

STMCA - GCSE 3D Design Curriculum Overview

Year 10 OCR GCSE 3D Design

	HT1 Autumn	HT2 Autumn	HT3 Spring	HT4 Spring	HT5 Summer	HT6 Summer
BIG Q	How can I analyse a design brief, understand a target user and begin developing original 3D design ideas?	How can workshop skills, product analysis and designer research inform my design work?	How can market research, client needs and CAD help me generate suitable design concepts?	How can modelling and practical experimentation help me develop and refine my design ideas?	How can I communicate a resolved final design and prepare accurately for manufacture?	How can I manufacture, record and evaluate a high-quality 3D design outcome?
Content (max 5)	- Understand the GCSE course, assessment objectives and sketchbook expectations. - Explore the role of product and 3D designers. - Analyse the design brief and identify design opportunities. - Define a target user and write a design specification. - Analyse existing products and create a research mood board.	- Investigate Pop Art and relevant designer influences. - Develop initial drawing, recording and CAD skills. - Learn safe workshop routines and tool use. - Explore measuring, marking out, cutting, shaping and finishing. - Present workshop processes, finishes and joints in the sketchbook.	- Research further designers and design movements. - Conduct product market research. - Create a detailed client profile. - Generate initial 3D concepts through sketching and CAD. - Use research and specifications to justify design decisions.	- Develop card models and photograph experiments. - Test proportion, form, construction and usability. - Produce small workshop samples. - Evaluate modelling and practical trials. - Refine concepts through iteration and feedback.	- Produce resolved final designs using sketching and CAD. - Complete catch-up and strengthen portfolio evidence. - Write a manufacturing specification. - Produce orthographic drawings and a cutting list. - Plan tools, materials, processes and quality-control checks.	- Begin manufacturing and maintain a production diary. - Apply workshop skills safely and accurately. - Complete the mock practical assessment. - Carry out ongoing quality control and a mid-project evaluation. - Refine the outcome in response to testing and feedback.
Vocabulary (max 10)	Design Brief Target User Specification Existing Product Analysis Mood Board Design Opportunity Function, Form User Needs Annotation	Workshop Processes Joints Finishes Accuracy Measuring Marking Out Cutting, Shaping CAD Design Movement	Market Research Client Profile Concept Design CAD Sketching User Needs Specification Communication Research Justification	Prototype Card Model Experiment Development Testing Evaluation Refinement Iteration Proportion Usability	Final Design Manufacturing Specification Orthographic Drawing Cutting List Materials, Process Tolerance Planning Quality Control Accuracy	Manufacture Production Diary Assembly Quality Control Evaluation Technical Skill Safety Refinement Outcome Testing
Catholic Link	Human Creativity and Dignity	Dignity of Work	Human Creativity and Dignity	Dignity of Work	Dignity of Work	Excellence and Perseverance
Careers Link	Product Designer, Industrial Designer	Furniture Designer, Workshop Technician	CAD Technician, Design Engineer	Model Maker, Product Developer	Architect, Production Planner	Product Designer, Manufacturing Technician