



Topic name	Rotation	Skills developed (Research, Design, Make, Evaluate)	Link to NC subject content	Prior learning	Next link in curriculum
Souvenir inspired LED Light	Product Design	Research- What is a souvenir. Design and Creativity: Students come up with a unique and visually appealing souvenir-inspired design for the acrylic panel. This encourages creativity in design. Make: Drawing and Engraving: Hand engraving the acrylic panel demands precision, attention to detail, and artistic skills. This involves developing fine motor skills. Woodworking Skills: Building the wooden base from softwood pine, gluing, and screwing, develops basic woodworking skills. Learning how to countersink screws properly is a valuable skill. Electronics and Soldering: Assembling and soldering the LED light element involves learning about basic electronics, circuitry, and soldering techniques. Problem-Solving: Throughout the project, students may encounter problems or challenges that require creative problem-solving, such as ensuring the LED is properly connected, aligned, and concealed within the base. Laser Cutting and Engraving: The laser-engraved feature on the wooden base involves working with design software, which includes skills related to computer-aided design (CAD). Attention to Detail: This project emphasises the importance of precision in every step, from engraving intricate designs on the acrylic panel to ensuring the laser-engraved wooden feature aligns correctly. Evaluate and Test: Students will evaluate the final product, which is part of the iterative design process.	Designing: Students are required to design a souvenir-inspired LED light, including the engraved acrylic panel and laser-engraved wooden base. This project encourages students to use their creative skills to come up with a unique design, considering aesthetics, functionality, and user needs. Making: The project involves hands-on making and crafting skills. Students are tasked with woodworking to create the wooden base and hand engraving the acrylic panel. This practical aspect aligns with the curriculum's emphasis on developing making skills. Materials and Processes: Students gain an understanding of different materials (wood, acrylic) and processes (soldering, laser cutting, and engraving). Technical Knowledge: The assembly of the LED light element requires an understanding of basic electronics and soldering techniques, introducing students to technical knowledge and skills. Problem-Solving: Throughout the project, students will encounter various challenges that require them to apply problem-solving skills. This aligns with the curriculum's focus on iterative design and practical problem-solving. Quality Control and Evaluation: As students work on their LED light project, they need to ensure the quality of their work. This includes evaluating their product against design specifications.	Links from KS2: Basic Design Skills: At KS2, students learn basic design skills, including sketching and creating simple design ideas. This project allows them to build upon this foundation by designing a more complex product, incorporating aesthetics, functionality, and the use of 2D design software for laser engraving. Materials and Properties: At KS2 students are introduced to various materials and their properties, such as wood, metal, plastic, and fabric. This project utilises this prior knowledge, with a focus on wood (softwood pine) and acrylic, helping students deepen their understanding of material selection and characteristics. Hand Tools and Equipment: KS2 may introduce students to basic hand tools and equipment, like scissors and glue. This project builds on this by incorporating more advanced tools and equipment such as soldering irons, laser cutters, and engraving tools. Health and Safety: Safety rules and practices for using tools and equipment are introduced in KS2. Students continue to develop these skills by applying safety knowledge to more complex tools and processes. Creative Expression: The creative aspect of the project aligns with the creative skills developed in KS2. Links from previous Y7 rotation: Food & Nutrition- Fine motor skills, attention to detail. Textiles- Measuring, Fabric/Textile souvenirs.	Link to next rotation: Research Design Make Evaluate CAM/CAM Material Knowledge Problem Solving Creativity Measuring & Accuracy Health & Safety



West Kirby
Grammar School

Curriculum Map – Year 8 – Design Technology (2026-27)

