

**Curriculum Plan: BTEC Art & Design Year 12**

	Enquiry Question(s)	Key Content	Key Assessments	Further Learning at Home
Term 1a	<p>How do I understand explore visual recording and communication?</p> <p>A1 Visual recording and communication in the work of others</p> <p>A2 Understanding formal elements in the work of others</p> <p>B1 Recording from primary and secondary sources</p> <p>Explore observational recording from primary sources</p>	<ul style="list-style-type: none"> <li>Examination of the ways that others visually record and communicate considering:</li> <li>content – theme, ideas, interpretation of a brief, contextual factors</li> <li>form – formal elements, use, purpose</li> <li>process – the use of materials, techniques and processes</li> <li>mood – the use of visual language to convey meaning, creative intentions</li> <li>how the application of materials, techniques and processes impact on the communication of an image</li> <li>.</li> </ul>	EA1 – Visual recording and analysis of a selected piece of artwork. Using artist techniques to reflect this.	<ul style="list-style-type: none"> <li>Revise BTEC National Art and Design Revision Workbook.</li> <li>Revise Btec National Art and Design Revision guide.</li> <li><a href="http://www.textileartist.org">www.textileartist.org</a></li> </ul>
Term 1b	<p>How do I develop my visual recording and communication skills</p> <p>C 1 Extend own visual recording and communication skills</p> <p>Experimentation and investigation</p> <p>C2 Apply visual recording skills to communicate creative intentions</p>	<ul style="list-style-type: none"> <li>Explore observational recording from primary sources:</li> <li>2D recording</li> <li>3D recording</li> <li>image recording with camera and/or film</li> <li>explore the use of secondary sources for visual recording:</li> <li>internet</li> <li>books, magazines, journals</li> <li>film, photographs, animation, video</li> <li>music/audio.</li> </ul> <p>Explore manipulation of materials, techniques and processes to communicate creative intentions.</p>	Ongoing feedback on progression through development of recording.	<ul style="list-style-type: none"> <li><b>Revise BTEC National Art and Design Revision Workbook.</b></li> <li><b>Revise Btec National Art and Design Revision guide.</b></li> <li><b>Think Like an Artist: . . . and Lead a More Creative, Productive Life Kindle Edition</b></li> <li>by Will Gompertz</li> <li><a href="http://www.textileartist.org">www.textileartist.org</a></li> </ul>
Term 2a	<p>D1 Review of the quality of research, outcomes, experimentation in relation to outcome</p> <p>D2 Identification of visual recording and communication skills developmental needs</p>	<ul style="list-style-type: none"> <li>. Ideas generation, selection, refinement and development.</li> <li>Use of imagery.</li> <li>Visual language.</li> <li>Formal elements.</li> <li>Purpose, meaning and intention.</li> <li>Use of materials, techniques and processes.</li> <li>Contextual influences.</li> <li>Justification of creative decisions.</li> </ul>		<ul style="list-style-type: none"> <li><b>Revise BTEC National Art and Design Revision Workbook.</b></li> <li><b>Revise Btec National Art and Design Revision guide.</b></li> <li><b>Think Like an Artist: . . . and Lead a More Creative, Productive Life Kindle Edition</b></li> <li>by Will Gompertz</li> <li><a href="http://www.textileartist.org">www.textileartist.org</a></li> </ul>

Term 2b	<p>Learning aim A: Understand the stages and activities within the creative process</p> <p>A1 Stages within the creative process</p> <p>A2 Activities within the creative process</p>	<ul style="list-style-type: none"> <li>• Initial response</li> <li>• Research</li> <li>• Ideas generation</li> <li>• Visual recording</li> <li>• Selection and exploration of materials, techniques and processes.</li> <li>• Recording insights about techniques explored.</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Revise BTEC National Art and Design Revision Workbook.</b></li> <li>• <b>Revise Btec National Art and Design Revision guide.</b></li> <li>• <b>Think Like an Artist: . . . and Lead a More Creative, Productive Life Kindle Edition</b></li> <li>• by Will Gompertz www.textileartist.org</li> </ul>
Term 3a	<p>B1 How the stages and activities in the creative process interrelate</p> <p>C1 Plan the use of creative process to produce art and design work</p>	<ul style="list-style-type: none"> <li>• Define creative intention.</li> <li>• Carry out contextual research, evaluating others' use of visual recording techniques, annotating examples.</li> <li>• Summaries and communicate the intended purpose.  Define the potential outcome.</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Revise BTEC National Art and Design Revision Workbook.</b></li> <li>• <b>Revise Btec National Art and Design Revision guide.</b></li> <li>• <b>Think Like an Artist: . . . and Lead a More Creative, Productive Life Kindle Edition</b></li> <li>• by Will Gompertz</li> <li>• www.textileartist.org</li> </ul>
Term 3b	<p>C2 Application of creative process to produce art and design work</p> <p>D1 Present work showing application of the creative process</p> <p>D2 Review own use of the creative process</p>	<p>Stages, techniques and approaches applied in own creative process.</p> <p>Specific techniques and approaches explored.</p> <p>Breadth and depth of research and how it supported ideas and realisation.</p> <p>Was planning stage realistic and manageable?</p> <p>Were visual recording techniques effective?</p> <p>Application of ideas generation techniques.</p> <p>Suitability, fitness for purpose, communication and creative intention of skills and techniques.</p> <p>How different stages and activities interrelated.</p> <p>Presentation techniques and explanations.</p>	Complete internal assessment	<ul style="list-style-type: none"> <li>• <b>Revise BTEC National Art and Design Revision Workbook.</b></li> <li>• <b>Revise Btec National Art and Design Revision guide.</b></li> <li>• <b>Think Like an Artist: . . . and Lead a More Creative, Productive Life Kindle Edition</b></li> <li>• by Will Gompertz www.textileartist.org</li> </ul>

