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| **S2 Broad General Education Plan – Breadth, Depth, Challenge and Skills** | | | | | | |
| August-October | | October - December | | | January - May | |
| **Learning and Teaching Focus (Es and Os)**  **Workshop – Making a simple phone holder out of pine and acrylic**  Learning how to mark out wood and plastic. As well as and how to safely cut the shape out, using all the correct tools for the material.  How to apply a finish to different materials. | **Learning and Teaching Focus (Es and Os)**  **Graphic Communication.**  Learning about different types of 2d and 3d drawing views – sketching orthographic and pictorial views  Prepare a design to be cut on Simple Box using digital software. | **Learning and Teaching Focus (Es and Os)**  **Design Project/Combined Materials**  **Design a Coat hook using multiple materials.**  Learning how to work with metal/wood and plastic safely. The different tools we use for each materials.  How to apply a high finish to your metal using dip coating. | **Learning and Teaching Focus (Es and Os)**  **Computer aided design. 3D modelling using Autodesk Inventor**  Learning skills in how to 2D sketch, dimension, extrude for simple parts. Learning how to assemble multiple parts together and create production drawings. | **Learning and Teaching Focus (Es and Os)**  **Earphone Holder – Making complex shapes out of wood.**  Learning how to make cut and join complex shapes out of wood.  How to apply various types of finish to wood. | | **Learning and Teaching Focus (Es and Os)**  **Desktop publishing and Computer aided design project.**  Inventor – Component Modelling/ Assemblies and Production Drawings (Lego Man/ Tetris/Security Camera etc)  Using DTP to create advertisements for the above products using the renders generated from the 3D models. |
| **Assessment Approach and evidence gathered:**  Practical Model will be completed and then graded. Input from teacher and pupil on good points, what you have learned and how you could improve for next time.  Teacher observations of how you work and how safely you work will count towards your grade.  Photographic evidence will be taken of model. | **Assessment Approach and evidence gathered:**  Portfolio – this is sheets of work where all your different types of drawing will be completed. | **Assessment Approach and evidence gathered:**  Practical Model will be completed and then graded. Input from teacher and pupil on good points, what you have learned and how you could improve for next time.  Teacher observations of how you work and how safely you work will count towards your grade.  Photographic evidence will be taken of model. | **Assessment Approach and evidence gathered:**  CAD drawing test. | **Assessment Approach and evidence gathered:**  Practical Model will be completed and then graded. Input from teacher and pupil on good points, what you have learned and how you could improve for next time.  Teacher observations of how you work and how safely you work will count towards your grade.  Photographic evidence will be taken of model. | | **Assessment Approach and evidence gathered:**  CAD drawing test, based on the production of the production drawings and renders..  Poster of final design – computer rendered graded. |
| **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Numeracy: Measuring and marking to stated tolerance. | **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Following instructions  CAD design skills  Digital literacy – Using Inventor 3D modelling programme. Improving computer skills.  Literacy, Numeracy, Digital Literacy | **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Numeracy: Measuring and marking to stated tolerance. | **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Following instructions  CAD design skills  Digital literacy – Using Inventor 3D modelling programme. Improving computer skills.  Numeracy – working within set tolerances. | **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Numeracy: Measuring and marking to stated tolerance. | | **Key Skills: Literacy/Numeracy/ HWB/Digital Literacy**  HWB - Safety in the workshop and classroom.  Following instructions  CAD design skills  Digital literacy – Using Inventor 3D modelling programme. Improving computer skills.  Numeracy – working within set tolerances. |
| **Skills for learning, work and life**  Developing hand and motor skills. To improve confidence in using tools.  Developing problem solving skills. Understanding how items go together and work.  Transferring skills to Science. | **Skills for learning, work and life**  Digital Literacy. Gaining an understanding of how to use CAD and improving computer knowledge. | **Skills for learning, work and life**  Developing hand and motor skills. To improve confidence in using tools.  Developing problem solving skills. Understanding how items go together and work. | **Skills for learning, work and life**  Digital Literacy. Gaining an understanding of how to use CAD and improving computer knowledge | **Skills for learning, work and life**  Developing hand and motor skills. To improve confidence in using tools.  Developing problem solving skills. Understanding how items go together and work.  Transferring skills to Science. | | **Skills for learning, work and life**  Digital Literacy. Gaining an understanding of how to use CAD and improving computer knowledge. |
| **Home Learning**  **Tools – Wood/Plastic**  **Types of wood – Softwood/Hardwood**  **Types of plastic – Thermoplastic/thermosetting**  **Joining methods – Wood/Plastic**  **Safety** | **Home Learning**  **Orthographic sketching**  **Isometric sketching**  **2D CAD commands** | **Home Learning**  **Tools – Wood/Metal/Plastic**  **Materials – Wood/Metal/Plastic**  **Finishing – Wood/Metal/Plastic**  **Safety** | **Home Learning**  **2D CAD commands**  **3D CAD commands** | **Home Learning**  **Materials – Softwood/Hardwood/Manufactured boards**  **Joining methods – Wood**  **Finishing - Wood**  **Safety** | | **Home Learning**  **CAD – components**  **CAD – assemblies**  **British Standards** |