

Curriculum Overview

Subject: Design & Technology

Year Group: 10



Year Group: 10

Students are working in line with the AQA GCSE Design Technology specification. Developing core technical principles to demonstrate a breadth of technical knowledge and understanding. Specialist technical principles to assess a more in-depth knowledge of technical principles. Designing and making principles.

Students will be working towards developing their practical skills in all areas, extending on prior knowledge in polymers, timbers, textiles, papers and boards and metals. Students will focus on two key areas in more depth; timbers, papers and boards.

This is taught through a mix of theory and practical sessions following the SOW

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS Timbers, origins, working with timbers, making a frame using wood joints, commercial manufacturing, CAD, CAM, tolerances and allowances, quality control and quality assurance. Papers and boards, natural and manufactured timbers, metals and alloys, polymers, textiles. casting a keyring. Industry and enterprise, sustainability and the environment, people culture and society, production techniques and systems, informing design decisions, batch production project.	KNOWLEDGE/SKILLS Energy storage, energy generation, modern materials, smart materials, composite materials and technical textiles, systems approach to designing, electronic systems processing, mechanical devices, making a child's toy, forces and stresses on materials and objects, improving functionality, ecological and social footprint. Mock NEA focusing on research, design brief and specification writing, designing, modelling, evaluation and improvement.	KNOWLEDGE/SKILLS Box making skills and marquetry, Linkages, the 6 Rs, scales of production, selection of materials and components, tolerances and allowances, material management and marking out, specialist tools and, equipment, techniques and processes, surface treatments and finishes, NEA task.
KEY ASSESSMENTS Half term 1: Unit 5B Assessment Half term2: Unit 3 Assessment	KEY ASSESSMENTS Half term 1: Unit 4 Assessment Half term2: Unit 1 Assessment	KEY ASSESSMENTS Half term 1: Unit 2 Assessment and PPE Half term 2: Unit 6 & 7 Assessment.

Extended reading suggestions and external resources:

<https://www.theguardian.com/environment/2016/jun/25/illegal-logging-amazon-timber-tougher-laws-british-products>
<https://www.theguardian.com/world/2015/sep/17/illegal-timber-myanmar-china-forests> <https://www.youtube.com/watch?v=luygMuoFnXs>
<https://www.youtube.com/watch?v=NvbgwdTGoyo>
<https://www.youtube.com/watch?v=7pNWI1dcbg4>
https://www.youtube.com/watch?v=SLUcVh_4wlM
<https://www.youtube.com/watch?v=UGnDzE9mfUc>
<https://www.youtube.com/watch?v=eF5LVBW1vl8>

<https://www.youtube.com/watch?v=P9KPJlA5yds>
<https://www.youtube.com/watch?v=3RUE367Sb9A>
<https://www.youtube.com/watch?v=CBmsOvbGh-Y>
<https://www.youtube.com/watch?v=fcBXtwGexNc>
<https://www.bbc.co.uk/news/science-environment-39217985>
https://www.youtube.com/watch?v=I8nMKH3y_1I
<https://www.youtube.com/watch?v=ALWwK7Vz4gY>
<https://www.bbc.co.uk/news/business-38472652>
<https://www.theguardian.com/world/2016/sep/19/waste-not-want-not-sweden-tax-breaks-repairs>
<https://www.bbc.co.uk/news/science-environment-37902773>
<https://www.bbc.co.uk/news/business-38263177>
<https://www.youtube.com/watch?v=ftj23FRS2LI>
<https://www.youtube.com/watch?v=BOo8gxp3K3w>
<https://www.youtube.com/watch?v=BqkekY5t7KY>
<https://footprint.wwf.org.uk/#/>
<https://www.youtube.com/watch?v=BtBLXlI2FNE>
https://www.rapidonline.com/pdf/87-2330S_v2.PDF
<https://footprint.wwf.org.uk/#/>
<https://www.youtube.com/watch?v=BtBLXlI2FNE>