**Curriculum Plan: Biology Year 12**

	<b>Enquiry Question(s)</b>	<b>Key Content</b>	<b>Key Assessments</b>	<b>Further Learning at Home</b>
Term 1a	What factors affect health?	Topic 1 <ul style="list-style-type: none"> <li>• Circulatory System</li> <li>• Cardiac cycle</li> <li>• The effect of caffeine on the heart</li> <li>• Atherosclerosis</li> <li>• Blood clotting</li> <li>• Cardiovascular disease</li> <li>• Evaluation of studies that determine health risk factors</li> <li>• Factors that increase cardiovascular diseases</li> </ul>	1. EA1 Exam	<u>Reading List:</u>  <b>Salters-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 1: p.2-55</li> </ul>
Term 1b		Monosaccharides, disaccharides and polysaccharides <ul style="list-style-type: none"> <li>• Investigate vitamin C content in food</li> <li>• Analyse data on energy budgets and diet</li> <li>• Synthesis of triglycerides</li> <li>• Saturated and unsaturated lipids.</li> <li>• Blood cholesterol levels</li> <li>• Treatments for cardiovascular disease</li> </ul>	2. Mock exam on Topic 1	<u>Reading List:</u>  <b>Salters-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 1: p.2-55</li> <li>• Topic 2: p.56-103</li> </ul>
Term 2a	How are genes and health linked?	Topic 2 <ul style="list-style-type: none"> <li>• Gas exchange surfaces in organisms</li> <li>• Diffusion</li> <li>• Amino acids</li> <li>• Proteins</li> <li>• Cell membranes</li> <li>• Osmosis</li> <li>• Enzymes</li> <li>• Mononucleotides</li> <li>• DNA</li> <li>• Genetic code</li> <li>• Mutations</li> <li>• Genetic screening</li> </ul>	3. EA2 Exam	<u>Reading List:</u>  <b>Salters-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 2: p.56-103</li> <li>• Topic 3: p.104-149</li> </ul>
	Term 2b	Topic 3 <ul style="list-style-type: none"> <li>• Eukaryotic cells</li> <li>• Prokaryotic cells</li> <li>• Gametes and fertilisation</li> <li>• Mitosis</li> <li>• Meiosis</li> <li>• Stem cells</li> <li>• Epigenetic changes</li> </ul>	4. Mock exam on Topic 2	<u>Reading List:</u>  <b>Salters-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 3: p.104-149</li> </ul>

	Enquiry Question(s)	Key Content	Key Assessments	Further Learning at Home
Term 3a	What is biodiversity? What are our natural resources?	Topic 4 <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Measuring biodiversity</li> <li>• Comparing biodiversity</li> <li>• Understanding niche</li> <li>• Natural selection</li> <li>• Classification</li> <li>• Plant cells</li> <li>• Structures of starch and cellulose</li> <li>• Sclerenchyma fibres, xylem vessels and phloem</li> <li>• Water and inorganic ions</li> <li>• Drug testing</li> <li>• Bacterial growth</li> <li>• Uses of plant fibres and starch</li> <li>• Conservation</li> </ul>	AS Level Paper 1: PM Tuesday 21 <sup>st</sup> May 2019  AS Level Paper 2: AM Friday 24 <sup>th</sup> May 2019	<u>Reading List:</u>  <b>Salter's-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 4: p.450-205</li> </ul>
Term 3b			5. Test on Topic 3 and 4	<u>Reading List:</u>  <b>Salter's-Nuffield AS/ A level Biology 1 – Pearson</b> (ISBN: 978-1447991007) <ul style="list-style-type: none"> <li>• Topic 4: p.450-205</li> </ul>

