

The Ecclesbourne School

Design & Technology	Year 12-13 A Level Product Design
<p>Intent</p> <p>In A Level Product Design we aim to deliver a Year 12 curriculum which all students can access and where every student acquires a comprehensive knowledge of how to design to a brief and for a specific target market. The knowledge gained will encourage students to recognise and appreciate the need for good design and quality manufacturing of products. We aim to develop within the students, a variety of skills and techniques including working safely, being able to follow instructions and the resilience to see a problem through to the end. During the Year 12 course students will enhance further their understanding of materials and processes through their small projects and theory work. Personal attributes such as perseverance, communication and independence will also be developed. The knowledge and practical skills developed in Year 12 students during the year, will enable them to continue their learning journey into the future, with the ability to work more independently and with a creative mind. They will have an increased confidence that they are able to complete the A Level course, achieve success in their NEA, as well as their exams and have an open mind to solve everyday problems which surround us on a day-to-day basis.</p> <p>Mathematics will be taught in year 12 via one hour a week with a Maths teacher.</p> <p>Literacy continue to be embedded into the A Level course and students are encouraged to write in detail about their designs and and justify all decisions which are made. Numeracy tasks are incorporated into projects and theory work.</p>	
<p>Implementation</p> <p>Pupils in Year 12 will consolidate their knowledge from KS4 and increase their awareness of materials and processes which are used in our everyday products. They will be complete a number of small practical tasks which involve precision, dexterity, and the ability to read detailed diagrams. Students learn more effectively when they can have a hands-on approach to their knowledge. Working with a greater variety of materials and processes will help embed the knowledge required for this A Level. We will give students the opportunity to work on their own, as well as support others in their group, while they investigate problems and learn from each other.</p> <p>Students will develop their skills to research, design and make, in a variety of different material areas, whilst being encouraged to be inspired by others and follow an iterative process through modelling and CAD skills. They will develop their technical knowledge and make informed decisions which consider the impact on our planet and the users of their final products.</p> <p>We will provide appropriate structure to tasks, to enable all students to make excellent progress. Clear communication skills are important to us and students will develop a variety of ways in which to explain their thoughts and draw up their ideas. Students will be given home learning activities to promote supported self-study. Long term memory will be developed through retrieval practice and knowledge organisers. Experienced staff allow the curriculum to be delivered to a high standard using a wide range of resources which have been developed over a number of years. These lessons are designed to encourage confidence and independence in the students, both in school and when learning at home.</p>	
<p>Impact</p> <p>A problem-solving approach to design, will enable students to think for themselves, become resourceful and take risks. Students will see how this curriculum links with many potential future careers and will hopefully inspire them to pursue their dreams in a creative or technological profession. Our students are the next generation of designers and engineers and we will teach them how to consider the impact we have on this planet and how we can help the people around us, by designing and making products which have good purpose and little impact at the end of their lifecycle. The Year 12 course prepares the students with a wealth of knowledge and skills to allow them to be successful in their A Level course, allowing them to work independelty on their NEA and prepare for their final exams.</p>	
<p>Links to prior learning</p> <p>The Year 12 curriculum builds on the skills learned in KS4, by consolidating and reinforcing pupils understanding of how to analyse products, research topics and design and make a small variety of items. The pupils knowledge of materials and processes from KS4 is developed in significant detail as they access a wider variety of media and machines, which allows for more creativity in their designs.</p>	
<p>Links to future learning</p> <p>The Year 12 Curriculum builds on the foundations of knowledge, application and practical skills required for success in the future, should they go on to study this subject at degree level or as a career. Following an intensive project such as the NEA in Year 13, will allow students to prepare for the requirement of projects at degree level and beyond. Working closely with their peers allows them to see that communication throughout a project is of vast importance. Their ability to communicate in their career will allow them to progress further and faster.</p>	
<p>Links to other subjects and the wider curriculum</p> <p>The development of strong technological vocabulary and the ability to discuss and reason their thoughts, will support language acquisition and extended writing skills. Mathematics is incorporated across the A Level and forms 15% of the overall marks. Advanced maths skills are to be taught by a maths teacher in year 13 for one hour a week. We will build on written skills and oracy through all schemes of work and encourage students to critically evaluate their own work and that of others. Links to Science and Humanities are widespread and include topics such as sources of materials, environmental issues during manufacture and the life cycle of the product.</p>	

7.1 Maths

Ref	Maths skills required	Potential applications: product design
a	Confident use of number and percentages	Calculation of quantities of materials, costs and sizes
b	Use of ratios	Scaling drawings
c	Calculation of surface areas and/or volumes	Determining quantities of materials
d	Use of trigonometry	Calculation of sides and angles as part of product design
e	Construction, use and/or analysis of graphs and charts	<p>Representation of data used to inform design decisions and evaluation of outcomes.</p> <p>Presentation of market data, user preferences, outcomes of market research.</p>
f	Use of coordinates and geometry	Use of datum points and geometry when setting out design drawings
g	Use of statistics and probability as a measure of likelihood	<p>Interpret statistical analyses to determine user needs and preferences.</p> <p>Use data related to human scale and proportion to determine product scale and dimensions.</p>

