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| **Our Lady Queen of Peace**  Catholic Engineering College | | | | Curriculum Overview | | | |
| **Year 7 Technology**  During Year 8 students complete 9 to 10 weeks in each of the four technology disciplines by the end of year all students will have completed: | | | | | | | |
|  | **Knowledge & Understanding** | | | | **Subject Specific Literacy Development** | | **Cultural Capital / Enrichment Opportunities** |
|  | **Composites**  **(Bigger Picture)** | **Components**  **(Key Concepts)** | **Recall & Retrieval Practice Focus** | | **Read Like A... Focus** | **Key Vocabulary** |
| **Product Design/CAD**  **“Stationary Rack”** | * Health and Safety * Design Process   Analysing existing products. Evaluating products  Creating and developing design ideas/Design Realisation to given/personal specification points.   * Selection of Tools and equipment: safety and use of woodwork tools measuring and marking to size. Cutting and finishing of materials * Materials: Polymers (Acrylic) Wood and manufactured boards * Wood joints and joining of materials. * Working with polymers * Material finishing * Basic CAD “2D Design basic shapes” | Health and safety, unit outcomes and keywords  Design Process:  Situation/Brief/Problem/Analyse/Evaluate  Identification of requirements and specification points for a given project from a brief and research.  How to analyse existing products and make improvements in our own designs. Evaluating a products effectiveness.  Designing to a specification “ Personalisation of product.  Practical Skills: Wood Saws and equipment, Measuring and marking to size using Try Square and Steel Rule, Line bending Polymers.  Materials and processes used in manufacturing products Polymers/Manufactured Boards  Different finishes used to protect materials, Varnishes/ Lacquers / Paints  Materials and processes in shaping and forming polymers - Line Bending, Heat moulding | Spelling – key terminology  Key equipment and uses in wood manufacture.  Common Wood Joints and application.    Polymers and manufactured Boards and their uses  Marking out tools / equipment and use  Use of Tools  Sequencing of practical’s  Properties of materials  Risk / Health and Safety | | Read like a “Materials Engineer – Timber” | Safety  Situation  Brief  Task Analysis  User/Client  Specification  Analyse  Analysis  Evaluation  Softwood  Manufactured Boards  Pine  MDF  Plywood  Properties  C.A.D  2D Design  Fillet  Prototype  Modelling  Electronics  Laser Cutter | Link to safety in the work place and the Health and safety at work act  Numeracy link with accuracy and measurements   |  | | --- | | What is research used for?  Link to industry: materials joining, joints and adhesives  3rd angle orthographic  Presentation skills  Sustainability  CAM | |

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| **CAD / Product Design Key Assessments** | | | |
| **When** | **What will be assessed?** | **Why is this being assessed?** | **How will results be stored & students receive feedback?** |
| Week 1 / 2 | Health and Safety Quiz, Knowledge and understanding (Recall) of Health and Safety in the Work Place. | To ensure students are aware of Health and Safety in the workplace and expectations and requirements for safe practicals. | In books feedback received via live marking throughout the lesson/s |
| Week 5 | Mid Make Review:  Progress and skills developed so far to be reviewed and knowledge of materials and processes used by the individual and areas of development identified | Identify Areas of improvement and development and to develop an understanding of the Design and Manufacture process. | Work collated in books for each student, Individual feedback through class feedback form and individually by CT. |
| End of Unit | Practical Product Outcomes Assessment against intentions (Evaluation) of Plans and physical outcome  Theory Knowledge Check through Recall Homework task. | To evaluate key practical skills and knowledge of tools and equipment throughout the unit of work. | Holistic overall mark stored in Sims marksheet of Progress and skills developed. Practical/Theory |