### Curriculum Plan: Chemistry Year 12

	Enquiry Question(s)	Key Content	Key Assessments*	Further Learning at Home
Term 1a	How are particles in an atom arranged? What are the patterns of a periodic table?	Topic 1 <ul style="list-style-type: none"> <li>• Structure of an atom</li> <li>• Relative masses</li> <li>• Evidence for electronic structure</li> <li>• Periodic properties</li> </ul>	1 EA1 Exam	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>• Topic 1: p.12-37</li> <li>• Topic 5: p.119-149</li> </ul>
	What can calculations tell us about the amount of substances?	Topic 5 <ul style="list-style-type: none"> <li>• Chemical quantities</li> <li>• Finding formulae</li> <li>• Amounts of gases</li> <li>• Calculations from equations</li> <li>• Solutions</li> <li>• Titrations</li> </ul>		
Term 1b	What are the different structures of substances?	Topic 2 <ul style="list-style-type: none"> <li>• Structures and bonding</li> <li>• Ionic structures</li> <li>• Covalent structures</li> <li>• Shapes of molecules</li> <li>• Polarity</li> <li>• Giant covalent structures</li> <li>• Metallic bonding</li> </ul>	2 Mock exam Topic 2 and 3	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>• Topic 2: p.38-80</li> <li>• Topic 3: p.81-93</li> </ul>
	What is a redox reaction?	Topic 3 <ul style="list-style-type: none"> <li>• Oxidation and reduction</li> <li>• Equations to explain redox</li> <li>• Oxidation numbers</li> </ul>		
Term 2a	What are the properties of the different groups of the periodic table?	Topic 4 <ul style="list-style-type: none"> <li>• Groups of the periodic table</li> <li>• Thermal stability of carbonates and nitrates</li> </ul>	3 EA2 Exam	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>• Topic 4: p.94-118</li> <li>• Topic 6.1: p.150-170</li> </ul>
	What is organic chemistry?	Topic 6.1 <ul style="list-style-type: none"> <li>• Functional groups</li> <li>• Naming Organic Compounds</li> <li>• Isomerism</li> <li>• Types of organic compounds</li> <li>• Reaction mechanisms</li> </ul>		

	Enquiry Question(s)	Key Content	Key Assessments*	Further Learning at Home
Term 2b	What are alkanes and alkenes?	Topic 6.2 <ul style="list-style-type: none"> <li>Alkanes</li> <li>Reactions of alkanes</li> <li>Fuels from crude oil</li> <li>Alkenes</li> <li>E/Z isomerism</li> <li>Reactions of alkenes</li> </ul>	4 Mock exam on Organic Chemistry	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>Topic 6.2: p.171-201</li> <li>Topic 5: p.202-224</li> </ul>
	What are halogenoalkanes and alcohols?	Topic 6.3 <ul style="list-style-type: none"> <li>Halogenoalkanes</li> <li>Alcohols</li> </ul>		
Term 3a	How can we analyse a compound?	Topic 7 <ul style="list-style-type: none"> <li>Mass spectra of organic compounds</li> <li>Infrared Spectra</li> </ul>	AS Level Paper 1: AM Monday 20 <sup>th</sup> May 2019  AS level Paper 2 AM Thursday 23 <sup>rd</sup> May 2019	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>Topic 7: p.225-236</li> <li>Topic 8: p.237-261</li> </ul>
	How can we apply energetics to chemical reactions?	Topic 8 <ul style="list-style-type: none"> <li>Energy changes</li> <li>Enthalpy changes</li> <li>Standard enthalpy changes</li> <li>Hess's law</li> </ul>		
Term 3b	How can we measure a chemical reaction?	Topic 9 <ul style="list-style-type: none"> <li>Reaction rates</li> <li>Collision theory</li> </ul>	5 Test on Topics 9 and 10	<u>Reading List:</u>  <b>Edexcel A-Level Chemistry book 1 - Hodder</b> (ISBN: 978-1471807466) <ul style="list-style-type: none"> <li>Topic 9: p.262-273</li> <li>Topic 8: p.273-285</li> </ul>
	How can we affect a reversible reaction?	Topic 10 <ul style="list-style-type: none"> <li>Reversible changes</li> <li>Reaching equilibrium</li> <li>Dynamic Equilibrium</li> <li>Equilibrium constants</li> </ul>		

## Curriculum Plan: Design & Technology

Year 12: Core and additional HL core issues

Year 13: **Design Project, Group 4 Project** (see end of plan) and **teacher directed time** – focused teaching design

Syllabus component	Teaching hours	
	SL	HL
<b>Core</b>		<b>90</b>
1. Human factors and ergonomics		12
2. Resource management and sustainable production		22
3. Modelling		12
4. Raw material to final product		23
5. Innovation and design		13
6. Classic design		8
<b>Additional higher level (AHL)</b>	Ignore the standard level	<b>54</b>
7. User-centred design (UCD)		12
8. Sustainability		14
9. Innovation and markets		13
10. Commercial production		15
<b>Practical work</b>		<b>96</b>
Design project		60
Group 4 project		10
Teacher-directed activities		26
<b>Total teaching hours</b>		

The recommended teaching time is 240 hours to complete HL courses and 150 hours to complete SL courses as stated in the document *General regulations: Diploma Programme* (2011) (page 4 article 8.2).

Component	Overall weighting (%)	Approximate weighting of objectives (%)		Duration (hours)
		1+2	3	
Paper 1	20	20		1
Paper 2	20	8	12	1½
Paper 3	20	10	10	1½
<b>Internal assessment Design project</b>	<b>40</b>	All assessment objectives are tested equally		<b>60</b>

