



YEAR 11 TERM 3

'An ambitious curriculum that meets the needs of all'



Medium Term Planning - Topic: Common specialist technical principles

Curriculum Intent	<p>Forces and stresses</p> <ul style="list-style-type: none"> Be able to recognise and characterise tension, compression, binding, torsion and shear forces and stresses Understand the impact of different forces and stresses on materials <p>Improving functionality</p> <ul style="list-style-type: none"> Understand how materials may be enhanced to resist and work with forces and stresses to improve functionality <p>Ecological and social footprint</p>
Skills/Assessment Objective Links	<ul style="list-style-type: none"> Understand that greenhouse gases and carbon are produced during the manufacture of products Understand the impact that a consumer society has on natural resources and the environment including deforestation, mining, drilling, farming and product miles Be aware of the need for social and governmental responsibility to address safe working conditions and pollution <p>The 6 Rs</p> <ul style="list-style-type: none"> Be aware of the role that consumers play in reducing waste and the demand on finite resources Understand the hierarchy of options in responsible and sustainable designs <p>Scales of production – mass, batch, one-off</p> <ul style="list-style-type: none"> Understand how products are produced in different volumes Explain when and why different manufacturing methods are used for different production volumes Be able to link the use of relevant specialist processes to the appropriate level of production
Spiritual, moral, social, and cultural development	<p>SMSC: Sustainability linking to materials and reduction in CO2 emissions, responsible design and manufacturing</p> <p>PSHE/British Values:</p> <p>Skills Builder: Linking product with the type of material and the reasons why the material is used.</p>
Numeracy	
Literacy	<p>Vocabulary Tier 2: See highlighted above</p> <p>Vocabulary Tier 3: See highlighted above</p> <p>Reading: exam style question, text book terminology</p> <p>Writing: use of technical tier 3 vocabulary within an exam question and annotation</p> <p>Oracy: when questioned pupils are able to use technical subject specific language</p>
Becoming future ready	<p>Careers/Employability: Environmental industry, various industrial links as examples</p>
Adaptation	<p>Throughout this topic, quality first teaching will provide differentiation:</p>
QFT/SEND Provision	<p>By product:</p> <p>By resource: PG Online booklets, teacher let focus, PG Online books</p> <p>By Intervention: by providing different levels of supervision and support</p> <p>By Progressive Questioning: exploring pupils' understanding through interactive dialogue.</p> <p>By Grouping: according to prior attainment, gender, social preference, preferred learning style.</p> <p>By Task: Pupils should be involved in the identification of targets which are meaningful to them and in the selection of an appropriate task from the given range.</p> <p>By Offering Optional Activities: In class or as homework, to extend learning.</p> <p>This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work.</p>
Implementation Curriculum Delivery	<ul style="list-style-type: none"> See Above

Learning Outcomes (Knowledge)	Red denotes interleaving; aspects of knowledge covered previously. See highlighted above
Current learning to be developed in the future within:	
Assessment	End of Unit test on material areas – using PG Online resources and text book and linking to PLCs in Doodle
Impact	Pupils to have knowledge and understanding of new and emerging technologies covered in the D&T specification