Curriculum Overview

Subject: Design & Technology

Year Group: 12

CHASE HIGH SCHOOL
Aspiration, Character & Excellence

The A level in Design and Technology course offers a unique opportunity in the curriculum for learners to identify and solve real problems by designing and making products or systems. Design and Technology is an inspiring, rigorous and practical subject. The Year 12 curriculum aim is to encourage learners to use creativity and imagination when applying iterative design processes to develop and modify designs, and to design and make prototypes that solve real world problems, considering their own and others' needs, wants, aspirations and values. The course enables learners to identify market needs and opportunities for new products, initiate and develop design solutions, and make and test prototypes. Learners will be inspired to take the broad subject further in their education and specialise in an area which they feel passionate about; whether this is through an apprenticeship, college or at university level.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS	KNOWLEDGE/SKILLS	KNOWLEDGE/SKILLS
Half term 1: Inclusive design challenge	Half term 1: Manufacturing products fit for purpose.	Half term 1: Manufacturing processes
➢ Social, moral, ethical responsibilities of designers and manufacturers ➢ Critical analysis of products ➢ Anthropometrics and ergonomics ➢ Aesthetics ➢ Inclusive design ➢ Environmental issues ➢ Circular economy – product life cycle	➢ Properties of timber ➢ Wood joints ➢ Writing a manufacturing plan ➢ Quality control checks ➢ Timber forming ➢ Wood finishes ➢ H&S procedures and risk assessment	➢ Printing processes ➢ Metal forming ➢ Metal wasting ➢ Metal hardening and tempering ➢ Metal joining ➢ Metal finishes ➢ Polymer forming ➢ composites
Half term 2: Designing functional products	Half term 2: Material properties	Half term 2: NEA
➢ The history of Design ➢ Design Styles and designers ➢ Socio-economic factors in design ➢ Efficient design and manufacture ➢ Marketing and brand identity ➢ Importance of copyright and trademarks (open design) ➢ Smart and Modern Materials – manufactured to disassemble ➢ Adhesives and Fixings ➢ Computer systems in manufacturing ➢ Bought-in components and subassembly ➢ Rapid prototyping • Working drawings	➢ Physical and mechanical properties and working characteristics ➢ Product function ➢ aesthetics ➢ polymers ➢ metals ➢ scale of production ➢ Product safety ➢ Packaging – paper and board / polymer based sheet ➢ Critical analysis of a product ➢ Ergonomics and anthropometrics ➢ • Inclusive design	➢ Context ➢ Potential user ➢ Investigation (Primary and secondary) ➢ Practical experimentation ➢ Disassembly ➢ Concept ideas
KEY ASSESSMENTS	KEY ASSESSMENTS	KEY ASSESSMENTS

Half term 1: Practical making skills, exam style questions and unit tests.	Half term 1: Practical making skills, exam style questions and unit tests.	Half term 1: Practical making skills, exam style questions and unit tests.
Half term 2: Practical making skills, exam style questions and unit tests.	Half term 2: Practical making skills, exam style questions and unit tests.	Half term 2: Practical making skills, exam style questions and unit tests.

Extended reading suggestions and external resources:

My Revision Notes: AQA A Level Design and Technology: Product Design

https://studyrocket.co.uk/revision/a-level-design-and-technology-aqa
www.technologystudent.com
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