## Year 12 Core and HL Principles

term	Enquiry Question(s)	Key Content	hours ....(....)	Key Assessments	Further Learning at Home
1	How is the data in Anthropometric books applied to the 3 types of ergonomics?	Unit 1 Human factors and ergonomics Unit 2 Resources and sustainability Unit 3 Modelling	(12) (22) (12)	KA1	Page 1-15. Questions on last page Page 17-54 Questions on last page Page 55-78 Questions on last page
2	Can you describe 3 key differences between sustainability and renewables?	Unit 4 Raw materials to production <b>DESIGNPROJECT1 (practice)</b>	(23) (22)	KA2	Page 79-170 Questions on last page
3 (HL)	How have the innovations of Philip Stark and Sir Norman Foster contributed to modernist thinking?	Unit 5 Innovation in design Unit 6 Classic Design Unit 7 User Centred Design	(13) (8) (12)	KA3	Page 171-205 Questions on last page Page 207- 216 Questions on last page Page 217-234 Questions on last page
4	Which key international laws have influenced sustainability?	Unit 8 Sustainability Unit 9 Innovation and Markets Unit 10 Commercial Production	(14) (13) (15)	KA4	Page 235-256 Questions on last page Page 257-276 Questions on last page Page 277-295 Questions on last page
5	NA	Design Project (TBA) see below	(50)	KA5	NA
6	NA	Design Project (TBA) see below	(50)	KA6	NA

### HL Design Project component Duration: 60 hours Weighting: 40%

**Individual design project • This design project covers assessment objectives 1, 2, 3 and 4.**

- At HL, the design project is assessed against the 4 common criteria and 2 HL only criteria:
  - Criterion A: Analysis of a design opportunity
  - Criterion B: Conceptual design
  - Criterion C: Development of a detailed design
  - Criterion D: Testing and evaluation
  - Criterion E: Commercial production
  - Criterion F: Marketing strategies

term	Enquiry Question(s)	Key Content	Key Assessments	Further Learning at Home
5	TBA	<p>The student: • describes an appropriate problem, which leads to a design opportunity</p> <p>The design problem should be clearly stated using supporting materials, which may include: • photographs • extracts from letters, magazines and news articles • summarized results from questionnaires or interviews. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <ul style="list-style-type: none"> <li>• explains the key findings from relevant market and user research</li> </ul> <p>The key findings should be provided in a summative form that shows evidence of: • quantitative and qualitative data collected using a range of techniques and appropriate primary and secondary sources • an analysis of competing or similar products. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <ul style="list-style-type: none"> <li>• develops a detailed brief, which identifies the relevant parameters of the problem</li> </ul> <p>A design brief comprises the expected outcome and broad requirements determined from the market and user research. The feasibility of the project should also be considered. The evidence for achievement against this strand should be presented in approximately one A4 page or the equivalent.</p> <ul style="list-style-type: none"> <li>• develops a marketing specification, which justifies the requirements</li> </ul> <p>Marketing specifications relate to market and user characteristics of the proposed design. • Target market—Consideration only needs to be given to market sectors and segments. • Target audience—Differentiate between the target market and the target audience. Characteristics of the users should be established. • Market analysis—A summary is required of the important information gathered about potential users and the market. An appraisal of economic viability of the proposed design from a market perspective is important taking into</p>	TBA	TBA

		<p>account fixed and variable costs and pricing. • User need—Specifications should identify the essential requirements that the product must satisfy in relation to market and user need. • Competition—A thorough analysis of competing designs is required to establish the market need. The marketing specification must be developed from the design brief and research. The evidence for achievement against this strand should be presented in approximately one A4 page or the equivalent.</p> <ul style="list-style-type: none"> <li>• develops a design specification, which justifies the requirements.</li> </ul> <p>A design specification details: • aesthetic requirements • cost constraints • customer requirements • environmental requirements • size constraints • safety considerations • performance requirements and constraints • materials requirements • manufacturing requirements. All of the requirements, constraints and considerations must be specific, feasible and measurable. The design specification must be developed from the design brief and research. The evidence for achievement against this strand should be presented in approximately one A4 page or the equivalent.</p>		
6	TBA	<p>The student:</p> <ul style="list-style-type: none"> <li>• develops feasible ideas to meet appropriate specifications, which explore solutions to the problem</li> <li>• uses concept modelling to guide design development</li> <li>• justifies the most appropriate idea for detailed development.</li> </ul> <p>Ideas must be developed and refined to enable a decision to be made about the preferred design to be developed in detail. This must include: • generating original ideas • selecting ideas to incrementally improve them to meet appropriate specifications • communicating ideas clearly using appropriate techniques • annotation to identify key features and explain how they meet the design specifications • undertaking additional research as required to inform development. The evidence for achievement against this strand should be presented in approximately six A4 pages or the equivalent.</p>	TBA	TBA

Concept models in the form of sketches, CAD, 2D and 3D models should be used to establish the validity of ideas against specifications before refining ideas through detailed development. Concept modelling is used to:

- test design ideas to find out if they will meet requirements
- provide feedback, which is used to develop designs further.

Students should consider the appropriate use of conceptual, graphical, physical and CAD models to develop, refine and test their ideas. The evidence for achievement against this strand should be presented in approximately four A4 pages or the equivalent.

The most appropriate idea should be validated against specifications before development is refined to enable manufacture.

- Evaluate ideas and models against the design specification to identify the most feasible solution.
- Present the most feasible idea.

The evidence for achievement against this strand should be presented in approximately one A4 page or the equivalent.

The student:

- justifies the choice of appropriate materials and components for a prototype
- justifies the choice of appropriate manufacturing techniques for prototype production
- develops an accurate and detailed design proposal
- produces a detailed plan for the manufacture of the prototype.

Manufacturing techniques are identified and selected according to the requirements of the prototype including joining, cutting, and so on.

- Valid reasons for their choice need to be provided.
- Selection can be justified through many aspects including cost, supply, material choice, working properties of the materials, and so on.

