

KS4 Curriculum Overview **Automotive studies (Year 1)**

Level 1

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 1- Health and Safety.</p> <ul style="list-style-type: none"> • Health and safety at work act. • Personal Protection equipment • Safety Signs • Environment (Harmful gases) • Career paths in the automotive industry 	<p>Subject Links - Geography- Environmental impacts - Mathematics</p> <p>Key Skills - Learning to be safe inside a workshop.</p>	<p>Students research a range of career paths including University, Apprenticeship, and college courses.</p> <p>Moral choices for manufacturers when designing and making cars.</p> <p>Impact of waste and recycling on the environment.</p> <p>Legislation in the UK and the consequences of their actions in waste removal.</p>
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 2 – Using engineering materials and skills.</p> <ul style="list-style-type: none"> ▪ Developing knowledge of engineering skills ▪ Fixtures and Fitting used in a vehicle. ▪ Planning a project ▪ Developing technical skills / interpreting engineering drawings. 	<p>Subject links</p> <ul style="list-style-type: none"> ▪ Mathematics ▪ Engineering ▪ Design Technology <p>Key Skills</p> <ul style="list-style-type: none"> ▪ Technical drawing skills ▪ Manufacturing metal tools 	<p>The students will be experiencing a range of job roles including graphic designer, engineering, and manufacturing employment.</p>
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 2- Using engineering materials and skills.</p> <ul style="list-style-type: none"> ▪ Working with metal. ▪ Engineering tools selection ▪ Safety practice in a workshop environment ▪ Knowledge of Tools/ machines 	<p>Subject links</p> <ul style="list-style-type: none"> ▪ Mathematics ▪ Engineering ▪ Design Technology <p>Key Skills</p> <ul style="list-style-type: none"> ▪ Technical drawing skills <p>Manufacturing metal tools</p>	<p>Students to be exposed to careers in the health and safety industry, fabrication and engineering.</p>
TERM 4 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 3- Remove and refit mechanical components.</p> <ul style="list-style-type: none"> ▪ Planning practical activities. ▪ Knowledge of engine systems/ braking systems ▪ Technical specification (spark plugs and Brake pads) 	<p>Subject links</p> <ul style="list-style-type: none"> ▪ Design Technology ▪ Engineering <p>Key Skills</p> <ul style="list-style-type: none"> ▪ Developing key practical skills ▪ Working safety on a vehicle ▪ Using hand tools to remove and replace parts. 	<p>Career opportunities in the automotive industry.</p> <p>Learning about business and how to become profitable in working and fixing cars.</p> <p>We explore communicating a range of issues with the car to a customer and explaining in a way that promotes good customer service.</p>

TERM 5 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 3- Remove and refit mechanical components.</p> <ul style="list-style-type: none"> ▪ Planning practical activities. ▪ Knowledge of steering and suspension components. <p>Technical specification (Track rod end and Drop link)</p>	<p>Subject links</p> <ul style="list-style-type: none"> ▪ Design Technology ▪ Engineering <p>Key Skills</p> <p>Developing key practical skills</p> <p>Working safety on a vehicle</p> <p>Communicating a range of issues with the car to a customer and explaining in a way that promotes good customer service.</p> <p>Using hand tools to remove and replace parts.</p>	<p>Career opportunities in the automotive industry.</p> <p>Learning about business and how to become successful in working and fixing cars.</p>
TERM 6 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
<p>Component 3- Remove and refit mechanical components.</p> <ul style="list-style-type: none"> ▪ Practical activities ▪ Remove and refit Spark plug, Brake pad, Drop link, Track rod end. 	<p>Subject links</p> <ul style="list-style-type: none"> ▪ Design Technology ▪ Engineering <p>Key Skills</p> <ul style="list-style-type: none"> ▪ Developing key practical skills ▪ Working safety on a vehicle ▪ We explore communicating a range of issues with the car to a customer and explaining in a way that promotes good customer service. <p>Using hand tools to remove and replace parts.</p>	<p>Career opportunities in the automotive industry.</p> <p>Learning about business and how to become successful in working and fixing cars.</p>

KS4 Curriculum Overview Automotive studies (Year 2)

Level 1

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Component 4- Introduction to the basic automotive electrical principles <ul style="list-style-type: none"> ▪ Knowledge of basic diagnostic tools and equipment ▪ Knowledge of the types of electrical circuits ▪ Knowledge of being able to know the different types of faults and how to diagnose them. 	Subject links Science (physics) Engineering Key skills Problem solving Diagnosing electrical faults Knowledge of electrical tools and equipment.	Students are allowed to explore careers in electrical engineering, automotive electrician.
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Final evaluation and feedback of course evidence booklet. Revision- Component 1 <ul style="list-style-type: none"> ▪ Health and safety ▪ Environment factors ▪ End of vehicle law. 	Subject links English (improving the grammar in their evidence book) Art (completing technical drawing) Key skills Evaluation and feedback Following basic instructions.	Students will be exploring peer assessment and developing respect for each other's work.
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Revision component 2-4 <ul style="list-style-type: none"> ▪ Using engineering materials and skills ▪ Introduction of basic automotive electrical principles 	Key skills - Looking at improving performance by effective revision techniques.	Students will be allowed to communicate with each other through effect questioning and allow time to build understanding of others.
TERM 4 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Revision component 3 <ul style="list-style-type: none"> ▪ Remove and replace mechanical components 	Key skills Exam preparation Exam style questions.	Students will be allowed to communicate with each other through effect questioning and allow time to build understanding of others.
TERM 5 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Final revision techniques Online exam		
TERM 6 TOPIC/s	*Key Skills/Subject Links	*Career links & BV