Product Design– Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Pop Art Coater Docking Station	Pencil Box Tea Light Holder	Desk Storage Flashing Led Reminder	Desk Storage Flashing Led Reminder Mini Stool	Mini Stool	NEA
Exam Theory	The work of others Design strategies Generate imaginative and creative design ideas using a range of different design strategies. Investigation, primary and secondary data use primary and secondary data to understand client and/or user needs.	Materials and their working properties Selection of materials or components Sources and origins Using and working with materials Stock forms, types and sizes. Surface treatments and finishes.	Specialist tools and equipment Specialist techniques and processes Scales of production Mechanical devices Different types of movement Systems approach to designing.	Communication of design ideas Forces and stresses New and emerging technologies Developments in new materials Energy generation and storage	Prototype development Selection of materials and components Tolerances Material management cut materials efficiently and minimise waste.	Exam board releases contexts. Students complete Section A: Identifying and investigating design possibilities
Practical Skills	2D Design CAD/CAM Construction of parts (inlay and creating 3d product from 2d design).	Finger Joints, hand tools & machines constructing a frame, accuracy and measurements. Router, forstner drill bit, laminating different types of wood to create a surface decoration	Lap joints, finger joints, router, accuracy, drawer, pewter cast handle, palm sander. Basic electronic circuit (soldering and etching PCB), light reflecting acrylic. Wood turning lathe used to make a honey dipper	Lap joints, finger joints, router, accuracy, drawer, pewter cast handle, palm sander. Basic electronic circuit (soldering and etching PCB), light reflecting acrylic. Wood turning lathe used to make a honey dipper. Surface finish/quality of finish.	Mortice & tenon Joints, construction of a frame, support, laminated top. Wood turning lathe used to make a honey dipper	Exam board set coursework

YEAR 11

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Investigating Design Opportunities,	Communication and Development of Design ideas.	Materials Management.Prototype Development	Prototype Development and Evaluation		

| Knowledge | Environmental, social and economic impact.

Brief and Specification. Initial Ideas | Experimentation, Development and Modelling of Ideas. Final Design Manufacturing Spec. | Make Product | Finish Making Product Evaluation of NEA | Exam Revision and Past Paper practice. | Exams Home study leave using materials on Google classroom. |
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| | Exam Paper practice Section A | Exam Paper practice Section B Revision and Mock | Exam Paper practice Section B | Exam Paper practice Section C | Exam Paper practice Section C | |

Further information and reading list
• Exam Board AQA, link; https://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/specification-at-a-glance
• Appropriate books
Hodder: My Revision Notes: AQA GCSE (9-1) Design & Technology: Product Design
Clear Revise: GCSE AQA Design and Technology: Illustrated Revision and Practice
CGP GCSE Design & Technology AQA Revision Question Cards
CGP GCSE Design & Technology AQA Revision Guide
• BBC Bitesize; https://www.bbc.co.uk/bitesize/examspecs/zby2bdm
• Technology Student.com; https://www.technologystudent.com/
• Seneca Learning; https://app.senecalearning.com/classroom/course/b4e64de8-a5d1-411b-81e2-aa4e2016e908/section/32cf34cb-5489-4210-9c3c-c504c87aadf7/session
• Spotify Podcast Revision; https://open.spotify.com/show/6dqepPKyp8sdLO2DFI7eeW
• Study Rocket; https://studyrocket.co.uk/revision/gcse-design-and-technology-aqa
• You Tube has many useful videos, just search topics.
Ways to support and extend student learning in this subject
Support for pupils
The greatest challenge for many students is the quantity of subject content that is necessary to cover in the course. Our GCSE students tell us that breaking this down into manageable chunks (often in the form of flashcards) and quizzing / consolidating little and often is the best way of keeping on top of what has been covered. We also recommend applying that knowledge to exam-style questions as often as possible
Revision and lesson materials will be on each Google Classroom. You can refer to these to help your child with their homework or if they are absent from school.
Stretch and Challenge Pupils.
It is important to have lots of practice exam questions and scenarios to give a wider extension of exam practice.
Some past papers are available to download from the AQA website: https://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/assessment-resources?f.Resource+type%7C6=Question+papers&sort=title&num_ranks=10
Encourage students to attend the extra scheduled revision sessions.
Revision cards are very useful for knowledge. These can be created by the student or you can purchase pre-printed flash cards.
To learn key words: use the AQA glossary to identify key words that cannot not yet be recalled or spelt correctly. Create flashcards and complete regular quizzing at home. https://www.aqa.org.uk/resources/design-and-technology/gcse/design-and-technology/teach/subject-specific-vocabulary