The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.

Develop the design to take into account the choice of materials, components and manufacturing techniques.

- Use appropriate techniques and methods to finalize the details of the design (CAD, hand drawn, paper/card models)
- Develop designs to sufficient detail for a third party to be able to interpret them correctly
- Include details such as sizes, materials, components, assembly, production

		<p>methods, and so on. The evidence for achievement against this strand should be presented in approximately three A4 pages or the equivalent.</p> <p>An appropriate plan should provide sufficient details including timings, techniques and risk assessment to allow the product to be made by a third party. Detailed plans could be presented using the following formats. • Gantt charts • Flow diagrams • Tables The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <p>The student:</p> <ul style="list-style-type: none"> <li>• evaluates the success of the solution against the marketing specification</li> <li>• evaluates the success of the solution against the design specification</li> <li>• explains how the solution could be improved. Identify strengths and weaknesses by testing the prototype(s) against the marketing specification in criterion A.</li> <li>• Target market • Target audience • Market analysis • User need • Competition</li> </ul> <p>The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p>		
1-2	TBA	<p>The student:</p> <ul style="list-style-type: none"> <li>• justifies the choice of materials and components appropriate for commercial production</li> <li>• justifies the choice of manufacturing techniques appropriate for commercial production</li> <li>• explains design modifications to the solution required for commercial manufacture.</li> </ul> <p>Manufacturing techniques should be appropriate to be effective at the chosen scale of production. • Manufacturing techniques are identified and selected according to the requirements of making the product commercially viable. • Valid reasons for their choice need to be provided. • Selection can be justified through many aspects including cost, supply, material choice, working properties of the materials, and so on. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent</p> <p>The detailed design should be modified in order to be compatible with the</p>	TBA	TBA

		<p>manufacturing techniques for commercial production and the design specification. Improvements should be presented in the form of revised specifications, annotated drawings/ photographs, or CAD. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <p>The student:</p> <ul style="list-style-type: none"> <li>• justifies an appropriate target sales price</li> <li>• discusses appropriate promotional strategies for the solution.</li> </ul> <p>Evidence is required to justify the target sales price based on competing or similar products market need and break-even point. Compare the cost of existing products against the cost of making a prototype and adjust costs to suit proposed scale of manufacture. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <p>Appropriate promotional strategies should be discussed in relation to the suggested initial production run and the nature of the target market. These could include: • advertising • sales promotion • personal selling • internet marketing • sponsorship. The evidence for achievement against this strand should be presented in approximately two A4 pages or the equivalent.</p> <p>Teacher-directed activities (formative tasks) Time has been allocated in the course for teacher-directed tasks: 26 hours at HL. This time can be used by teachers to direct students: • to practise and develop appropriate design and practical skills • to complete a mini-project that can be formatively assessed against the assessment criteria • to ensure that a prototype is manufactured (by themselves or outsourced) for evaluation as part of the IA.</p>		
3-4	TBA	<p>The group 4 project allows students to appreciate the environmental, social and ethical implications of science and technology. It may also allow them to understand the limitations of scientific study, for example, the shortage of</p>	TBA	TBA

		<p>appropriate data and/or the lack of resources. The emphasis is on interdisciplinary cooperation and the processes involved in scientific investigation, rather than the products of such investigation. The choice of scientific or technological topic is open but the project should clearly address group 4 aims 7, 8 and 10 of the biology, chemistry and physics subject guides.</p> <p><b>Types of project</b> While addressing aims 7, 8 and 10 the project must be based on science or its applications. The project may have a hands-on practical action phase or one involving purely theoretical aspects. It could be undertaken in a wide range of ways: • designing and carrying out a laboratory investigation or fieldwork • carrying out a comparative study (experimental or otherwise) in collaboration with another school • collating, manipulating and analysing data from other sources, such as scientific journals, environmental organizations, science and technology industries and government reports • designing and using a model or simulation • contributing to a long-term project organized by the school</p>		
5	See Core and HL examination material	Revision of ALL Core and HL units	See Core and HL examination material	See Core and HL examination material

