



Topic name	Rotation	Skills developed (Research, Design, Make, Evaluate)	Link to NC subject content	Prior learning	Next link in curriculum
Alessi Mobile Phone Holder	Product Design	Research: Research and understand key principles of Alessi. Design: CAD Software Proficiency: Using 2D Design CAD software to create a detailed design of the mobile phone holder, including accurate measurements and dimensions. Aesthetics: Gaining an understanding of aesthetic design principles, such as balance, symmetry, and proportion, which are often associated with Alessi products. Material Knowledge: Acrylic Properties: Learning about the properties of acrylic, including its strength, flexibility, and transparency. Make: Strip Heater Operation: Learning to use a strip heater to bend the acrylic into the desired shape. Problem-Solving Skills: Prototyping: Developing the ability to create prototypes and make iterative improvements. Creativity & Innovation: Encouraging creative thinking to come up with unique and aesthetically pleasing design elements inspired by Alessi's design philosophy. Evaluate (critical thinking): Evaluating the final product for design flaws, usability, and any areas for improvement.	Designing and Making: This project embodies the core principle of the Design and Technology curriculum, which is to encourage students to design and create products. Use of CAD Software: Using 2D Design CAD software corresponds to the digital design and modelling aspect of the curriculum. It enables students to work with digital tools for designing and modelling products. Material Knowledge: Understanding the properties of acrylic and selecting appropriate materials. Manufacturing Techniques: The use of a laser cutter and strip heater represents a hands-on approach to learning about manufacturing processes. Practical Skills: Students will develop practical skills related to operating machinery and tools. Problem-Solving: This project inherently involves problem-solving, both in the design and manufacturing stages. Creativity: Encouraging creative thinking to design an Alessi-inspired product is in line with the curriculum's emphasis on creativity and innovation. Evaluation and Testing: Students will evaluate the final product, which is part of the iterative design process emphasised in the curriculum.	Links from KS2: Understanding Materials and Their Properties: This project introduces acrylic as a material, allowing students to delve deeper into its properties, uses, and working characteristics. Design and Making: KS2 emphasises design and making projects, which include making products with simple materials. This project extends by introducing more advanced tools and processes for designing and creating products. Problem-Solving: This project enhances this skill by presenting more complex design and manufacturing challenges, such as ensuring the acrylic is bent accurately using the strip heater. Practical Skills: KS2 introduces practical skills related to basic hand tools. At KS3, students advance to using digital design tools and operating advanced machinery, enhancing their practical skills. Measurement and Accuracy: At KS2, students learn about measurement and accuracy in basic contexts. At KS3, they apply these skills to create accurate dimensions for their phone holder designs and ensure precision in the manufacturing process. Links from previous Y7 rotation: Food & Nutrition- Balance, symmetry, and proportion. Textiles- Evaluating the final product for design flaws, usability, and any areas for improvement.	Link to next rotation: Research Design Make Evaluate CAM/CAM Material Knowledge Problem Solving Creativity Measuring & Accuracy