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| Year 10GCSE 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:**

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| **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 ScanningFrayer's model for new keywords**Wider Reading Opportunities/Links:**Knowledge OrganisersAQA GCSE 9-1 Design & TechnologyCGP GCSE AQA Design & TechnologyPG 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
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