Week comm	MOCK TOPICS ARE HIGHLIGHTED IN RED MINI ASSESSMENTS SHOWN IN BLUE MOCKS IN YELLOW NEA deadlines				
	Yr 12 HRH 2 hours	Yr 12 SSH 3 hours	Yr 13 HRH 3 hours	Yr 13 SSH 2 hours	Yr 12 Maths 1 hour
Sept 4 th (Inset 1-2)	Th P4: Summer tasks discuss/mark 3.1.1 Materials and their applications- physical and mechanical properties (working characteristics) • product function • aesthetics • cost • manufacture and disposal. Foam modelling of handle Fri P3 Complete material properties and handle. Exam questions	Mon- P4 iNSET Tue P4- Inset Wed P3 3.1.1 Classifications and types of Softwoods Hardwoods	Tue p4- Inset Wed P2- Hand in summer work Theory: Re-cap polymer processes Modelling techniques lesson- Model two of your preferred designs Fri P3 Specification evaluation of design ideas Complete model of prefered designs.	No lesson due to inset days	Calculation of surface areas and/or volumes Determining quantities of materials
11 th	Thu P4: 3.1.1.4 Design and Communication F1 Fri P3 3.1.1.4 Design and Communication Modelling using foam.	Mon P4 3.1.2 Performance characteristics of woods Teak : Tue P4 3.1.4 Wood processes - joining - addition/fabrication - forming Wood joint Wood lathe Wed P3 3.1.4 Wood finishing	Tue P4 Summer work feedback Complete spec evaluation of design ideas. Wed P2 (Review –Ideas and begin Development) Fri P3 Continue development of designs	Mon P3 3.1.2 Performance characteristics of woods Teak 3.1.4 Wood processes - joining - addition/fabrication - forming Wood joint Tuesday P2 NEA Client feedback on initial ideas	Calculation of surface areas and/or volumes Determining quantities of materials

18th	<p>Thu P4</p> <p>3.1.2 Performance characteristics of papers and boards</p> <ul style="list-style-type: none">- types of- applications of <p>Papers and boards (Laminated card, corrugated card)</p> <p>Fri P3</p> <p>3.1.2 Performance characteristics of papers and boards</p> <ul style="list-style-type: none">- types of- applications of <p>Papers and boards (Laminated card, corrugated card)</p> <p>Continue modeeling mouse in foam</p>	<p>Mon- P4 3.1..4.5 Jigs and fixtures</p> <p>Tue P4- Try square (1 hour)</p> <p>Wed P3</p> <p>3.1.2 Performance characteristics of woods recap</p> <p>Continue 3.1.4 Wood processes</p> <ul style="list-style-type: none">- joining- addition/fabrication- forming <p>. .</p> <p>Wood joint</p> <p>Wood lathe</p>	<p>Tue P4</p> <p>Continue development of ideas sketching.</p> <p>Wed P2</p> <p>3.1.2 Performance characteristics of papers and boards</p> <ul style="list-style-type: none">- types of- applications of <p>Papers and boards (Laminated card, corrugated card)</p> <p>Modelling developed ideas.</p> <p>Fri P3</p> <p>Continue modelling of possible designs.</p>	<p>Mon P3 Recap Jigs and fixtures and 3.1.2 Performance characteristics of woods recap</p> <p>Continue 3.1.4 Wood processes</p> <ul style="list-style-type: none">- joining- addition/fabrication- forming <p>Wood lathe- Bowl turning</p> <p>Tues P2</p> <p>Recap design communication to support development of ideas sketching.</p>	<p>Use of ratios – calculating weights/volumes of material in ratio</p>
25th	<p>Thur P4</p> <p>3.1.4 Paper and board printing processes</p> <p>Die cutting</p> <p>Fri P3</p> <p>3.1.4 Paper and board forming processes</p> <p>3.1.3 Paper and board finishing</p> <p>Paper finishes (foil blocking, embossing, spot varnishing)</p>	<p>Mon P4</p> <p>3.1.4 Wood processes</p> <ul style="list-style-type: none">- joining- addition/fabrication- forming <p>Wood joint</p> <p>Wood lathe</p> <p>:</p> <p>Tue P4</p> <p>Try square finished</p> <p>Wed P3</p> <p>3.1.3 Wood enhancement</p>	<p>Tue P4</p> <p>Continue testing possible processes</p> <p>-Depends on students projects</p> <p>Wed P2</p> <p>Recap die cutting</p> <p>Continue testing processes</p> <p>Fri P3</p> <p>Continue testing processes</p>	<p>Mon P3 Recap wood enhancement</p> <p>Tues P2</p> <p>Begin testing processes</p> <p>-Depends on student's projects</p>	<p>Use of trigonometry- calculating lengths and angles</p>

