BRANNEL SCHOOL
EXCELLENCE | CREATIVITY | COMMUNITY

Curriculum Summary Document

Year 9 – Design & Technology

Designing for a User, Improving Technical Skills and Introducing KS4 Concepts

Module/Unit of Learning	Taught During	What will students learn?	How does this prepare students for transition into Key Stage 4?	Links to other Subjects
Design & Manufacture: Desk Lamp Project	September – December	Students refine their visual communication skills through 1-point and 2-point perspective drawing. They analyse existing products and identify a target user, learning how user needs influence design decisions. Students write a specification and develop initial design ideas before exploring a range of manufacturing joints. They begin manufacturing the lamp base, applying accuracy, safe tool use and quality control.	This module mirrors early KS4 practice by requiring students to work to a specification, design for a real user and justify choices. They develop higher-level practical skills and a more structured design process, forming the foundations needed for GCSE NEA-style thinking.	Art – drawing and idea generation Science – properties of materials and forces Maths – measurement, scale and tolerances
Card Modelling, Iteration & Acrylic Shade Manufacture	January – April	Students create card models of shade components, testing proportions and functionality before refining their designs through iteration. They evaluate their models and adjust the design accordingly. Students then manufacture an acrylic lamp shade using specialist equipment and forming techniques, before assembling and refining all components into a complete desk lamp.	Card modelling, testing and iteration directly reflect GCSE NEA processes. Students learn to prototype ideas, gather feedback and improve their designs, developing the resilience and problem-solving skills required at KS4. Acrylic work introduces materials and processes used more extensively at GCSE.	Art – modelling and 3D form Science – heat processes and material behaviour Maths – geometry and precise measurement
Electronics, Polymers & Advanced Modelling		Students study basic electronics, including circuits, current and voltage. They explore how electrical systems integrate into products and identify common components. They then learn polymer theory, including types, uses and environmental considerations. Finally, students apply design skills through card modelling for furniture, exploring structure, stability and product function.	Electronics and polymers are core elements of the GCSE specification. This module gives students a strong grounding in key theory, enabling them to access KS4 content with greater confidence. Advanced modelling encourages creative problem-solving and introduces the complexity expected in GCSE design tasks.	Science – electricity and plastics Geography – sustainability and environmental impact of materials Maths – structural stability and measurement