWLEDGE I know		PROCEDURAL KNOWLEDGE I can do	
K1	Identify the following electronic components: 78L05 voltage regulator Diode 8-Pin chip carrier LED	C1	With minimal help and support, I know how to place the following components on a PCB (which way around they should be placed): 78L05 voltage regulator Diode 8-Pin chip carrier LED
K2	The resistor colour code	C2	With minimal help and support, read the values of fixed resistors using the colour code
K3	Identify a multi-meter and where the resistance scale is.	C3	With minimal help and support, measure the resistance values of the fixed resistors
K4	Identify the following variable resistors: LDR (Light Dependent Resistor) Potentiometer Thermistor (temperature)	C4	With minimal help and support, measure the resistance values of the following variable resistors: LDR (Light Dependent Resistor) Potentiometer Thermistor (temperature)
K5	Identify the following flowchart symbols: Start Digital Decision Analogue Decision Outputs Wait Tune Stop	C5	With minimal help and support, write basic microcontroller programs using flowchart symbols
K6	Identify the difference between an analogue and a digital input	C6	With minimal help and support, download a flowchart program to a microcontroller and test
K7	Identify how to connect a microcontroller to a PC	C7	With minimal help and support, use progression over time, independently evaluate the quality of the product, related research and design tasks.
K8	Reflecting on work completing will help improve future learning	C8	With minimal help and support, identify targets for improvement in future products.