Oct 2nd	<p>Thur P4 Revision for assessment</p> <p>Create net packaging design for Pizza slice design</p> <p>Fri P3 Mini assessment on Material properties, papaers and boards and design communication – self assess</p> <p>F11 M P2: 3.2.2 Design influences</p> <p>3.2.2 Design styles and movements</p> <p>F1 Tu P2 3.2.2 Designers and their work</p> <p>F11 Th P4 : Work on presentations on designers- this will be a group task students to present work on other designers to the class along with handouts etc.</p> <p>F11 M P2: 3.1.4 Polymer finishing -acrylic spray paints Using foam to make a to scale model of glue gun (1 hrs) finish by spraying!</p> <p>F1 Tu P2 3.1.2 Performance characteristics of polymer based sheet and film - types of - applications of</p> <p>3.1.2 Polymer stock forms</p> <p>F11 Th P4 : 3.1.3 Polymer processes -Injection moulding</p> <p>sketching pizza handle with markers</p>	<p>Mon- P4 3.1.2 Classifications and types of metals -Ferrous -Non-ferrous -Alloys -applications of</p> <p>Metals (gold, low carbon steel, stainless steel)</p> <p>Tue P4-</p> <p>3.1.2 Classifications and types of metals -Ferrous -Non-ferrous -Alloys -applications of</p> <p>Wed P3</p> <p>3.1.2 Performance characteristics of metals -stock forms</p>	<p>Tue P4 Continue testing possible processes</p> <p>-Depends on students projects</p> <p>Wed P2</p> <p>Continue testing processes</p> <p>Fri P3</p> <p>Give year 13 same Mini assessment as year 12. Mini assessment on Material properties, papaers and boards and design communication – self assess</p>	<p>Mon P3 3.1.2 Classifications and types of metals -Ferrous -Non-ferrous -Alloys -applications of</p> <p>Metals (gold, low carbon steel, stainless steel)</p> <p>Tues P2 Continue testing possible processes.</p>	<p>Use of trigonometry- calculating lengths and angles</p>
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9th	<p>Thur P4</p> <p>3.2.2 Design influences</p> <p>3.2.2 Design styles and movements</p> <p>Fri P3</p> <p>3.2.2 Designers and their work</p> <p>Students to prepare presentation-</p>	<p>Mon- P4</p> <p>3.1.3 Metal processes- extrusion</p> <p>-Metal enhancement</p> <p>Tue P4-</p> <p>3.1.4: Metal processes- Students should be aware of how metals can be shaped into 3D products.</p> <p>Wed P3</p> <p>Metal finishes (anodising)</p>	<p>Tue P4</p> <p>Continue testing possible processes</p> <p>-Depends on students projects</p> <p>Wed P2</p> <p>Start testing possible finishes.</p> <p>Fri P3</p> <p>Give year 13 same Mini assessment as year 12.</p> <p>Mini assessment on Material properties, papaers and boards and design communication – self assess</p>	<p>Mon P3</p> <p>3.1.2 Classifications and types of metals</p> <p>Metal finishes (anodising)</p> <p>Tues P2</p> <p>Continue testing possible finishes.</p>	<p>Using statistics, calculating probablity-likelihood</p>
16th	<p>Thur P4</p> <p>Students present work of others</p> <p>3.1.8 The requirements for product design and development</p> <p>Product development and improvement</p> <p>Critical analysis</p> <p>Start Product analysis task – tool box</p> <p>Fri P3</p> <p>Finish product analysis</p> <p>Box lid design on 2D Design based on design movement.</p>	<p>Mon- P4</p> <p>Metal enhancement</p> <p>Tue P4-</p> <p>3.1.4: Metal processes- Students should be aware of how metals can be shaped into 3D products</p> <p>Wed P3</p> <p>3.1.4: Metal processes- Students should be aware of how metals can be shaped into 3D products</p>	<p>Tue P4</p> <p>Continue testing possible finishes- begin fnalising materials, dimensions and processes.</p> <p>-Depends on students projects</p> <p>Wed P2</p> <p>.1.8 The requirements for product design and development</p> <p>Product development and improvement</p> <p>Critical analysis</p> <p>Start analysis of design against the specifciation</p> <p>Fri P3</p> <p>Finish analysis of evaluation and begin final design on CAD!</p>	<p>Mon P3</p> <p>3.1.2 Classifications and types of metals</p> <p>Metal finishes (anodising)</p> <p>Tues P2</p> <p>NEA</p> <p>Continue testing possible finishes/processes</p>	<p>Using statistics, calculating probablity-likelihood</p>

