Curriculum Map: Year 9 Subject: Product Design

Topic	Key Knowledge *What will all students KNOW by the end of the topic?*	Key Skills *What key skills will be learnt/developed by the end of the topic? What will all students be able to DO by the end of the topic?*	Assessment Opportunities *What are the key pieces of assessment? How will students be assessed?*
Project: **Design Technology: Light Up!**	**Design** Research and evaluate existing products and the influence of design influences on their form and function Create innovative designs through drawing in different forms which show consideration of product life cycles and sustainability **Make** Confident use of a range of materials and equipment. Accurate measuring and cutting to produce a functioning friction hinge. **Evaluate** Test the outcome against the specification and suggest modifications. **Technical Knowledge** Know how to keep yourself and others safe in the workshop	**Design** Students will develop an understanding of design movements and how they influence product design. Students will know that products have a life cycle and the importance of sustainable materials and processes. Students will record ideas and insights through drawing in different forms to develop innovative design ideas. **Make** Students will apply skills in marking out, cutting and finishing to create a lamp base with friction hinge. Students will select appropriate technical equipment and use appropriate techniques to produce a recycled lampshade considering function and aesthetics. Students will apply knowledge of electrical circuits to attach the LED components. **Evaluate**	Demonstrate ability to work safely in the workshop and use equipment and electronics competently LED light with friction hinge Electronic Circuit Evaluation of outcomes

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	Understand key principles of electronics and circuits. Apply knowledge to produce a functioning circuit.	Students will evaluate their competency when using equipment safely and skilfully. Students will test this outcome against the specification and suggest modifications. **Technical Knowledge** Students understand how to work safely in the workshop and understand Health & Safety protocols. Complete H&S passport. Consideration of other students, hazards and risks in all aspects as well as electronics. Understand the selection of the correct materials, technique and tools for different outcomes. Using Fret saws, junior hacksaw, files, sand paper, buffer/polisher and drills. Students will understand the purpose of a cutting list and be able to consider ways to reduce waste Understand how electronic circuits function within the design and the key processes. Record in an accurate diagram. Use of solder and components to manufacture a circuit Understand the role of ergonomic and anthropometric data and consider this in their design and making process.	