



CHRIST'S COLLEGE
Emmanuel Schools Foundation

Design Technology Course Overview

KEY STAGE 4 COURSE GUIDE

Introduction

Welcome to GCSE Design Technology! This course offers you the unique opportunity to bridge academic principles with real-world applications, making it one of the most practical and dynamic subjects you can study. Design Technology is much more than just making things—it is a subject that invites you to explore your creativity, engage in problem-solving, and look at the world through the eyes of a designer.

By studying GCSE Design Technology, you will develop a strong foundation in the fundamental principles and concepts that drive technology today, including consumer pull and technology push. You will also take part in discussions and debates which explore the ethical impacts of the design and manufacture of products on how we live and preserve our planet. In addition, there will be opportunities to develop your technical knowledge, skills and experience with Cad software and cam output devices such as the plotter cutter and Laser script . We encourage you to explore other software programs which are of interest to you. You will apply your knowledge to real-world problems as part of your NEA, answering to a client to produce a prototype which will meet their specification.

This course is designed to enhance your ability to think creatively, analytically, logically, and critically. You will also learn to recognise the connections between various aspects of the design process and the accompanying theory, enabling you to approach challenges with a holistic and informed perspective. Alongside these skills, you will build a solid mathematical foundation alongside your GCSE maths course, which is essential for success in the field.

Whether you're interested in pursuing a career in technology, engineering, or any other field that values innovation and analytical thinking, GCSE Design Technology provides the tools and knowledge to help you succeed. Embrace the challenge, unleash your creativity, and discover the exciting world of Design!

Mrs M. Butler

Lead Teacher Design Technology

Department organisation

The GCSE Design Technology course is delivered by one teacher over three periods a week and you will most likely have the same teacher throughout year 10 and year 11. These are split into one single lesson and one double lesson.

Most of the course will be delivered in the workshop or ICT suit. There will also be opportunities for learning outside of the classroom.

Meet the teacher

Mrs Butler is the Lead teacher for Design Technology across Secondary here at Christ's College. With almost 20 years classroom experience in DT, she has taught across the age and subject range including Resistant Materials, Electronics, Graphics, Food and Nutrition/Hospitality and Textiles.

COURSE OVERVIEW

Prior Learning Required

- An interest in and a desire to study DT at GCSE is essential. Students who are willing to spend time studying on their own will do very well and will enjoy the course. We aim to instil a deep interest in the subject, which can be maintained in courses of further education and beyond.

Complimentary Subjects of Study

- Design Technology compliments core subjects such as English Language Maths and Science, cross curricular links are made throughout the course . At least 15% of the written exam will have a maths focus and 10% will link to Science . It is a subject which, at GCSE level, will improve how you critically think about the world around you, as students consider the work of others in solving problems and allow it to influence their own work

Further Education Pathways

- Students who perform well in GCSE DT have several pathways open to them, including further academic study, vocational options, and careers in various sectors.
- They can pursue A-levels in DT, Textiles, Art, Engineering as examples which can lead to university degrees in related fields such as Education, Architecture, Engineering, or Fashion Design.
- There are also options for technical and vocational courses such as fields related to Construction. Apprenticeships are also an increasingly popular option.
- Additionally, the skills developed in DT, such as problem solving, critical thinking and communication, are valuable for careers in law, healthcare, social work, the armed forces, education, and the media.



COURSE OVERVIEW

What is assessed?

There are 2 parts to the assessment for GCSE DT, both are worth 50% of the final mark

NEA

Practical application of:

- Core technical principles
- Specialist technical principles
- Designing and making principles

How it's assessed

- Non-exam assessment (NEA): 30–35 hours approx
- 100 marks
- 50% of GCSE

Task(s)

- Substantial design and make task
- Assessment criteria:
 - Identifying and investigating design possibilities
 - Producing a design brief and specification
 - Generating design ideas
 - Developing design ideas
 - Realising design ideas
 - Analysing & evaluating

In the spirit of the iterative design process, the above will be awarded holistically where they take place and not in a linear manner.

Contextual challenges to be released annually by AQA on 1 June in the year prior to the submission of the NEA.

Students will produce a prototype and a portfolio of evidence.

Work will be marked by teachers and moderated by AQA.

Written exam

- Core technical principles
- Specialist technical principles
- Designing and making principles
- In addition:

- At least 15% of the exam will assess maths
- At least 10% of the exam will assess science

How it's assessed

- Written exam: 2 hours
- 100 marks
- 50% of GCSE

Questions

Section A – Core technical principles (20 marks)

A mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding.

Section B – Specialist technical principles (30 marks)

Several short answer questions (2–5 marks) and one extended response to assess a more in depth knowledge of technical principles.

Section C – Designing and making principles (50 marks)

A mixture of short answer and extended response questions.

KNOWLEDGE CHECKLIST

Section A Core technical principles

- ☐ New and emerging technologies
- ☐ Energy generation and storage
- ☐ Development in new materials
- ☐ Systems approach to designing
- ☐ Mechanical devices
- ☐ Materials and their working properties

Section B Specialist techniques and principles

- ☐ Selection of materials or components
- ☐ Forces and stresses
- ☐ Ecological and social footprint
- ☐ Papers and boards
- ☐ Timbers
- ☐ Metals
- ☐ Polymers
- ☐ Textiles
- ☐ Electronics and mechanical systems
- ☐ Scales of production
- ☐ Specialist techniques and processes

Section C

- ☐ Designing Principles
- ☐ Making Principles



REVISION

Revision Material

There is a selection of pre-approved revision material in our class Teams folder

Students will be given packs of knowledge organisers

Useful Revision Websites

- BBC Bitesize (offers interactive notes and tests)
- Seneca Learning (provides in-depth content, practice questions, and personalized learning tailored to your needs.
- AQA website provides access to past papers

Other useful techniques are –

- ✓ Practice past exam papers (used with mark schemes to correct or improve answers)
- ✓ Making flash cards use dual coding, include pictures or diagrams to help you to remember the information, and then test with family or friends.
- ✓ Watch revision videos and make notes in the form of bullet points or mind maps, use these notes to create sentences, describe a process or or answer exam questions.

Homework and Independent Study

Homework

Each week you will be set a homework task which has a deadline assigned to it.

This will be marked and returned to you.

These tasks will be in the form of:

Homework Booklets

Seneca Learning

Exam Style Questions

Revision tasks

Learning

Independent Study

Each week you should also spend at least 1 additional hour studying for this subject.

The suggested tasks for independent study are:

Creating mind maps or flash cards using the GCSE AQA revision guide.

Creating mind maps or flash cards using online videos.

Completing the GCSE Design Technology tasks on Seneca.

Completing the revision tasks in the revision guides provided in Teams.



TEXT BOOK AND REVISION GUIDE SUGGESTIONS

It is recommended that students have a copy of a revision guide to support with home study for this course.

publisher	title	Author(s)	ISBN
PG ONLINE	Clear revise revision and practice, AQA Design and Technology 8552		9781910523247
CGP	GCSE AQA Design Technology for the grade 9-1 course. The revision Guide.		9781782947523
CGP	<u>GCSE Design & Technology AQA Revision Question Cards: for the 2026 and 2027 exams (CGP AQA GCSE D&T) by CGP Books</u>		Available preloved online from various retailers from £2.19



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