October 23rd	<p>Thur P4</p> <p>3.1.7 digital design- Laser cutting Complete 2D design of lid and submit</p> <p>Fri P3</p> <p>3.1.7 digital design CNC router (rebate, blind hole, counterbore hole)</p> <p>Box lid to be cut over half term.</p>	<p>Mon- P4</p> <p>Tue P4- 3.1.1 Classifications and types of</p> <p>Manufactured boards</p> <p>Wed P3</p> <p>3.1.2 Performance characteristics of manufactured boards</p> <p>Set revision for mini assessment after half term on</p> <p>Woods and metals properties and processes.</p>	<p>Tue P4</p> <p>Recap 3.1.7 digital design- laser cutting Final design</p> <p>Wed P2</p> <p>Recap 3.1.7 digital design CNC router (rebate, blind hole, counterbore hole)</p> <p>Final design</p> <p>Fri P3</p> <p>Final design Health and safety</p> <p>Section A-D Deadline (minus manufacturing specification, cutting list and plan for making</p>	<p>Mon P3</p> <p>Recap Tue P4- 3.1.1 Classifications and types of</p> <p>Manufactured boards</p> <p>Tues P2</p> <p>NEA Continue final design</p>	<p>Construction, use and/or analysis of graphs and charts</p> <p>Representation of data used to inform design decisions and evaluation of outcomes. Presentation of market data, user preferences, outcomes of market research</p>
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Half term					
Nov 6th	<p>Thur P4</p> <p>3.1.1 polymers materials and characteristics Polymers (ABS, HIPS, PLA)</p> <p>Fri P3</p> <p>3.1.1 polymers materials and characteristics Polymers (ABS, HIPS, PLA)</p>	<p>Mon- P4</p> <p>3.1.4. metal processes permanent and temporary joining methods for metals.</p> <p>Tue P4-</p> <p>3.1.4 metal wasting processes. 3.1.4 Complete metals and woods topic</p> <p>Wed P3</p> <p>Mini Assessment on woods/metals- self assess</p>	<p>Tue P4</p> <p>Recap 3.1.1 polymers materials and characteristics Polymers (ABS, HIPS, PLA)</p> <p>Order materials/start cutting list.</p> <p>Wed P2</p> <p>Continue manufacturing specficaiton</p> <p>Final design</p> <p>Fri P3</p> <p>Complete cutting list, manufactuing specification</p>	<p>Mon P3</p> <p>Recap 3.1.8 Product development and improvement - Ergonomics & Anthropometrics</p> <p>Tues P2</p> <p>NEA Begin manufacturing specification</p>	<p>Confident use of number and percentages/wastage</p> <p>Calculation of quantities of materials, costs and sizes</p>

13th	<p>Thur p4 3.1.2 performance characteristics of polymers</p> <p>Fri P3 3.1.2 performance characteristics of polymers</p>	<p>Mon- P4 3.1.2 Performance characteristics of composites</p> <p>Tue P4- 3.1.2 Performance characteristics of composites</p> <p>Wed P3 Start box construction Marking and drilling handle slots (hole saw-jigsaw)</p>	<p>Tue P4 Recap 3.1.4 Forming and distribution</p> <p>Rotational moulding, vac forming</p> <p>Complete final spec check</p> <p>Wed P2 Begin manufacturing final prototype</p> <p>Fri P3 Begin manufacturing final prototype Making diary update</p>	<p>Mon P3 Recap 3.2.9 Quality assurance and quality control</p> <p>Working with accuracy on a lathe</p> <p>Tues P2 NEA Client feedback on final design/final design spec evaluation</p> <p>:</p>	<p>Confident use of number and percentages</p> <p>Calculation of quantities of materials, costs and sizes</p>
20th	<p>Thur P4 Biodegradable polymers</p> <p>Fri P3 3.1.3 Enhancement of polymers</p>	<p>Mon- P4 3.1.9 Health & Safety – Safe working practices – risk assessment for BOX.</p> <p>Continue cutting and shaping handle</p> <p>Tue P4 3.1.2 Performance characteristics of smart materials</p> <p>Wed P3 3.1.2 Performance characteristics of smart materials</p> <p>Mark out for biscuit joint and start cutting.</p>	<p>Tue P4 Recap 3.1.4 Forming and distribution</p> <p>Rotational moulding, vac forming</p> <p>Complete final spec check</p> <p>Wed P2 Begin manufacturing final prototype</p> <p>Fri P3 Begin manufacturing final prototype Making diary update</p>	<p>Mon P3 Recap .1.7 digital design Virtual modelling</p> <p>FEA</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Construction, use and/or analysis of graphs and charts</p> <p>Representation of data used to inform design decisions and evaluation of outcomes. Presentation of market data, user preferences, outcomes of market research</p>

