



Year 10 Design Technology – Product Design Curriculum Map

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| Overview | <p>AQA GCSE Design and Technology allows students to study core technical and designing and making principles, including a broad range of design processes, materials techniques and equipment. They will also have the opportunity to study specialist technical principles in greater depth.</p> <p>You can find out about all our Design and Technology qualifications at aqa.org.uk/designandtechnology Theory resources endorsed through PGOnline</p> | | | | | |
| Year 10 | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Topic | Unit 3 Materials and Working Properties | Unit 4 Common specialist technical principles | Unit 7 Making Principles | Unit 5 Specialist Materials - Polymers and Timbers | Unit 1 New and emerging technologies | Unit 2 Energy, materials systems and devices |
| Knowledge | Papers and Boards Natural and Manufactured timbers Metals and Alloys Polymers Textiles | Forces and stresses on materials and objects Improving functionality Ecological and social footprint The six R's Scales of production | Selection of materials and components Tolerances and allowances Material management and marking out Specialist tools, equipment, techniques and processes Surface treatments and finishes | Polymers Sources, origins and properties Working with polymer based materials and fixings Commercial manufacturing and quality control Timbers Sources, origins and properties Working with timber based materials and fixings Commercial manufacturing surface treatments and finishes | Industry and enterprise Sustainability and the environment People, culture and society Production techniques and systems Informing design decisions | Energy generation Energy storage Modern materials Smart materials Composite materials and technical textiles Systems approach to designing Electronic systems processing Mechanical devices |

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| <p>Skills</p> | <p>Theory skills in Materials and their working properties</p> <p>Practical Skills Clock Project - mini NEA Research Analysis Exploring Designing</p> | <p>Theory skills in Common specialist technical principles</p> <p>Practical Skills Clock Project - mini NEA Making Evaluating</p> | <p>Theory skills in Making Principles</p> <p>Practical Skills Storage Project - mini NEA Research Analysis Exploring Designing</p> | <p>Theory skills in Specialist Materials - Polymers and Timbers</p> <p>Practical Skills Storage Project - mini NEA Making Evaluating</p> | <p>Theory skills in New and emerging technologies</p> <p>Practical Skills Display Stand Project - mini NEA Research Analysis Exploring Designing</p> | <p>Theory skills in Energy, materials systems and devices</p> <p>Practical Skills Display Stand Project - mini NEA Making Evaluating</p> |
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