

## Y9 Design & Technology Curriculum Summary

<b>Name of unit</b>	Be Seen, Be Safe.
<b>Why do we study this unit?</b>	<p>This is the main unit studied at the end of KS3 and exposes students to basic electronics. Their design focus shifts to the needs of a user and they explore the issues of road safety for a variety of situations. Practical lessons focus on the soldering and assembly skills needed to create functioning products. Wooden components needed for the project are produced with high levels of student independence, consolidating the skills achieved in Y7 &amp; 8.</p>
<b>By the end of the unit, students will be able to....</b>	<p>Identify the main components found within the road safety project and explain their function.</p> <p>Explore the task in the context of a specific group of users, aiming to produce a product which meets the needs of a wider audience than a single individual.</p> <p>Explain how plastics can be thermoformed via the vacuum former and injection moulding.</p> <p>Recognise where forces are important in their product. They can link standard components to the forces they produce - the nut and bolt exert a compressive force on the casing. The handle splits when twisted, so it needs to be stronger in torsion.</p> <p>Create components in both wood and plastic.</p> <p>Capable of duplicating components with some precision.</p>
<b>Links to previous units</b>	Y8 Automata. Y8 Tiny House Living
<b>Key vocabulary</b>	<p>Printed Circuit Board (PCB), Capacitor, Transistor, Resistor, Soldering, Light emitting diode (LED), Battery box, Switch, Standard Components, Component, Conductor, Insulator, Vacuum Forming, Polymer, Thermoplastic, Thermosetting plastic, The 6R's, Crude oil, Sustainable, PPE, Productive / Productivity, Sub-assembly, Linear, Bottle neck, Creativity, Collaboration, Laminate, Evaluate, Finite, Iteration, Tangible, Short-Circuit &amp; Graphics.</p>