

Curriculum Summary – Programmable Logic (Year 10)

Autumn	Spring	Summer
<p>R047: Principles of electronic and programmable Systems</p> <p>In this term students will learn about:</p> <ol style="list-style-type: none"> The relationships between voltage, current, resistance and power, and the ways in which systems are represented, tested and assembled. <p>Topics include:</p> <ul style="list-style-type: none"> Basic electronic circuit principles Electronic and programmable systems Components and devices <ol style="list-style-type: none"> Application of Soldering Techniques and Risk assessments for Practical application. Conducting small individual circuit kit practical's making simple circuits to provide a basic function. <ul style="list-style-type: none"> Amplifier LED display 555 Timer 	<p>R048: Making and testing electronic circuits</p> <p>In this term students will learn how to:</p> <ol style="list-style-type: none"> Use Computer Aided Design (CAD) software to simulate electronic circuits, as well as how to construct and test them. <p>Topics include:</p> <ul style="list-style-type: none"> Drawing and simulating electronic circuits Constructing electronic circuits Testing electronic circuits <ol style="list-style-type: none"> Understand and carry out the production of PCB via Engraving/Etching process. 	<p>Programmable Systems Case study</p> <p>In this term students will investigate the objectives, challenges, and outcomes of implementing programmable systems in specific scenarios. They will delve into the architecture, programming languages, algorithms, and hardware components involved in these systems.</p> <p>Pupils will also be Preparing for Exam style assessment.</p> <p>They will Carry out a review of content:</p> <ul style="list-style-type: none"> Basic electronic circuit principles Electronic and programmable systems Components and devices Drawing and simulating electronic circuits Constructing electronic Testing electronic circuits