DESIGN ENGINEERING PATHWAY
YEAR 9 EGG TIME LP

DECLARATIVE KNOWLEDGE I know			PROCEDURAL KNOWLEDGE I can do	
K1	The following electronic components and tools: Components: 555 Timer IC, resistors, Diode, 8-Pin chip carrier, slide switch, DIP switches, 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): 555 Timer IC, resistors, Diode, 8-Pin chip carrier, slide switch, DIP switches, buzzer, LEDs and battery snap.
K2	The formula for calculating the frequency for an astable 555 timer circuit.		C2	Independently, calculate the frequency of the 555 timer in the astable configuration.
K3	The formula for calculating the time delay for a monostable 555 timer circuit.		C3	Independently, calculate the time delay of the 555 timer in the monostable configuration.
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	Independently use Circuit Wizard to design the basic circuit and PCB for the components needed for the egg timer project.
K5	Evaluations will help to improve on future developments of contextual challenges.		C5	Independently use progression over time, independently evaluate the quality of the product, related research and design tasks.
K6			C6	Independently identify targets for improvement in future products.