



CHS Curriculum Intent

SUCCESSFUL: Learners who gain deep and powerful knowledge in preparation for life; combining academic rigour, curiosity and creative flair.

CREATIVE: Learners who are imaginative, optimistic and inventive; finding their voice to become effective communicators prepared for lifelong adaptability

HAPPY: Learners who are confident, resilient, well-rounded citizens; they understand the world's communities and are ready to discover their place in it.

CHS Curriculum Area Framework for Learning – Year 10

SUBJECT	Design Technology
INTENT	<p>Design and Technology exposes students to a wide range of areas relating to not only how products are designed and made, but also gives and insight into the justification for using and avoiding materials, considerations for Sustainability and explore how historical developments have led to more advances manufacturing processes, as a result, GCSE Design and Technology will prepare students to participate confidently and successfully in an increasingly technological world.</p> <p>Students will gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors, as well as be able to practice and develop some practical skills not only in designing but when working with a range of materials. It is our hope this developed student's creativity as well as problem solving skills when designing and making and apply technical and practical expertise.</p>

Department: **Computing and Technology 2019-2020**

Subject: **AQA Design Technology (8552)**

Year Group	10
Rationale/ Narrative	<p>Following on from the foundation year in the subject, students will this year develop greater independence and understanding of the basic:</p> <ul style="list-style-type: none"> • Core Technical principles • Specialist Technical principles • Designing and making principle



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	Autumn 1 (7½ weeks)	Autumn 2 (7 weeks)	Spring 1 (6 weeks)	Spring 2 (5 weeks)	Summer 1 (5 weeks)	Summer 2 (7 weeks)
KNOWLEDGE	<p>Students will learn about:</p> <ul style="list-style-type: none"> • The impact of new and emerging technologies. (using Designers Case studies) Smart and modern materials. • Enterprise based on the development of an effective business innovation. Blue sky thinking. • How technology push/market pull affects choice. • How products are designed and made to have both positive and negative impact on others and the environment. • The contemporary and potential future use manufacturing systems. <ul style="list-style-type: none"> • Forces and stresses 	<p>Students' will complete a project-based task that will involve the acquisition of knowledge that centers around: Practice NEA focused on Front end research and initial ideation to a context. – Use textiles and timber as base materials to recap knowledge.</p> <ul style="list-style-type: none"> • Designing and developing prototypes in response to client wants and needs. • Selecting and using a variety of materials and components. • Material management. • Selecting and using specialist tools and equipment. • Identification of Specialist techniques and processes suitable for a specifically named material. 	<p>Students will focus their learning on energy generation and storage. They will learn:</p> <ul style="list-style-type: none"> • How power is generated from fossil fuel. <p>The impact of resource consumption on the planet</p> <ul style="list-style-type: none"> • Arguments for and against the selection of fossil fuels. • How nuclear power is generated. • Arguments for and against the selection of nuclear power. • How power is generated from sustainable sources. • Arguments for and against the selection of renewable energy. • Kinetic pumped storage systems. • Alkaline and re-chargeable batteries. 	<p>Students' will complete a second project-based task that will involve the acquisition of knowledge that centers around: Practice NEA focused on Manufacturing, and evaluation and testing. Paper and plastic based to recap knowledge.</p> <ul style="list-style-type: none"> • Designing and developing prototypes in response to client wants and needs. • Selecting and using a variety of materials and components. • Material management. • Selecting and using specialist tools and equipment. • Identification of Specialist techniques and processes suitable for a specifically named material. 	<p>Students will focus their learning on the work of others. In relation to this, students will:</p> <ul style="list-style-type: none"> • Compare the work of past and present designers and companies to inform their own designing. • Learn how to use a range of different design strategies. • Develop, communicate, record and justify design ideas using a range of appropriate techniques <p>Respecting people of different faiths and beliefs.</p>	<p>Students will be introduced to the Board prescribed NEA topics. They will focus their learning on the completion of the initial required sections. In relation to these students will:</p> <ul style="list-style-type: none"> • Analyze the contextual challenges set out by the examination board. • Develop a design brief.
SKILLS	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Identify, select and breakdown key Information. 	<p>Students will be able to develop and use successfully a variety of</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> • Identify, select and breakdown key Information. 	<p>Students will be able to develop and use successfully a variety of</p>	<p>Students will develop the skills of:</p> <ul style="list-style-type: none"> • Investigation • Analysis 	<p>Students will develop skills in:</p> <ul style="list-style-type: none"> • Researching and investigating (A)



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	<ul style="list-style-type: none"> • Summarise facts. • Investigate, research and question. • Analyse and evaluate. 	<p>practical skills which will include:</p> <ul style="list-style-type: none"> • Drawing • Measuring • Marking • Selecting and using specialist tools and machines • Selecting and using a variety of construction techniques. 	<ul style="list-style-type: none"> • Summarise facts. • Investigate, research and question. • Argue • Analyse and evaluate 	<p>practical skills which will include:</p> <ul style="list-style-type: none"> • Drawing • Measuring • Marking • Selecting and using specialist tools and machines • Selecting and using a variety of construction techniques. 	<ul style="list-style-type: none"> • Evaluation • Drawing by hand and with computer software packages • Modelling • Communication, recording and justifying design ideas 	<ul style="list-style-type: none"> • Writing a design brief (B) • Generating ideas (C)
ASSESSMENTS	<ul style="list-style-type: none"> • Classwork piece – Students will be required to look at and investigate the impact that people have on design especially in relation to; Technology Push Market Pull Changing job roles • Classwork piece – Students will complete ten Initial Design Ideas • Homework piece – Students will complete a second design brief. 	<ul style="list-style-type: none"> • Progress Test The test will be in the format that will be encountered by students at the end of the course in the summer term of Year 11 • Classwork piece – As part of their project during Spring term students will be required to produce a design specification, this will be an assessed against the suitability against the design brief • Classwork piece – Assessment of the Design work produce to go alongside the practical element. 	<ul style="list-style-type: none"> • Classwork piece – Students will be required to carry out some research on renewable energy will be assessed • Classwork piece – A detailed cutting list will be assessed. • Homework piece – Students will identify possible design development pieces of work and carry out at least three of these 	<ul style="list-style-type: none"> • Progress test The test will be in the format that will be encountered by students at the end of the course in the summer term of Year 11 • Classwork piece – Production of a manufacturing plan. • Classwork piece – Students will complete a final evaluation of the students’ project overall. 	<ul style="list-style-type: none"> • Classwork piece – As part of their project during Summer term students will be required to produce a design specification, this will be an assessed against the suitability against the design brief. • Classwork piece – Students will produce developed design ideas both designs and models. • Homework piece – Testing evaluations for there products. 	<ul style="list-style-type: none"> • Progress Test The test will be in the format that will be encountered by students at the end of the course in the summer term of Year 11 • Classwork piece – AO1 Section A: Identifying and investigation design possibilities. • Classwork piece – AO1 Section B: Design Brief and Specification (10 Marks)