'Nurturing young Catholic gentlemen.

Aspiring for Academic, Cultural & Sporting Excellence'

Department: Design and Technology

Blended Learning Curriculum Overview 2020-21

In the event of a local lockdown, students isolating or school closure, please outline your approach to blended learning below. DfE guidance stresses there will be a need for ongoing provision of "remote learning" which "is high quality and aligns as closely as possible with in-school provision." Within departments, this may mean planning each unit or area of learning with an eye on how it could translate into virtual or remote practice, if necessary. For example, it might mean preparing booklets or text-based resources which could be used by students at home as well as at school. It might even mean having procedures and infrastructure in place for recording lessons, or for allowing simultaneous online access to classroom teaching.

Autumn Term	Curriculum Time (Periods)	In-School provision (situation dependent)	Live 'Zoom' lessons (Tier 3&4) Expectations	Pre-recorded 'Zoom' lessons (Tier 2) Expectations	Resources available?	Assessment & Feedback?
Year 7	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT	**ARE -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products DT Baseline test
Topic/ Unit:	**Structures Project** – Students will study a range of basic structures and develop their knowledge to understand the design constraints placed on structures. Students will then demonstrate their knowledge in the construction of a simple bridges and towers using a given material. Students will also develop their basic graphical skills in both 2D and 3D and hence their design communication abilities. Project Aims- The aim of this unit is to develop pupil's understanding of designing a structure with a particular					

	focus on making the structure strong.					
Year 7 Topic/ Unit:	3 lessons per 2 weeks 10 Week Project Rotation with DT and IT **Mini light Project** Week 1 Health and Safety Week 2 Six Things about Me (Drawing) Week 3 Six Things about Me ((Making) Week 4 Input Control Output, (Electronic Components) Week 5 Batteries and LED's Week 6 Resistors Week 7 Transistors and Ohms Law Week 8 Circuits(Parallel and Series and How to Solder Week 9 Net Development Mini Light Week 10 Test/Evaluation	**PDI -** As per the curriculum map / AREs / Scheme of work	Live sessions working With students through project lessons as indicated in SOW Opposite.	Pre-recorded presentations with narration and/or demos.	**Presentations** PPT Prezi Worksheets **Videos** GCSE POD Multiple choice and free text questions **SMHW** Tasks, links and worksheets **Kahoot** **Quizlet**	Assessment and Feedback given on GCSE POD Assessment and Feedback given back on Kahoot and Quizlet
Year 7 Topic/ Unit:	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT **Sculpture Project** Task to design and construct a sculpture for a sports award. The award must show	**PDI -** As per the curriculum map / AREs / Scheme of work	Live sessions working With students through project lessons as indicated in SOW Opposite	Pre-recorded presentations with narration and/or demos.	**Presentations** PPT Prezi Worksheets **Videos** GCSE POD	Assessment and Feedback given on GCSE POD

	the movement of the figure and stand on a plinth To introduce basic knowledge of metals and its working characteristics. (The figure will be made of card). Knowledge on manmade woods will be taught. Students will understand the brazing hearth, annealing and the brazing process. They will understand the dip coating process as a means of finishing with metals.				Multiple choice and free text questions **SMHW** Tasks, links and worksheets **Kahoot** **Quizlet**	Assessment and Feedback given back on Kahoot and Quizlet
Year 7	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT	**ARE -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products DT Baseline test
Topic/ Unit:	Key Fob Project To introduce basic knowledge of Plastics and its working characteristics. Have an understanding of CAD CAM. Learning about plastics. Developing a range of ideas. Ideas suitable for client. Design is original. Accuracy when using CAD. Understanding stages of making. Laser cutting shapes.					

	Key Fob looks good enough to sell in a shop.					
Year 8 Topic/ Unit:	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT **Candle Holder Project –** Students will have to design a metal candle holder with set limitations, components and understand environmental issues. Students will understand different manufacturing processes to achieve the results. To use graphic techniques, ICT, including CAD to generate, develop, model and communicate design proposals. **Project Aims-** The aim of the project is for students to build more confidence work and have a stronger understanding of using tools.	**ARE -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products SMHW quiz
Year 8 Topic/ Unit:	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT **Maze Project** Week 1 Human Factors	**PDI**- As per the curriculum map / AREs	Live sessions working With pupils through project lessons as indicated in SOW Opposite.	Pre-recorded presentations with narration and demos.	**Presentations** PPT Prezi Worksheets **Videos** GCSE POD	Assessment and Feedback given on GCSE POD

