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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 productsCreating 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 keywordsDesign Process:Situation/Brief/Problem/Analyse/EvaluateIdentification 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 BoardsDifferent finishes used to protect materials, Varnishes/ Lacquers / PaintsMaterials and processes in shaping and forming polymers - Line Bending, Heat moulding | Spelling – key terminologyKey equipment and uses in wood manufacture.Common Wood Joints and application. Polymers and manufactured Boards and their usesMarking out tools / equipment and useUse of Tools Sequencing of practical’sProperties of materialsRisk / Health and Safety | Read like a “Materials Engineer – Timber”  | SafetySituationBriefTask AnalysisUser/ClientSpecificationAnalyseAnalysisEvaluationSoftwoodManufactured BoardsPineMDFPlywoodPropertiesC.A.D2D DesignFilletPrototypeModellingElectronicsLaser Cutter | Link to safety in the work place and the Health and safety at work actNumeracy link with accuracy and measurements

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| What is research used for?Link to industry: materials joining, joints and adhesives3rd angle orthographicPresentation skillsSustainability 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 outcomeTheory 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 |