KS3 Resistant Material

<table>
<tr>
<td>What will students learn/ what skills will they develop?
Year 7 British theme: Stamp Project CAD-CAM
• Students develop knowledge of different types of woods and their properties.
• Students develop skills in using Access FM to write their specification.
• Students use a mood board and specification to design 2 innovative ideas for the stamp.
• Students develop skills in using tools and equipment for marking out and cutting.</td>
<td>What will students learn/ what skills will they develop?
Year 8 China / Japan theme: Japanese wooden boxes
• Students further develop skills in using Access FM to write their specification.
• Students will develop skills in using a mood board.
• Students develop knowledge of different types of woods.
• Students develop understanding of technical and orthographic drawing.
• Students develop understanding of 2D design and CAD.
• Students develop understanding of 2D design
• Students develop skills in bitmapping and vectorising.
• Students develop skills in using 2D design software.
• Students develop skills in using tools and equipment for marking out and cutting.</td>
<td>What will students learn/ what skills will they develop?
Year 9 America theme: Mobile holders / Jewellery project with pewter
• Students further develop skills in using Access FM to write their specification.
• Students will develop skills in using a mood board.
• Students develop understanding of the difference between Thermoplastic and Thermosetting plastics.
• Students develop knowledge in industrial processes used to manufacture plastic products.
• Students develop skills in bitmapping and vectorising.
• Students develop skills in using 2D design software.
• Students develop skills in using a coping saw and hand files.
• Students develop skills in using CAM(laser cutting)</td>
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<td>Assessment
Each unit of work is marked to National Curriculum levels. Students also evaluate their work and progress and respond to feedback.
Individual pieces of work are formatively marked following the school’s assessment policy to provide constant feedback and progression.
Students are expected to correct their own work and respond to teacher comments using the school assessment proforma.</td>
<td>Numeracy
Students deal with measurement, symmetry, proportion, scale, shape, rotation, perspective, adding, subtracting</td>
<td rowspan="2">Safety

A strong emphasis is placed on Health and Safety within the Department and safe practice is reinforced in every lesson. General safety rules are always rigorously enforced for the protection of the individual students and staff. Each teaching area also has its own special requirements and safety is continually taught through talks and demonstrations as and when required. Safety goggles, dust masks and gloves are provided when appropriate and instruction is given on their proper use.</td>
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<td>Literacy
Students develop speaking and listening skills.
Students provide oral and written evaluation of their work.
The promotion of independent research allows students to develop ideas in depth.
Reading enriches their subject knowledge and technical vocabulary.
Students use the correct technical language. Key terms are taught explicitly.</td>
<td>SMSC
Students understand responsibility towards others. Collaborative and cooperative work allows students to develop respect for the abilities of each other. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding and they learn to appreciate the value of differences and similarities. In these particular projects, the understanding of British and Japanese cultures is reinforced.</td>
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