## Curriculum Plan: English Year 12

	Enquiry Question(s)	Key Content	Key Assessments	Further Learning at Home
Term 1a	<p>1. How has Arthur Miller presented and developed the key characters of <i>The Crucible</i>?</p> <p>2. What was the Salem society of 1692 like?</p> <p>3. How does Miller explore links to communism?</p> <p>4. How does <i>The Crucible</i>'s historical context impact on the way an audience experiences it?</p>	<ul style="list-style-type: none"> <li>Salem Witch trials</li> <li>Life of Arthur Miller</li> <li>McCarthyism</li> <li>Puritan settlement</li> <li>Opening paranoia</li> <li>Abigail as a manipulator</li> <li>Proctor and Abigail's relationship</li> <li>Factions of Salem society</li> <li>Rise of Parris</li> <li>Links to communist ideology</li> <li>Presentation of witchcraft</li> <li>Questioning of Abigail</li> <li>The confessions</li> <li>Elizabeth and John's relationship</li> </ul>	<p>EA1 exam:</p> <p>Creative writing task – diary as Abigail/Parris</p>	<ul style="list-style-type: none"> <li>Why did Miller choose to set his play in 1692 Salem?</li> <li>How does Miller convey Parris's paranoia in the opening?</li> <li>Character studies</li> <li>Is Abigail a believable character?</li> <li>How does Miller depict Proctor's moral anguish?</li> <li>How does Miller make Salem society seem threatening?</li> <li>Research 17<sup>th</sup> century beliefs in witchcraft and attitudes towards West Indians</li> </ul>
Term 1b	<p>1. How did Robert Frost use language, structure and form to create meaning?</p> <p>2. How did Frost explore the region of New England in his poetry?</p> <p>3. How did Frost's poetry evolve through his different collections?</p> <p>4. How has Frost's poetry been received?</p>	<ul style="list-style-type: none"> <li><i>Mending Wall</i></li> <li><i>Mountain Interval</i></li> <li><i>Fire and Ice</i></li> <li><i>Two Tramps in Mud Time</i></li> <li><i>Come In</i></li> <li><i>The Silken Tent</i></li> <li><i>Carpe Diem</i></li> <li><i>The Death of the Hired Man</i></li> <li><i>After Apple-Picking</i></li> <li><i>Design</i></li> <li><i>Once by the Pacific</i></li> <li><i>Birches</i></li> </ul>	<p>Written tasks discussing Interpretation of poetry, exploring the reader's response vs. the writer's intention</p>	<ul style="list-style-type: none"> <li>Life of Robert Frost</li> <li>Research New England locales, identities, and themes.</li> <li>Reviews of Frost's poetry</li> <li>Frost as a 'turn of the century' poet</li> <li>How did Frost use the vernacular of New England?</li> <li>How did Frost explore man's relationship with nature?</li> <li>Comparison with poetry of Emily Dickinson and Ralph Waldo Emerson</li> </ul>
Term 2a	<p>1. How did Elizabethan's view race and how are these views reflected in the play?</p> <p>2. How is jealousy presented in <i>Othello</i>?</p> <p>3. What is the significance of Iago?</p>	<ul style="list-style-type: none"> <li>Clash of Civilisations: Venice, Christianity and Islam</li> <li>Arrival on Cyprus</li> <li>Iago traps Cassio</li> <li>Iago convinces Othello</li> <li>Iago frames Cassio'</li> </ul>	<p>EA2 exam:</p> <p>Critical written task</p>	<ul style="list-style-type: none"> <li>Context of 16<sup>th</sup> century Venice</li> <li>Research on the rise of the Ottoman Empire</li> <li>Shakespearean vocabulary</li> <li>Key characters and their roles</li> <li>Plot summary</li> </ul>
Term 2b	<p>1. How is the relationship between Othello and Desdemona presented?</p> <p>2. How far is Othello</p>	<ul style="list-style-type: none"> <li>Othello accuses Desdemona of adultery</li> <li>Emilia exposes male hypocrisy</li> <li>Iago wounds Cassio</li> <li>Othello kills</li> <li>Othello takes his life</li> </ul>	<p>Postcolonial readings in literature</p> <p>Individual oral commentary</p>	<ul style="list-style-type: none"> <li>Research and reading of postcolonial reviews: <i>Gender, Race, Renaissance Drama</i> (1987), Ania Loomba; Karen Newman, "And Wash the Ethiop White": Femininity and the Monstrous in <i>Othello</i>' in Andrew Hadfield, ed.,</li> </ul>

	<p>responsible for his own downfall?</p> <p>3. How have post-colonialists critiqued the play's presentation of race?</p>			<p><i>William Shakespeare's Othello : A Sourcebook</i> (1987)</p> <ul style="list-style-type: none"> <li>• Planning and practice of IOC</li> </ul>
Term 3a	<p>1. What are the major differences between modern and ancient drama?</p> <p>2. How might our knowledge of the political and religious context of the Great Dionysia influence our reading of Greek tragedy?</p> <p>2. How does Sophocles develop the character of Antigone as the tragic protagonist?</p> <p>3. How does Sophocles' tragedy explore the will of the gods?</p> <p>4. Why do you think Greek tragedy chose the mythic past of a foreign city as the settings for its stories?</p>	<ul style="list-style-type: none"> <li>• Life in ancient Athens</li> <li>• The Great Dionysia</li> <li>• Women in Classical Athens</li> <li>• The Oedipus myth</li> <li>• The Labdacid Saga</li> <li>• Introduction to Ancient Greek Tragedy and concept of catharsis</li> <li>• Structure of a tragedy</li> <li>• Themes and motifs: Polis and Oikos; Male and Female; Human and Divine</li> <li>• Stichomythia: the heart of tragic conflict</li> <li>• Antigone's subversion</li> <li>• Creon's decree</li> <li>• Antigone's confession</li> <li>• Haemon's advice</li> <li>• Antigone's burial</li> <li>• Tiresias' prophecy</li> <li>• Haemon's suicide</li> </ul>	EA3 exam:  Contextual readings in literature (social/historical)	<ul style="list-style-type: none"> <li>• Research life of Sophocles</li> <li>• Tragic conventions</li> <li>• Stagecraft and dramatic devices</li> <li>• Summarise the plot</li> <li>• Glossary of key terms</li> <li>• What role does the chorus play?</li> <li>• Character studies</li> <li>• How does Sophocles present Antigone in Act I?</li> <li>• Compare Ismene to Antigone as dramatic foils</li> <li>• To what extent do you agree with Creon's statement that: 'there's no greater evil than lack of leadership'?</li> <li>• How does Sophocles present Creon throughout the play?</li> <li>• Who is more blindly hubristic: Creon or Antigone?</li> </ul>
Term 3b	<p>1. What is the significance of the stillness in <i>Antigone</i>?</p> <p>2. How might one consider the play as an anti-fascist allegory of events of the French Resistance?</p> <p>3. How does Sophocles escalate the conflict in <i>Antigone</i>?</p> <p>4. The power of language and persuasive speech is an important issue for Athenians of the fifth century. What modern examples of</p>	<ul style="list-style-type: none"> <li>• Life of Jean Anouilh</li> <li>• Nazi occupation of Paris during the Second World War</li> <li>• Similarities/differences between plot of Antigone and French political events</li> <li>• The function of the Guardsmen</li> <li>• Comparison with the Eleusian Mysteries</li> <li>• Debate: "If I had to choose between betraying my country and betraying my friend, I hope I should have the guts to betray my country." (E.M. Forster) To what extent do you agree?</li> <li>• Influence of the modern viewpoint.</li> </ul>	Critical written task	<ul style="list-style-type: none"> <li>• To what extent do you agree with that statement that: "Antigone is primarily a drama of politics, not of fate"?</li> <li>• Reading: <i>Sophocles' Antigone and the promise of ethical life: tragic ambiguity and the pathologies of reason</i></li> <li>• Zeitlin, Froma, 'Playing the Other: Theater, Theatricality, and the Feminine in Greek Drama', <i>Representations</i> 11 (1985) 63-94,</li> <li>• Introduction to Gibbons, Reginald, and Segal, Charles, <i>Antigone</i> (Oxford: OUP, 2003)</li> <li>•</li> <li>• Compare modern adaptations of <i>Antigone</i></li> </ul>

