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| Year 10  GCSE DT: Resistant Materials | **Topic: Desk Tidy & Materials Theory**  **Period:** Autumn 1 |
| **Overview of topic:**  Students will be in the workshop refining their practical skills acquired throughout KS3 to produce a quality assured desk tidy. This project will encompass material sections (timbers/metals/plastics) students are required to know to help better understand their physical/mechanical properties as well as new processes that relate with industrial practices. Theory lessons will take place alongside practical sessions and relate to workshop practices. | |
| **Key** **knowledge:**  Students will learn processes such as laminating timbers, metal turning, CAD/CAM (laser cutting & etching) as well as build upon prior practical skills in KS3. More emphasis will be applied to quality control when using hand tools and machinery for measuring/marking/cutting/shaping. Theory content will cover AQA Specification section 3.1. Core technical principles focusing on materials and working properties  **Key vocabulary:**   |  |  | | --- | --- | | **Tier 2** | **Tier 3** | | **Analyse**  **Apply**  **Compare**  **Complete**  **Consider**  **Define**  **Describe**  **Discuss**  **Evaluate**  **Examine**  **Explain**  **Identify**  **Justify**  **Name**  **State** | **Finite**  **Lean manufacturing**  **Life cycle assessment**  **Primary source**  **Social footprint**  **Working properties** | | **Key skills:**  **Students develop their skills of working to a set timeframe to produce a quality practical outcome**  **Students will use the skills learnt in the workshop to produce a quality manufactured product;**  **Measuring & marking**  **Cutting & shaping**  **Timber lamination**  **Centre Lathe Turning**  **Fabrication**  **Finishes**  **CAD – 2D Design**  **CAM – Laser Cutter**  **Quality Control**  **Students will develop their knowledge and understanding of materials and their working properties.** |
| **Co-curricular opportunities:**  Wednesday afterschool DT intervention sessions (voluntary to begin with) | **Key reading skills taught and key texts:**  Skimming and Scanning  Frayer's model for new keywords  **Wider Reading Opportunities/Links:**  Knowledge Organisers  AQA GCSE 9-1 Design & Technology  CGP GCSE AQA Design & Technology  PG Online Clear Revise AQA GCSE Design & Technology |
| **How can I use this information at home?**   * Conversation starters with your children to discuss their learning * Support your child to complete set homework's and meet deadlines * Promote books/other texts that explore this topic (see reading section) * Help your child to learn the key vocabulary | |