



YEAR 12 TERM 2

'An ambitious curriculum that meets the needs of all'

Medium Term Planning - Topic: SMART Materials



Curriculum Intent	In addition to working further on objectives from Year 11 , pupils will be taught, following National Curriculum guidelines, the following this term:
Skills/Assessment Objective Links	<p>SMART materials</p> <ul style="list-style-type: none"> Be able to know a range of smart materials (SMA, Thermochromatic pigment, phosphorescent pigment, photocromic pigment, electroluminescent wire and piezo electric material) Understand how the functional properties of a range of smart materials can be changed by external stimuli such as temperature, light and pressure.
Spiritual, moral, social, and cultural development	<p>SMSC:</p> <p>PSHE/British Values: Links to British industries and products</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	Careers/Employability: Knowledge of metals, metal industries and processes
Adaptation	Throughout this topic, quality first teaching will provide differentiation:
QFT/SEND Provision	<p>By product:</p> <p>By resource: A Level books, Online resources, Powerpoints</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"> Be able to know a range of smart materials (SMA, Thermochromatic pigment, phosphorescent pigment, photocromic pigment, electroluminescent wire and piezo electric material) Understand how the functional properties of a range of smart materials can be changed by external stimuli such as temperature, light and pressure.
Learning Outcomes (Knowledge)	<p>Red denotes interleaving; aspects of knowledge covered previously.</p> <p>Only a small amount of knowledge covered at GCSE</p>
Current learning to be developed in the future within:	
Assessment	End of Unit assessment – use of AQA Exampro questions

Impact

Students to have knowledge and understanding of metals, processes and finishes in order to be able to answer exam style questions and apply knowledge and understanding to NEA tasks.