Year 11 Curriculum Map : Design and Technology

	Autumn	Spring	Summer
Assessment Objectives	AO1 - **Core Technical Principles** Materials and their working properties AO2 - **Specialist Technical Principles** Selection of materials or components, specialist techniques and processes, surface treatments and finishes. AO3 - **Design & Making Principles** investigating the work of others design strategies tools and equipment		
Unit Length	20 lessons	20 lessons	20 lessons
Key Learning Outcomes	AO3 - **Design & Making Principles** investigating the work of others design strategies tools and equipment Students will have begun their controlled assessment which will be 50% of their GCSE mark. The live design tasks would have been shared with the students on 1st June. 1. Feedback, reteach and D.I.R.T lesson 2. Investigating the contextual design challenge 3. Research analysis 4. Client profile 5. Product analysis 6. Social, cultural and economic impacts; Designer research 7. Product placement 8. Summary of research 9. Progress check - Reteach and D.I.R.T lessons 10. Design brief 11. Design specification 12. Progress check - Reteach and D.I.R.T lessons 13. Materials and properties 14. Design ideas 15. Annotation of design ideas 16. Progress check - Reteach and D.I.R.T lessons 17. Developing design ideas 1 18. Progress check - Reteach and D.I.R.T lessons	AO2 - **Specialist Technical Principles** Selection of materials or components, specialist techniques and processes, surface treatments and finishes. AO3 - **Design & Making Principles** investigating the work of others design strategies tools and equipment Students will continue with their controlled assessment which will be 50% of their GCSE mark. This will then be moderated and begin revision 1. Modelling 2. Progress check - Reteach and D.I.R.T lessons 3. Final design idea 4. Manufacture of the product 5. Cutting list 6. Manufacturing specification 7. Manufacture of the product 8. Progress check - Reteach and D.I.R.T lessons 9. Test and evaluate against specification 10. Client feedback 11. Progress check – Reteach and D.I.R.T lessons	AO1 - **Core Technical Principles** Materials and their working properties AO2 - **Specialist Technical Principles** Selection of materials or components, specialist techniques and processes, surface treatments and finishes. AO3 - **Design & Making Principles** investigating the work of others design strategies tools and equipment Students will revise in the summer term for their GCSE exam which is 50% of the GCSE grade 1. New and emerging technologies 2. Energy generation and storage 3. Developments in new materials 4. Systems approach to designing 5. Mechanical devices 6. Materials and their working properties 7. Progress check – assessment 8. Feedback, reteach and D.I.R.T lessons 9. Selection of materials or components 10. Forces and stresses 11. Ecological and social footprint 12. Sources and origins 13. Using and working with materials 14. Stock forms, types and sizes 15. Scales of production 16. Specialist techniques and processes 17. Surface treatments and finishes. 18. Progress check - assessment
Prior knowledge	KS3: Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion]		
CEIAG	**Link to careers routes:** product designers, carpenters, interior design, jewellery design, game design, engineering **Topics to be delivered by employers:** employers from building merchants		

Specific careers links	**Link to personal skills:** problem solving		
RRSA	Article 12: respect for the views of the child Article 13: freedom of expression Article 14: Freedom of thought, belief and religion	Article 3: best interests of the child Article 28: Right to education Article 29: Goals of education	Article 23: children with a disability Article29: Goal of an education Article 42: knowledge of rights
Cross curricular links	**Maths** – trigonometry; percentage waste **Science** – life cycle assessment; mechanical advantage **Geography** – life cycle assessment; renewable energy Literacy links in evaluation writing.		
Useful websites/videos	https://www.technologystudent.com/	http://mr-dt.com/	https://www.bbc.co.uk/bitesize/topics/zxhhvcw
Wider Reading	Identifying key words that are associated with research such a product analysis, anthropometric, ergonomics, design criteria, etc. Encourage students to books on design such as the design of everyday things by Don Norman		
Literacy Programme	• Decode it NOW • Guided practice/model answers • Sentence Starters • Writing strategies	• Review it now • Guided practice/model answers • Sentence Starters • Writing strategies	• Decode it NOW • Guided practice/model answers • Sentence Starters • Writing strategies
Independent Learning Tasks	Mind-map revision homework Retrieval practice homework Knowledge Organiser practice Questions.	Mind-map revision homework Retrieval practice homework Knowledge Organiser practice Questions.	Mind-map revision homework Retrieval practice homework Knowledge Organiser practice Questions.