

## DESIGN ENGINEERING PATHWAY

### YEAR 9 DRAWER ALARM LP

<b>DECLARATIVE KNOWLEDGE</b> <b>I know</b>			<b>PROCEDURAL KNOWLEDGE</b> <b>I can do</b>		
K1	That before building a product I should establish some design criteria i.e. what it must do to be successful		C1	Independently build circuits on Circuit Wizard using analogue inputs.	
K2	How to research existing products can judge them against a known set of criteria		C2	Independently build flowcharts on circuit wizard to response to changes in light levels	
K3	That a potential divider is needed when using an analogue input i.e. LDR into a microcontroller.		C3	With support, build complex PCBs on Circuit Wizard	
K4	That a transistor is needed to power a speaker in a microcontroller circuit		C4	Independently solder together a neat working PCB, using the identified components.	
K5	Evaluations will help to improve on future developments of contextual challenges.		C5	Test my PCB using a download cable and add my own programs to the microcontroller	
K6			C6	With limited support, write an in-depth flowchart which uses variables and compare decisions to responded to changes in light levels.	
K7			C7	Independently use progression over time, independently evaluate the quality of the product, related research and design tasks.	
K8			C8	Independently identify targets for improvement in future products.	