27th	<p>Thur P4 3.1.4 Forming and distribution</p> <p>Rotational moulding, vac forming</p> <p>Fri P3 3.1.4 Forming and distribution</p> <p>Rotational moulding, vac forming</p>	<p>Mon- P4 3.1.2 Performance characteristics of Modern Materials</p> <p>Tue P4- 3.1.2 Performance characteristics of Modern Materials</p> <p>Wed P3</p> <p>3.2.10 National and International Standards in product design</p>	<p>Tue P4 Recap 3.1.9 Health and safety Safe working practice Consumer safety of toys</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3</p> <p>Continue manufacturing final prototype</p> <p>Making diary update</p>	<p>Mon P3 Recap 3.2.9 Quality assurance and quality control</p> <p>Critical path analysis</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Construction, use and/or analysis of graphs and charts</p> <p>Representation of data used to inform design decisions and evaluation of outcomes. Presentation of market data, user preferences, outcomes of market research</p>
December 4th	<p>Thur P4 3.1.2 Thermosets</p> <p>Fri P3</p> <p>3.1.3 Polymer processes - Compression moulding</p>	<p>Mon- P4 3.2.10 National and International Standards in product design</p> <p>Tue P4- 3.1.9 Safety in products and services to the customer</p> <p>Wed P3 3.1.4.5 The use of adhesives- glue box together.</p> <p>Continue with box- routing and glueing MDF box</p>	<p>Tue P4 Recap polymers thermosets</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3</p> <p>Continue manufacturing final prototype</p>	<p>Mon P3 Recap 3.1.1 Jigs and fixtures</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Using statistics, calculating probability-likelihood</p>

11th	<p>Thur P4 Design for manufacturing, maintenance, repair and disposal Manufacture, repair, maintenance and disposal</p> <p>F1 Tu P2 Revisit polymers Ready for assessment</p>	<p>Mon- P4 3.1.6 Modern industrial and commercial practice -scales of production -Efficient use of materials</p> <p>Tue P4- .1.6 Modern industrial and commercial practice -The use of computer systems Bought in components -Sub assembly</p> <p>Wed P3 3.1.11 Design for manufacturing, ease of manufacture. Continue with box.</p>	<p>Tue P4 Recap 3.1.13 Enterprise and marketing in the development of products Market research</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3 Continue manufacturing final prototype</p>	<p>Mon P3 Recap 3.1.10 Protecting designs and intellectual property Open design</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Use of coordinates and geometry</p> <p>Use of datum points and geometry when setting out design drawings</p>
18th /	<p>Thur P3 Polymers revision</p> <p>Fri P4 Minin assessment on Polymers</p>	<p>Mon- P4 3.1.10 Protecting designs and intellectual property</p> <p>Tue P4- 3.1.8 Product development and improvement -Ergonomics & Anthropometrics</p> <p>Wed P3 Complete box consturction-sealing ready for painting Set up revision of topics for after christmas</p>	<p>Tue P4 Mini assessment on polymers</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3 Continue manufacturing final prototype</p>	<p>Mon P3 Recap 3.1.11 Design for maintenance and repair Vertical in house production</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Use of coordinates and geometry</p> <p>Use of datum points and geometry when setting out design drawings</p>
Christm as					
Jan 9th	<p>Thur P4 3.2.3 How technology and cultural changes can impact on the work of designers Socio economic infuences</p> <p>Fri P3 3.2.3 How technology and cultural changes can impact on the work of designers Socio economic infuences</p>	<p>Mon- P4 3.1.11 Design for manufacturing, Disassembly</p> <p>Tue P4- 3.1.12 Feasibility studies</p> <p>Prototypes</p> <p>Wed P3 Mini assessment on topics till no</p>	<p>Mocks</p>	<p>Mocks</p>	<p>Use of trigonometry- calculating lengths and angles</p>

