



YEAR 12 2023-2024 TERM 1

'An ambitious curriculum that meets the needs of all'

Medium Term Planning - Topic: Polymer Project – Egg Holder



Curriculum Intent	<p>In addition to working further on objectives from Year 911, pupils will be taught, following National Curriculum guidelines, the following this term:</p> <p>To be able to:</p> <ul style="list-style-type: none">investigate the Alessi theme from the briefproduce initial sketches for the egg holderinvestigate the materials and their limitations and the size of the eggproduce a range of designs following the design theme and briefdevelop a chosen design ideaapply the iterative design approach through sketches, templates and modelsadd manufacturing processes to annotationsmake a template for the shape the egg holder – full scale and testuse a range of measuring and marking out toolsuse the laser cutter to cut out the componentsapply the theory principles in order to heat, shape or mould selected polymershow to use the vacuum former for HIPSdraw up the chosen design using CAD softwarecut out each piece using the laser cutterapply QC methods in order to sand, smooth and wet and dry the edges of each component to ensure a good quality finishuse a range of adhesives in order to assemble the final productknow a range of testing and evaluation methods and techniques to present the data
Skills/Assessment Objective Links	
Spiritual, moral, social, and cultural development	<p>SMSC: Sustainability, wasting materials,</p> <p>PSHE/British Values:</p> <p>Skills Builder: designing, developing the product, making, use of CAD, use of laser cutter, know how to test</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: Design industry, manufacturing industry</p>
Adaptation	<p>Throughout this topic, quality first teaching will provide differentiation:</p> <p>By product:</p> <p>By resource: worksheets on how to use software, use of exemplar materials</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>
QFT/SEND Provision	
Implementation Curriculum Delivery	<p>To be able to:</p> <ul style="list-style-type: none">investigate the Alessi theme from the brief

Learning Outcomes (Knowledge)	<ul style="list-style-type: none"> • produce initial sketches for the egg holder • produce a range of designs following the design theme and brief • develop a chosen design idea • apply the iterative design approach through sketches, templates and models • add manufacturing processes to annotations • make a template for the shape the egg holder – full scale and test • use a range of measuring and marking out tools • use the laser cutter to cut out the components • how to use the vacuum former for HIPs • draw up the chosen design using CAD software • cut out each piece using the laser cutter • apply QC methods in order to sand, smooth and wet and dry the edges of each component to ensure a good quality finish • use a range of adhesives in order to assemble the final product • know a range of testing and evaluation methods and techniques to present the data <p>Red denotes interleaving; aspects of knowledge covered previously in Yr11 if studied at GCSE</p>
Current learning to be developed in the future within:	<p>To be applied to NEA annotations and Paper 2 style questions. NEA skills being developed through the iterative design process and building skills for the future in Yr13 and beyond</p>
Assessment	<p>Formative – Use of PLCs and self reflection Summative – Design ideas/development and making</p>
Impact	<p>Pupils to have knowledge and understanding of how to apply theoretical principles and build skills for the NEA and beyond.</p>