

Year 10 – ENGINEERING Programme of Study

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|--|--|---|---|--|--|
| <p>An introduction the Engineering course</p> <p><u>Engineering disciplines, sectors and organisations</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Engineering disciplines and sectors • Investigating engineered products • Links between sectors <p><u>Exploring basic engineering making skills and techniques - hooks</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Health and safety • Preparing material • Measuring and marking out • Cutting • Drilling • Bending • Painting <p>Milestone Assessment: Practical Assessment</p> | <p><u>Engineering disciplines, sectors and organisations</u> continued.</p> <p>Key content covered:</p> <ul style="list-style-type: none"> ▪ Employment opportunities ▪ Functions in organisations ▪ Different sized organisations ▪ Career progression opportunities <p><u>Applying basic engineering making skills and techniques - hooks and dog tags</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Planning out production • Finishing techniques • Inspection techniques - quality control and assurance • Accuracy - working to tolerance <p>Milestone Assessment: Official Assignment Exploring a Product (12%)</p> | <p><u>Exploring designing and manufacturing processes</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Interpretation an engineering brief • Producing initial design proposals • Using computer-aided design (CAD) <p><u>Applying basic engineering making skills and techniques</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Joining methods • Reviewing planning and production <p>Milestone Assessment: Planning the manufacture of a component</p> | <p><u>Exploring designing and manufacturing processes</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Generating 2D and 3D models • Making final design solution decisions • Importance of engineering team and peer review <p><u>Applying basic engineering making skills</u> continued.</p> <p>Milestone Assessment: Official Assignment Engineering Skills and designing solutions (12%)</p> | <p><u>Exploring an existing engineered product</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Materials • Components • Processes • Disassembly <p><u>Application of practical skills</u></p> <p>Milestone Assessment: Year 10 Exam</p> | <p><u>Exploring an existing engineered product</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> • Examining techniques and analysing • Product design specification <p><u>Application of practical skills</u></p> <p>Key content covered:</p> <ul style="list-style-type: none"> ▪ Interpreting engineering drawings ▪ Investigating through disassembly <p>Milestone Assessment: Official Assignment Materials, Components and Processes (12%)</p> |