15th	<p>Thur P4 3.1.6.2 Efficient use of materials Sub assembly</p> <p>Fri P3 3.2. 5.- Testing and evaluating products in commercial products</p>	<p>Mon- P4 3.2.3.4 Product life cycle</p> <p>Tue P4- Recap metal processes based on assessment Marking out and cutting metal frame for tray</p> <p>Wed P3 Recap metal processes based on assessment Marking out , drilling and filing metal tray section</p>	<p>Tue P4 Continue manufacturing final prototype</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3 Continue manufacturing final prototype</p>	<p>Mon P3 NEA Continue manufacturing final prototype</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Use of trigonometry- calculating lengths and angles</p>
22nd	<p>Thur P4 3.1.8 The requirements for product design and development Product development and improvement</p> <p>Fri P3 3.1.8 The requirements for product design and development Product development and improvement Inclusive design</p>	<p>Mon- P4 3.2.6 Selecting appropriate tools, equipment and processes- Consider projects covered so far tools used revisit</p> <p>Tue P4- 3.2.6 Selecting appropriate tools, equipment and processes- Consider projects covered so far tools used revisit</p> <p>Wed P3 3.2.9 Quality assurance and quality control</p> <p>Working with accuracy on a lathe to make handle for box.</p>	<p>Tue P4 Continue manufaturing final prototype</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3 Continue manufacturing final prototype</p> <p>Making diary update</p>	<p>Mon P3 NEA Continue manufacturing final prototype</p> <p>Tues P2 NEA Continue manufacturing final prototype</p>	<p>Confident use of number and percentages/wastage</p> <p>Calculation of quantities of materials, costs and sizes</p>
28th	<p>Thur P4 3.2.7 Accuracy in design and manufacture-</p> <p>Fri P3 3.1.6 Modern industrial and commercial practice Scales of productio</p>	<p>Mon- P4 3.1.7 digital design Virtual modelling</p> <p>FEA</p> <p>Tue P4 P4 3.1.7 digital design Virtual modelling</p> <p>FEA</p> <p>Wed P3 3.2.9 Quality assurance and quality control</p> <p>Critical path analysis</p>	<p>Tue P4 Continue manufaturing final prototype</p> <p>Wed P2 Continue manufacturing final prototype</p> <p>Fri P3 Continue manufacturing final prototype</p> <p>Making diary update</p>	<p>Mon P3 NEA Continue manufacturing final prototype</p> <p>Tues P2 NEA Continue manufacturing final prototype</p> <p>:</p>	<p>Confident use of number and percentages/wastage</p> <p>Calculation of quantities of materials, costs and sizes</p>

Feb 5th	<div>Thur P4 3.1.6 Modern industrial and commercial practice Scales of production</div> <div>Revise areas found on previous mini assessment</div>	<div>Mon- P4 3.1.2 Elastomers</div> <div>Tue P4 3.1.2 Elastomers</div> <div>Wed P3 3.2.9 Quality assurance and quality control Finish handle for box</div>	<div>Tue P4 Continue manufcaturing final prototype</div> <div>Wed P2 Continue manufacturing final prototype</div> <div>Fri P3 Continue manufacturing final prototype</div> <div>Making diary update</div>	<div>Mon P3 NEA Continue manufacturing final prototype</div> <div>Tues P2 NEA Continue manufacturing final prototype</div>	<div>Confident use of number and percentages/wastage</div> <div>Calculation of quantities of materials, costs and sizes</div>
12th	<div>Thur P4 3.1.6.2 Efficient use of materials The use of computer systems</div> <div>Fri P3 3.1.6.2 Efficient use of materials The use of computer systems</div> <div>Revise for this half terms topics</div>	<div>Mon- P4 3.1.1. Methods for investigating and testing material</div> <div>Tue P4- 3.1.1. Methods for investigating and testing material</div> <div>Wed P3 3.1.1 Jigs and fixtures Braising metal frame</div> <div>Revise for this half terms topics</div>	<div>Tue P4 Continue manufcaturing final prototype</div> <div>Wed P2 Continue manufacturing final prototype</div> <div>Fri P3 Continue manufacturing final prototype</div> <div>Making diary update</div> <div>Section A-D hand in</div>	<div>Mon P3 NEA Continue manufacturing final prototype</div> <div>Tues P2 NEA Continue manufacturing final prototype</div> <div>:</div>	<div>Areas of weaknesses to be identified and plan put in place prior to fmock exam.</div>
Half term	Evaluate final product with client/photograph				
26th	<div>Thur P4 3.2.3 Socio economic influences</div> <div>Fri P3 3.2.3 Socio economic influences-</div> <div>F11 Th P4 Mini assessment – self asses</div>	<div>Mon- P4 3.1.10 Protecting designs and intellectual property</div> <div>Open design</div> <div>Tue P4- 3.1.10 Protecting designs and intellectual property</div> <div>Open design</div> <div>Wed P3 Mini assessment – self asses</div>	<div>Tue P4 NEA evaluation – client feedback write-up with photographs</div> <div>Wed P2 NEA evaluation – client feedback write-up with photographs</div> <div>Fri P3 NEA evaluation – client feedback write-up with photographs</div>	<div>Mon P3 NEA Evaluation- making diary</div> <div>Tues P2 NEA Evaluation- making diary</div>	<div>Areas of weaknesses to be identified and plan put in place prior to fmock exam.</div>

