Curriculum overview 2020-21 – Design and Technology
**The Shape of Things to Come H.G.Wells**
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| Year | Intent | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| 7 | All projects in Yr 7 will; <br><br> • Teach know how to plan effectively to make a range of quality products safely. <br> • Teach about range materials from sources to working properties for use. <br> • Teach the skills to develop the use of range of tools to be able to manipulate materials. <br> • Teach and develop evaluation skills to evaluate final product and effectiveness of manufacturing processes. | *Project 1* <br> *2D Design Acrylic Key Fob Project* <br><br> Planning for manufacture <br><br> Material Knowledge Thermo-Plastics | *Project 1* <br> *2D Design Acrylic Key Fob Project* <br><br> Tools for Manufacture and Tools Knowledge (CAD/CAM) <br><br> Evaluation | *Project 2* <br> *Workshop Tools, Metal Coat Hook* <br><br> Planning for manufacture <br><br> Material Knowledge Ferrous Metals Non-Ferrous Metals Alloys | *Project 2* <br> *Workshop Tools, Metal Coat Hook* <br><br> Tools for Manufacture and Tools Knowledge Metal Workshop <br><br> Evaluation | *Project 3* <br> *Multi Tools Wood Bas Tea Light* <br><br> Planning for manufacture <br><br> Material Knowledge Woods Hardwood Timber Softwood Timber Manufactured Boards | *Project 2* <br> *Workshop Tools, Metal Coat Hook* <br><br> Tools for Manufacture and Tools Knowledge Wood Workshop <br><br> Evaluation |
| 8 | All projects in Yr 8 will build on and develop knowledge from Yr7; <br><br> • Teach how to analyse a range of information <br> 1. The work of others. <br> 2. Mechanical and Electronic Systems. <br> 3. Commercial Manufacturing processes. | *Project 4* <br> *2D Design Acrylic Work of Others Phone Stand* <br><br> Analysis of Work of Others <br><br> Planning for manufacture <br><br> Material Knowledge Thermo-Plastics | *Project 4* <br> *2D Design Acrylic Work of Others Phone Stand* <br><br> Tools for Manufacture and Tools Knowledge (CAD/CAM) <br><br> Evaluation | *Project 5* <br> *Workshop Tools Manufacturing Processes Pewter Casting* <br><br> Analysis of Manufacturing Processes <br><br> Material Knowledge Ferrous Metals Non-Ferrous Metals Alloys | *Project 5* <br> *Workshop Tools Manufacturing Processes Pewter Casting* <br><br> Analysis of Manufacturing Processes <br><br> Material Knowledge Thermo-Plastics Thermoset | *Project 6* <br> *Electrical Systems Input, Process, Output* <br><br> Analysis of Systems and Controls Electronics <br><br> Design and Make a electronic power car | *Project 6* <br> *Mechanical Systems Input, Process, Output* <br><br> Analysis of Systems and Controls Mechanical <br><br> Design and Make a electronic power car |
| 9 | All projects in Yr 9 will build on and develop knowledge from Yr7 & Yr8 <br><br> • Teach how to analysis and understand a design context and the skills to independently research <br> • Teach the skills to write a design brief and design specification <br> • Teach the skills to design, develop and communicate ideas, solutions and proposals <br> • Develop independent making skills | *Project 7* <br> *Research, Design, Develop and Make Clock* <br><br> Analysis and Specification <br><br> Context <br><br> Research <br><br> Design Brief <br><br> Design Specification | *Project 7* <br> *Research, Design, Develop and Make Clock* <br><br> Designing and Development <br><br> Free Sketching <br><br> One point perspective <br><br> Oblique view <br><br> Rendering | *Project 7* <br> *Research, Design, Develop and Make Clock* <br><br> Modelling and final prototype <br><br> Cardboard <br><br> Final Solution | *Project 8* <br> *Research, Design, Develop and Make Table Lamp* <br><br> Analysis and Specification <br><br> Context <br><br> Research <br><br> Design Brief <br><br> Design Specification | *Project 8* <br> *Research, Design, Develop and Make Table Lamp* <br><br> Designing and Development <br><br> Free Sketching <br><br> Two point perspective <br><br> Isometric view <br><br> Rendering | *Project 8* <br> *Research, Design, Develop and Make Table Lamp* <br><br> Modelling and final prototype <br><br> Solid Works <br><br> Orthographic view <br><br> Final Solution |

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| 10 | All projects in Yr 10 will build on and develop knowledge from Yr7,8,9;<br><br>Unit 1 Exam 2hrs<br>100 marks<br>50% GCSE<br><br>Section A – Core technical principles<br>Section B – Specialist technical principles<br>Section C – Designing and making principles<br>• Develop skill on answering questions for summer exam using Knowledge and Understanding taught through scheme of learning. (50% of course)<br><br>Unit 2 NEA<br>100 marks<br>50% GCSE<br><br>• Use Knowledge and Understanding delivered through scheme to deliver personal skill on individual NEA (50% of course) | Section A – Core technical principles | Section A – Core technical principles<br><br>Section B – Specialist technical principles | Section B – Specialist technical principles | Section C – Designing and making principles | Section C – Designing and making principles | NEA<br><br>Analysis and Specification<br><br>Exam preparation |
| 11 | Unit 1 Exam 2hrs<br>100 marks<br>50% GCSE<br>Section A – Core technical principles<br>Section B – Specialist technical principles<br>Section C – Designing and making principles<br><br>• Develop skill on answering questions for summer exam using Knowledge and Understanding taught through scheme of learning. (50% of course)<br><br>Unit 2 NEA<br>100 marks<br>50% GCSE<br><br>• Use Knowledge and Understanding delivered through scheme to deliver personal skill on individual NEA (50% of course) | NEA<br><br>Designing and Development<br><br>Exam preparation | NEA<br><br>Designing and Development<br><br>Realisation | NEA<br><br>Realisation<br><br>Evaluation | Exam preparation | Exam preparation | A-Level Preparation |

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| 12 | All projects in Yr12 will build on and develop knowledge from Yr7,8,9;10,11<br><br>Unit1 Exam 2hr 30mins<br>120 marks<br>30% A-Level<br>Technical Principles<br><br>Unit2 Exam 1hr 30mins<br>80 marks<br>20% A-Level<br>Design and Making Principles<br><br>• Develop skill on answering questions for summer exam using Knowledge and Understanding taught through scheme of learning. (50% of course)<br><br>Unit 3 NEA<br>200 marks<br>50% A-Level<br><br>• Use Knowledge and Understanding delivered through scheme to deliver personal skill on individual NEA (50% of course) | Technical Principles | Design and Making Principles | Technical Principles | Design and Making Principles | NEA<br><br>Analysis<br>and Specification<br><br>Exam preparation | NEA<br><br>Analysis<br>and Specification<br><br><br>Designing and Development<br><br>Exam preparation |
| 13 | • Use Knowledge and Understanding delivered through scheme to deliver personal skill on individual NEA (50% of course)<br><br>• Develop skill on answering questions for summer exams using knowledge and understanding taught through scheme of learning. (50% of course) | NEA<br><br>Designing and Development<br><br>Exam preparation | NEA<br><br>Designing and Development<br><br>Realisation | NEA<br><br>Realisation | NEA<br><br>Realisation<br><br>Evaluation<br><br>Exam preparation | Exam preparation | |

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