Bideford College Technology Faculty: Electronics Key Stage 4 Progress Matrix

In order to get a **grade G** at GCSE you must be able to:	In order to get an **E-F** Grade at GCSE you must be able to	In order to get a **C-D grade** at GCSE you must be able to	In order to get a **B-A grade** at GCSE you must be able to	In order to get a A* **grade** at GCSE you must be able to
EI1.1: recall at least 5 circuit symbols and explain the following processes; Transistors, thyristors.	EI2.1: recall 10 circuit symbols and explain the following processes; transistors, thyristors, astable.	EI3.1: Recall a wide range of components and processes including; monostable, logic gates, drivers.	EI4.1: recall and explain in detail the complete range of components and processes studied.	EI5.1: recall and explain in detail the complete range of components and processes studied.
EI1.2: copy simple flowchart solutions.	EI2.2: produce simple digital flowchart solutions with guidance.	EI3.2: produce independently simple digital and analogue flowchart solutions to a given problem.	EI4.2: use formulae with confidence to calculate component and circuit values.	EI5.2: use all formulae with confidence to calculate component and circuit values without error.
EI1.3: use correct units to describe component values (ohms, voltage, amps).	EI2.3: use formulae to calculate component values (current limiting resistors).	EI3.3: use formulae to calculate component and circuit values for monostable and astable circuits.	EI4.3: use knowledge of electronic systems to generate complex ideas (2 or more processes).	EI5.3: use knowledge of electronic systems to generate complex ideas (3 or more processes)
EI1.4: generate ideas with guidance.	EI2.4: use knowledge of electronic systems to generate ideas with guidance.	EI3.4: use knowledge of electronic systems to generate ideas with 1 process.	EI4.4: produce circuit diagrams, PCB layouts and flowcharts without errors.	EI5.4: produce circuit diagrams, PCB layouts and flowcharts quickly and without errors.
EI1.5: test given circuits using computer simulation.	EI2.5: produce circuit diagrams, PCB layouts and flowcharts with guidance.	EI3.5: produce circuit diagrams, PCB layouts and flowcharts with occasional errors.	EI4.5: test circuits using computer simulation and breadboarding independently.	EI5.5: test and calibrate circuits using computer simulation and breadboarding independently.
EI1.6: solder circuits with support.	EI2.6: test circuits using computer simulation.	EI3.6: test circuits using computer simulation and breadboarding.	EI4.6: solder circuits with accuracy with no evidence or risk of dry joints and/or short circuits.	EI5.6: solder circuits without error.
EI1.7: present coursework sheets are with a title.	EI2.7: solder circuits and correct errors when required.	EI3.7: solder circuits with accuracy insulating components where appropriate.	EI4.7: ensure coursework sheets are coherent and developed in terms of research and circuit development.	EI5.7: ensure All coursework sheets are completed in detail and decisions are fully explained.
	EI2.8: present coursework sheets tidily and in a consistent format.	EI3.8: present coursework sheets (research and circuit development) which are annotated and explained.		