Mar 4th	<p>Thur P4 3.1.9 Health and safety Safe working practice Consumer safety of toys</p> <p>Fri P3 3.1.8 The requirements for product design and development</p> <p>Inclusive design</p>	<p>Mon- P4 3.1.13 Enterprise and marketing in the development of products</p> <p>Tue P4- 3.2.3 Major developments in technology.</p> <p>Wed P3 Re-cao metal finishes dip coat frame)</p>	<p>Tue P4 NEA evaluation – Third party feedback</p> <p>Wed P2 NEA evaluation – Third party feedback and own opinion</p> <p>Fri P3 NEA evaluation – Own opinion on final design.</p>	<p>Mon P3 NEA making diary</p> <p>Tues P2 NEA Making diary</p>	<p>Areas of weaknesses to be identified and plan put in place prior to mock exam.</p>
11th	<p>Thur P4 3.1.8 The requirements for product design and development</p> <p>Inclusive design</p> <p>FRI p3 3.1.13 Enterprise and marketing in the development of products Market research</p>	<p>Mon- P4 3.2.3 Major developments in technology.</p> <p>Tue P4- 3.2.3 Major developments in technology.</p> <p>Wed P3 Coninute with box</p>	<p>Tue P4 NEA evaluation – Test against specification</p> <p>Wed P2 NEA evaluation – Test against specification</p> <p>Fri P3 NEA evaluation – Test against specification</p> <p>Sections A-E Mini coursework deadline (final feedback opportunity)</p>	<p>Mon P3 NEA test against specification</p> <p>Tues P2 NEA test against specification</p>	<p>Areas of weaknesses to be identified and plan put in place prior to mock exam.</p>
18th	<p>Thur P4 3.1.13 Enterprise and marketing in the development of products Market research</p> <p>Fri P3 3.1.7 Electronic data interchange Production, planning and control (PPC) networking</p>	<p>Mon- P4 3.2.5 Ctritical analysis and evaluation-</p> <p>Tue P4- 3.2.5 Ctritical analysis and evaluation-</p> <p>Wed P3 Continue with box</p>	<p>Tue P4 NEA evaluation – Modifications</p> <p>Wed P2 NEA evaluation – Modifications</p> <p>Fri P3 NEA evaluation – Final improvements</p>	<p>Mon P3 NEA Modification</p> <p>Tues P2 NEA Modifications</p>	<p>Areas of weaknesses to be identified and plan put in place prior to mock exam.</p>
25th	<p>Thur P4 3.2.8 Conservation of energy and resources</p> <p>Fri P3 Discuss NEA launch</p> <p>Revise topics and come back with a possible problem to solve.</p>	<p>Mon P4 - 3.2.3 How technology and cultural changes can impact on the work of designers</p> <p>Social, moral and ethical</p> <p>Tue P4- 3.2.3.4 Product life cycle</p> <p>Wed P3 Continue with box Revise for mini assessment</p>	<p>Tue P4 NEA evaluation – Final improvements</p> <p>Wed P2 NEA evaluation – Final improvements</p> <p>Fri P3 NEA evaluation – Final improvements</p>	<p>Mon P3 NEA modifications</p> <p>Tues P2 NEA Modifications</p>	<p>Areas of weaknesses to be identified and plan put in place prior to final exam.</p>
		Easter Holidays	Mark students work		

April 15th	<p>Thur P4 <i>NEA begins- present ideas to HRH and SHH Year 10.</i></p> <p>Fri P3 Mini assessment on topics- self asses</p>	<p>Mon- P4 revise topics- finish box</p> <p>Tue P4- revise topics – finish box</p> <p>Wed P3 Mini assessment- self assess</p>	Coursework deadline	Coursework deadline	Areas of weaknesses to be identified and plan put in place prior to mock exam.
22nd	<p>Thur P4 3.2.4 Design processes The use of a design process</p> <p>Fri P3 NEA- Mindmap start</p>	<p>Mon- P4 3.1.11 Design for maintenance and repair Vertical in house production</p> <p>Tue P4- 3.1.11 Design for maintenance and repair Vertical in house production</p> <p>Wed P3 Revision tbc depending on weaker areas and incomplete topics</p>	<p>Tue P4 NEA evaluation – Final improvements</p> <p>Wed P2 NEA evaluation – Final improvements</p> <p>Fri P3 NEA evaluation – Final improvements</p>	<p>Mon P3 Revise tbc based on mocks and previous weak areas</p> <p>Tues P2 Revise tbc based on mocks and previous weak areas</p>	Areas of weaknesses to be identified and plan put in place prior to mock exam.
29th	<p>Thur P4 Revise weaker topics</p> <p>Fri P3 Situation page</p>	<p>Mon- P4 – Revision tbc depending on weaker areas and incomplete topics</p> <p>Tue P4- NEA – Complete mindmap</p> <p>Wed P3 Revision tbc depending on weaker areas and incomplete topics</p>	<p>Tue P4 NEA evaluation – complete paperwork</p> <p>Wed P2 NEA evaluation – complete paperwork</p> <p>Fri P3 NEA evaluation – Final submission- students given score out of 100 for NEA.</p>	<p>Mon P3 Revise tbc based on mocks and previous weak areas</p> <p>Tues P2 Revise tbc based on mocks and previous weak areas</p>	Areas of weaknesses to be identified and plan put in place prior to mock exam.
May 6th	<p>Thur P4 <i>Revision lesson TBC- prep for mocks</i></p> <p>Fri P3 Gaant chart start</p>	<p>M Mon- P4 – Revision tbc depending on weaker areas and incomplete topics</p> <p>Tue P4- Complete situation page</p> <p>Wed P3 Revision tbc depending on weaker areas and incomplete topics</p>	<p>Tue P4 Revise tbc based on mocks and previous weak areas</p> <p>Wed P2 Revise tbc based on mocks and previous weak areas</p> <p>Fri P3 Revise tbc based on mocks and previous weak areas</p>	<p>Mon P3 Revise tbc based on mocks and previous weak areas</p> <p>Tues P2 Revise tbc based on mocks and previous weak areas</p>	Areas of weaknesses to be identified and plan put in place prior to mock exam.

