Cornwallis Academy
Ambitions for All

SMILE
SUCCESSFUL | MOTIVATED | INSPIRED | LEARNING | EXCITED & ENGAGED

Design and Technology

Curriculum Intent

Design and Technology is delivered to inspire creativity, develop practical problem-solving skills and equip students with the knowledge, understanding and confidence to thrive in an increasingly technological and rapidly changing world. Students will have gained knowledge, developed their knowledge in different areas of Design and Technology creating more confidence in the theory and practical elements. Through designing, making, testing and evaluating, students learn to identify real and relevant problems and create innovative solutions that respond to the needs, wants and values of a range of users. The KS4 curriculum draws upon the knowledge learnt in earlier key stages and further develops learning in mathematics, science, engineering, computing and art, enabling students to understand how these disciplines work together in the design, manufacture and evaluation of products. Students develop technical knowledge across a range of areas, including materials, manufacturing processes, CAD/CAM, graphical principles and textiles, while gaining an understanding of the social, cultural, environmental and economic factors that influence design decisions. Through independent and collaborative learning, students become resilient, resourceful and reflective learners who are willing to take risks, learn from failure and communicate their ideas effectively. Design and Technology provides opportunities for all students to succeed by developing both creative and technical strengths, while fostering transferable skills such as innovation, teamwork and critical thinking that support achievement across the wider curriculum. Students have the opportunity to complete Non-Exam Assessment in the classroom giving students the chance to work independently producing both design work and a practical outcome forming knowledge of project work and problem solving. Our Key Stage 4 curriculum prepares students for work in many manual industries, apprenticeships and further education in a design or creative pathway. This KS4 subject enables the children studying to become informed, capable and enterprising people within their community who can contribute positively to an ever-evolving technological world.

Assessment, Marking and Feedback

Students complete a written assessment task each term. They are also assessed on practical skills each term. Making of practical will focus on accuracy and skill. Students are given feedback and the opportunity to improve and progress on all assessed tasks.
In year 11 students will produce a Non-Exam Assessment project. This will be monitored and supported by the class teacher and will be marked in line with AQA's assessment criteria.

Homework

In year 10, students are set three tasks each term. This covers and revisits content that students will need for the examination.
In year 11, students do not have homework but need to keep up to date with their NEA. We offer catch up and support sessions throughout year 11 to help with NEA work and revision for the examination.

Links to National Curriculum / Syllabus Specifications

Key Stage 4 National Curriculum
AQA Design and Technology
2.1 Subject content

- **1.** Core technical principles
- **2.** Specialist technical principles
- **3.** Designing and making principles

2.2 Assessments
What's assessed

- 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 is assessed

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

Questions

Section A – core technical principles
A mixture of multiple choice and short answer questions assessing a breadth oof technical knowledge and understanding.
Section B – Specialist technical principles
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
A mixture of short answer and extended response questions.

Non-Exam Assessment (NEA)

What's assessed
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

Tasks
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 and evaluating

GCSE Design and Technology 8552 | Specification | Specification At A Glance | AQA

Exam Support & Revision Resources

BBC design and technology bitesize
www.design-technology.info‘
Mr. Ridley’s you tube channel

Extracurricular and Enrichment Opportunities

Throughout KS4 we offer extra-curricular activities for students to attend. There are sessions twice a week where students can develop their projects and complete NEA work.

We run national competitions within the department for students of different age groups. These are dictated to by the dates and rules of each competition.

Interested to know more?

To read:

- Made in the UK *by Evan Davis*
- The design of everyday things *by Dan Norman*
- How bad are bananas *by Mike Berners-Lee*

To watch:

- Click *on BBC news*
- Mr Ridley *on you tube*
- 'How it's made' *on you tube*

To listen:

- The design museum *podcast*
- 99% invisible *podcast*
- Design Better *podcast*

To visit:

- Victoria and Albert Museum *London*
- The Design Museum *London*
- The Historic Dockyard *Chatham*