	Week 2 Mazes and Labyrinths Week 3 Design a Maze, First ideas Week 4 Design a Maze, Developed ideas Week 5 Timbers. Hardwoods and Softwood Joints Week 6 Manufactured Boards Week 7 Vacuum Forming Week 8 Net Development (Making Maze) Week 9 Net Development (Making Maze) Week 10 Test/Evaluation				Multiple choice and free text questions **SMHW** Tasks, links and worksheets **Kahoot** **Quizlet** Interactive flash cards and learning games	Assessment and Feedback given back on Kahoot and Quizlet
Year 8	**3 lessons per 2 weeks** 10 Week Project Rotation with DT and IT	**ARE -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products DT Baseline test
Topic/ Unit:	**Board Game** Students will study the history of packaging and its importance. They will develop knowledge of the various techniques used in the manufacturing of packaging. Students will demonstrate their knowledge in the construction of a net for packaging a board game. Students will develop their basic graphical skills in both 2D and 3D. Students will focus on the importance of					

	accurate dimensions, including flaps and visualizing the package.					
Year 9 Topic/ Unit:	5 lessons per 2 weeks 14 Week Project **Flat Pack Furniture** Week 1 intro (KD fittings) Week 2 Stock Form and Components Tools Week 3 Wood Finishes Week 4 Scales of Production Week 5 Manufacturing Week 6 intro, Mind Map Week 7 Research Week 8 Initial Ideas Week 9 Prototyping, Mini 3D paper Models Week 10 Final Design 2D &3D Week 11 CAD Design Week 12 3D Card board Model (Photos) Week 13 Packaging Week 14 Test/Evaluation	**PDI**- As per the curriculum map / AREs	Live sessions working With student through project lessons as indicated in SOW Opposite.	Pre-recorded presentations with narration and demos.	**Presentations** PPT Prezi Worksheets **Videos** GCSE POD Multiple choice and free text questions **SMHW** Tasks, links and worksheets **Kahoot** **Quizlet** Interactive flash cards and learning games	Assessment and Feedback given on GCSE POD Assessment and Feedback given back on Kahoot and Quizlet
Year 9 &10 Topic/ Unit:	5 lessons per 2 weeks 14 Week Project **Grabber introduction** Students will be able to recognize how ergonomics	**ARE** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons.	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com	WWW EBI % assessment

	and anthropometrics are related to the human body. Students will be able to incorporate the information that they have researched into the grabber project. They will analyse how existing products are designed and made, in order to provide a range of strategies and factual information to use when designing their own grabber.		In the event of a closure there will be one live or pre-recorded lesson per week		AQA GCSE 9-1 DT PG Online Film clips YouTube Worksheet	Photographs of products SMHW quiz PPE
Year 9 &10 Topic/ Unit:	5 lessons per 2 weeks 14 Week Project **Frame Project -** The photo frame project enables students to learn how to design and make a picture frame using CAD and CAM. The skills of using "2D Design" program, changing and manipulating graphics. It is expected that all frames be finished to a high degree of accuracy and appearance. Emphasis is given to typography and design styles.	**ARE -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com AQA GCSE 9-1 DT PG Online Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products PPE
Year 10 Topic/ Unit:	5 lessons per 2 weeks 14 Week Project **Phone holder –**	**ARE** As per the curriculum map / AREs	Resources have been designed to be translated into live lessons.	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com	WWW EBI % assessment

	In this unit, you will explore how to develop your ideas to produce a phone holder. Students will consider different manufacturing process such as line bending and laser cutting.		In the event of a closure there will be one live or pre-recorded lesson per week		AQA GCSE 9-1 DT PG Online Film clips YouTube Worksheet	Photographs of products SMHW quiz PPE
Year 10 Topic/ Unit: Year 10 Topic/ Unit:	5 lessons per 2 weeks 14 Week Project **Chopping Board** Week 1 History of Product Design and Designers Week 2 Phiippe Starck and Post Modernism Week 3 Product Analysis of Chopping Boards Week 4 Human Factors and Health and Safety Week 5 Materials and Smart Materials Week 6 Processes Week 7 Mind Map Week 8 First Ideas Week 9 Developed ideas Week 10 Prototyping, Paper Models Week 11 CAD work Week 123D Card board Model (Photos)	**PDI** - As per the curriculum map / AREs	Live sessions working With students through project lessons as indicated in SOW Opposite.	Pre-recorded presentations with narration and demos.	**Presentations** PPT Prezi Worksheets **Videos** GCSE POD Multiple choice and free text questions **SMHW** Tasks, links and worksheets **Kahoot**	Assessment and Feedback given on GCSE POD PPE Assessment and Feedback given back on Kahoot and Quizlet

	Week 13 Test Week 14 Project Evaluation				**Quizlet** Interactive flash cards and learning games	
Year 11	35 lessons per 35 weeks	**ARE / PDI** - As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week and a support / drop in lesson	Resources have been designed to be translated into pre-recorded sessions.	PowerPoint Technology student.com AQA GCSE 9-1 DT PG Online Film clips YouTube Worksheet AQA Past Papers	WWW EBI % assessment Photographs of products SMHW quiz Assessment and Feedback given on GCSE POD / DPI Assessment and Feedback given back on Kahoot and Quizlet / PDI PPE
Topic/ Unit:	**Major Project** – As a 50% part of the GCSE the major project holds some importance. Students should be aware of the weighting it carries and approach all work accordingly. Students should choose a project of which they are interested and thus motivated to complete. Students should spend 35hours of school time on the project and supplement this with appropriate time working at home. The expected outcomes are a detailed Design Folio and a 3D artefact. Core Technical Principles to be taught each week: New and emerging technologies Energy generation and storage					