	<p>literature or drama reflect modern concerns about our political system?</p> <p>5. How important is it to read the Antigone in the original language, rather than just in translation?</p>	<ul style="list-style-type: none"><li>• Does it change the way we view the play?</li></ul>		<ul style="list-style-type: none"><li>• <a href="https://artsandculture.google.com/exhibit/greek-tragedy-at-the-national-theatre/">https://artsandculture.google.com/exhibit/greek-tragedy-at-the-national-theatre/</a></li></ul>
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**Curriculum Plan: Finance Year 12**

	Syllabus	Topics	Assessments	Further reading at home
Term 1a	Unit 1: Financial capability in the immediate and short term	<ol style="list-style-type: none"> <li>1. Purposes of money</li> <li>2. The personal life cycle</li> <li>3. Payment methods</li> <li>4. Everyday banking</li> <li>5. Savings products</li> <li>6. Borrowing products.</li> </ol>	EA Exam 1: Part A and B exam based on topics 1-6	<p>Topics 1-6 of Certificate in Financial Studies (CeFS) Unit 1 textbook</p> <p>Financial times The Economist</p>
Term 1b	Unit 1: Financial capability in the immediate and short term	<ol style="list-style-type: none"> <li>7. Providers</li> <li>8. Consumer protection</li> <li>9. Budgets and forecasts</li> <li>10. Dealing with unexpected events</li> <li>11. Dealing with debt</li> <li>12. Earnings.</li> </ol>	Part A and B mock based on topics 7-12	<p>Topics 1-12 of Certificate in Financial Studies (CeFS) Unit 1 textbook</p> <p>Financial times The Economist</p>
Term 2a	Unit 2: Financial capability in the medium and long term	<ol style="list-style-type: none"> <li>1. Needs, wants and aspirations</li> <li>2. Savings and investment products</li> <li>3. Borrowing products</li> <li>4. Dealing with long-term risks</li> <li>5. Financial planning</li> </ol>	<p>Unit 1 on-line exam: week beginning 14<sup>th</sup> January 2019.</p> <p>Unit 1 Written exam: Monday 21<sup>st</sup> January 2019</p>	<p>Topics 1-5 of Certificate in Financial Studies (CeFS) Unit 2 textbook</p> <p>Financial times The Economist</p>
Term 2b	Unit 2: Financial capability in the medium and long term	<ol style="list-style-type: none"> <li>6. Financial planning and informed choices</li> <li>7. Dealing with unforeseen events</li> <li>8. Ethics and sustainability</li> <li>9. Sources of information and advice</li> <li>10. Making an informed choice</li> </ol>	<p>Optional – unit 1 retakes</p> <p>On-line exam: week beginning 18<sup>th</sup> March 2019.</p> <p>Written exam: Monday 25<sup>th</sup> March 2019</p>	<p>Topics 1-10 of Certificate in Financial Studies (CeFS) Unit 2 textbook</p> <p>Financial times The Economist</p>
Term 3a	Revision	Final preparation for the unit 2 exam, focusing on areas of weakness.	<p>Unit 2 on-line exam: week beginning 29<sup>th</sup> April 2019.</p> <p>Written exam: Tuesday 7<sup>th</sup> May 2019</p>	Topics 1-10 of Certificate in Financial Studies (CeFS) Unit 2 textbook
Term 3b	Revision	Final preparation for the unit 2 retake, focusing on areas of weakness.	<p>Optional – unit 2 retakes</p> <p>On-line exam: week beginning 10<sup>th</sup> June 2019.</p> <p>Written exam: Friday 21<sup>st</sup> June 2019</p>	Topics 1-10 of Certificate in Financial Studies (CeFS) Unit 2 textbook