13th	<div>Thur P4 Revision lesson TBC- prep for mocks</div> <div>Fri P3 Start secondary research</div>	<div>Mon- P4 Revision tbc depending on weaker areas and incomplete topics Tue P4- Complete gaant chart</div> <div>Wed P3</div> <div>Revision tbc depending on weaker areas and incomplete topics</div>	<div>e P4 Revise tbc based on mocks and previous weak areas</div> <div>Wed P2 Revise tbc based on mocks and previous weak areas</div> <div>Fri P3</div> <div>Revise tbc based on mocks and previous weak area</div>	<div>Mon P3 NEA SUBMISSION</div> <div>Revise tbc based on mocks and previous weak areas</div> <div>Tues P2 Revise tbc based on mocks and previous weak areas</div>	<div>Areas of weaknesses to be identified and plan put in place prior to mock exam.</div>
20th	<div>Thur P4 Revision lesson TBC- prep for mocks</div> <div>Fri Continue with secondary research</div> <div>Set to complete secondary research and find product to dissassemble</div>	<div>Mon- P4 Revision tbc depending on weaker areas and incomplete topics Tue P4- Continue with secondary research</div> <div>Wed P3</div> <div>Revision tbc depending on weaker areas and incomplete topics</div>	<div>e P4 Revise tbc based on mocks and previous weak areas</div> <div>Wed P2 Revise tbc based on mocks and previous weak areas</div> <div>Fri P3</div> <div>Revise tbc based on mocks and previous weak area</div>	<div>Mon P3</div> <div>Revise tbc based on mocks and previous weak areas</div> <div>Tues P2 Revise tbc based on mocks and previous weak areas</div>	<div>Areas of weaknesses to be identified and plan put in place prior to mock exam.</div>
		Half Term			
June 3rd	<div>Thur P4 Revision lesson TBC- prep for mocks</div> <div>Fri P3 Complete product disassembly</div> <div>NEA check 1</div>	<div>Mon- P4 Revision tbc depending on weaker areas and incomplete topics Tue P4- NEA product disassembly</div> <div>Wed P3</div> <div>Revision tbc depending on weaker areas and incomplete topics</div>			
10th	<div>Thur P4 Revision lesson TBC- prep for mocks</div> <div>Fri P3 NEA Environemtal study</div>	<div>Mon- P4 Revision tbc depending on weaker areas and incomplete topics Tue P4- NEA Environmental study</div> <div>Wed P3</div> <div>Revision tbc depending on weaker areas and incomplete topics</div>			
17th	<div>Thur P4 Revision lesson TBC- prep for mocks</div> <div>Fri P3 Complete environmental study</div>	<div>Mon- P4 Round up of topics and focussed revision lessons for Mocks</div> <div>Tue P4- Round up of topics and focussed revision lessons for Mocks</div> <div>Wed P3</div> <div>Round up of topics and focussed revision lessons for Mocks</div>			

24th	Mocks	Mocks			
July 1st	Thur P4 NEA Identification of client/questionnaire Fri P3 NEA Identification of client/questionnaire NEA check 2	Mon- P4 NEA Anthropometrics and ergonomics Tue P4- NEA Anthropometrics and ergonomics Wed P3 Practical round up			
8th	Thur P4 NEA Design ideas (initial concepts) Fri P3 NEA Design ideas (initial concepts)	Mon- P4 Design brief Tue P4- Design brief Wed P3 Specification			
15th	Thur P4 NEA Design ideas Fri P3 NEA Design ideas	Mon- P4 Design ideas Tue P4- Design ideas Wed P3 NEA feedback and summer design work set.			
22nd		Mon P4 Discuss and ensure summer work is set to complete design ideass section A-C deadline			

Be very wary of setting exam questions from the old spec for homework, as all of the mark schemes are freely available on the AQA website. It is much better to use the questions as a starter or plenary to your lesson. Any papers on eAQA, not released to the public will be used as the PPE. **Do not use any of these questions for revision purposes.**