	• Developments in new materials • Systems approach to designing • Mechanical devices • Materials and their working properties. Specialist technical principles • selection of materials or components • forces and stresses • ecological and social footprint • sources and origins • using and working with materials • stock forms, types and sizes • scales of production • specialist techniques and processes • surface treatments and finishes specialist technical principle should be delivered through at least one material • papers and boards • timber based materials • metal based materials • polymers • textile based materials • electronic and mechanical systems					

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	Students should investigate, analyse and evaluate the work of past and present designers and companies. Designers: • Aldo Rossi• Charles Rennie Macintosh • Coco Chanel• Ettore Sottsass • Gerrit Reitveld • Harry Beck • Louis Comfort Tiffany • Marcel Breuer • Norman Foster • Philippe Starck • Raymond Templier • Sir Alec Issigonis • Vivienne Westwood • William Morris. Companies: • Alessi • Apple • Braun • Dyson • Gap • Primark • Under Armour • Zara					
Year 12	38 weeks	**ARE / PDI** - As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week and a support / drop in lesson	Resources have been designed to be translated into pre-recorded sessions.	AQA AS/A level DT Product Design book PowerPoint Technology student.com AQA Past Papers	WWW EBI % assessment Photographs of products Questions and answers SMHW quiz
Topic/ Unit:	**Personal Investigation** – **Student devised –** plan co-created with students with workshops to support development of skills, knowledge and understanding. **Non-exam assessment NEA:**					

	•Identifying and investigating design possibilities **•Producing a design brief and specification** **•Development of design proposal(s)** **•Analysing and evaluating** Technical principles Elastomers Biodegradable polymers Composites Smart materials Modern materials Forming, redistribution and addition processes Different Polymer processes Different Metal processes. Different wood processes. Wood finishing and applied finished. The use of adhesives and fixings. Paper and board finishing Metal finishing.				Film clips YouTube Worksheet	PPE

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	Modern industrial and commercial practice: • one-off, bespoke • batch production • mass/line production • unit production systems (UPS) • quick response manufacturing (QRM) • vertical in-house production. Designing and making principles					
	Curriculum Time (Periods)	In-School provision (situation dependent)	Live 'Zoom' lessons (Tier 3&4) Expectations	Pre-recorded 'Zoom' lessons (Tier 2) Expectations	Resources available?	Assessment & Feedback?
Year 13	36 weeks	**ARE /PDI -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per week and a support / drop in lesson	Resources have been designed to be translated into pre-recorded sessions.	AQA AS/A level DT Product Design book PowerPoint Technology student.com AQA Past Papers Film clips YouTube Worksheet	WWW EBI % assessment Photographs of products Questions and answers SMHW quiz PPE
Topic/ Unit:	**Non-exam assessment NEA: To be finished by Dec 2021** **•Identifying and investigating design possibilities** **•Producing a design brief and specification** **•Development of design proposal(s)** **•Analysing and evaluating** Explain the suitability of the different wasting processes for a range of					

	specific products. The use of adhesives and fixings. Paper, board and its finishes. Methods to enhance their appearance or for improved function. Different types of printing processes and their suitability for specific products and scales of production. Explain specific industrial manufacturing systems. The advantages and disadvantages of using CAD compared to a manually generated alternative How CAM is used in the manufacture of products. Electronic data interchange (EPOS). Health and safety • knowledge of the Health and Safety at Work Act (1974),	**ARE /PDI -** As per the curriculum map / AREs / Scheme of work	Resources have been designed to be translated into live lessons. In the event of a closure there will be one live or pre-recorded lesson per	Resources have been designed to be translated into pre-recorded sessions.	AQA AS/A level DT Product Design book PowerPoint Technology student.com	WWW EBI % assessment Photographs of products Questions and answers

	• control of Substances Hazardous to Health (COSHH) Customer safety such as Consumer Rights Act (2015), Sales of Goods Act (1979) Protecting designs and intellectual property. **Designing and making principles** Design methods and processes: Iterative design process • designing to meet needs, wants or values • investigations to inform the use of primary and secondary data: • market research • interviews • human factors • focus groups • product analysis and evaluation • the use of anthropometric data and percentiles • the use of ergonomic data • the development of a design proposal • the planning and manufacture of a prototype solution • the evaluation of a prototype solution to inform further development.		week and a support / drop in lesson		AQA Past Papers Film clips YouTube Worksheet	SMHW quiz PPE

	Design theory Design styles and movements. Range of Designers and their work. Major developments in technology.					