Year 8 Design Technology: Personalised Learning Checklist (PLC)

Year 8	Electronics & Product Design	Moodlamp (DT)

I can:	R	A	G
Analyse a design brief, independently identifying client requirements and annotate with design idea thoughts.			
Write a personised specification using 'ACCESSFM' (aesthetics, cost, customer, environment, size, safety, function, materials/manufacture), detailing what the product will be and how this meets clients' wants and needs.			
Use research skills to study existing solutions, identify good design aesthetics, functionality, material properties, and areas for further development, whilst using subject specific vocabulary to annotate.			
Know how to draw in isometric and oblique perspectives and create design ideas including CAD (computer aided design) visuals, to present work in a graphically accurate style.			
Know how a PCB (printed circuit board) works and know the functions of some electronic components used in the moodlamp circuit (resistor, transistor, LED, LDR/phototransistor, potentiometer, battery clip).			
Safely demonstrate an ability to solder a PCB (printed circuit board).			
Confidently use measuring tools within the 2D Design computer software programme (rel tool & dim-lines tool).			
Prepare a CAD visual of a final design and create all CAD mood lamp components accurately for laser cutter output; cut and engrave.			
Independently manufacture a finger joint that is durable and aesthetically pleasing.			
Accurately assemble CAM (computer aided manufacture / laser cutter) sections, focussing on a quality finish and demonstrate an understanding of using permanent and temporary fixings.			
Test and evaluate the final moodlamp outcome using specification targets.			

Key Vocabulary for this project
Electronics, Components, PCB (printed circuit board), Resistor, Transistor, LED (light emitting diode), LDR (light dependant resistor), Phototransistor, Potentiometer, Battery clip, Computer aided design CAD, Computer aided manufacture CAM, Input, Output, Specification, Functionality, Finger joint, Requirements

Assessment Result	Mark:	%