### Curriculum Plan: Mathematics Year 12

	Syllabus	Key Content	Key Assessments	Prerequisites
Term 1a	Pure (AS) Stats (AS) Stats (AS) Mech (AS) Mech (AS)	Unit 1: Algebra and functions Unit 1: Statistical sampling Unit 2a: Data presentation and interpretation Unit 6: Quantities and units in mechanics Unit 7a: Kinematics 1 (constant acceleration)	Unit Tests EA1 Exam	
Term 1b	Pure (AS) Pure (AS) Stats (AS) Mech (AS)	Unit 2: Coordinate geometry in the (x, y) plane Unit 3: Further algebra Unit 2b: Data presentation and interpretation Unit 7b: Kinematics 1 (constant acceleration)	Unit Tests Mock Exam	Pure (AS) Unit 1 Pure (AS) Unit 1
Term 2a	Pure (AS) Pure (AS) Stats (AS) Stats (AS) Mech (AS)	Unit 4: Trigonometry Unit 5: Vectors (2D) Unit 3: Probability Unit 4: Statistical distributions Unit 8a: Forces & Newton's laws	Unit Tests EA2 Exam	Pure (AS) Unit 1  Stats (AS) Unit 3 Mech (AS) Unit 6
Term 2b	Pure (AS) Pure (AS) Stats (AS) Mech (AS)	Unit 6: Differentiation Unit 7: Integration Unit 5a: Statistical hypothesis testing Unit 8b: Forces & Newton's laws	Unit Tests Mock Exam	Mech (AS) Unit 6
Term 3a	Pure (AS) Stats (AS) Mech (AS)	Unit 8: Exponentials and logarithms Unit 5b: Statistical hypothesis testing Unit 9: Kinematics 2 (variable acceleration) Revision (AS level)	AS Level Paper 1: AM Wednesday 15 <sup>th</sup> May  AS Level Paper 2: AM Wednesday 22 <sup>nd</sup> May	Pure (AS) Unit 1
Term 3b	Pure (AS) Pure (AS)	Unit 1: Proof Unit 2: Algebraic and partial fractions	Unit Tests EA Exam	Pure (AS) Unit 3

**Curriculum Plan: Psychology Year 12**

	<b>Enquiry Question(s)</b>	<b>Key Content</b>	<b>Key Assessments</b>	<b>Further Learning at Home</b>
Term 1a	What is psychology?	Introduction to Psychology <ul style="list-style-type: none"> <li>• Key events and classic studies</li> <li>• Existing understanding of psychology</li> </ul>	EA1 Exam	<u>Reading List:</u>  The psychopath test – Jon Ronson
	How do we research about psychology?	Introduction to Research Approaches <ul style="list-style-type: none"> <li>• Qualitative vs. Quantitative</li> <li>• Critical thinking</li> <li>• Review terminology</li> <li>• Reductionist vs holistic approaches</li> </ul>		
	What factors affect behaviour?	Biological Level of Analysis <ul style="list-style-type: none"> <li>• Brain and behaviour</li> <li>• Hormones and behaviour</li> <li>• Genetics and behaviour</li> <li>• Animal research</li> </ul>		
Term 1b	How can we research on a biological level?	Research Approaches Within Biological Level <ul style="list-style-type: none"> <li>• Imaging techniques and inherent limitations</li> <li>• Ethics related to biological explanations</li> </ul>	Assessment 2	<u>Reading List:</u>  The brain that changes itself – Norman Doidge
Term 2a	What affects cognitive processing?	Cognitive Level of Analysis <ul style="list-style-type: none"> <li>• Cognitive processing</li> <li>• Reliability of cognitive processing</li> <li>• Emotion and cognition</li> <li>• Cognitive processing in the digital world</li> </ul>	EA2 Exam	<u>Reading List:</u>  Before you know it – John Bargh
Term 2b			Assessment 4	<u>Reading List:</u>
	What methods could we use to research within a cognitive level?	Research Approaches Within Cognitive Level <ul style="list-style-type: none"> <li>• Experiments, focusing on variable manipulation</li> <li>• Naturalistic Observations</li> </ul>		

	Enquiry Question(s)	Key Content	Key Assessments	Further Learning at Home
Term 3a	What can influence an individual?	Sociocultural Level of Analysis <ul style="list-style-type: none"> <li>• The individual and the group</li> <li>• Cultural origins of behaviour</li> <li>• Cultural influences on individual attitudes, identity and behaviours</li> <li>• Influences of globalisation on individual attitudes, identities and behaviours</li> </ul>	EA3 Exam	<u>Reading List:</u> Thinking, fast and slow – Daniel Kahneman
Term 3b	What methods could we use to research within a sociocultural level?	Research Approaches Within Sociocultural Level of Analysis <ul style="list-style-type: none"> <li>• Quasi experiment</li> <li>• Correlations research</li> </ul>	Internal Assessment	<u>Reading List:</u> Enlightenment now – Steven Pinker
	n/a	Internal Assessment		