This guide is for students, parents and carers. It outlines: Information about the GCSE course; the topics on each examination paper and where students can find revision resources; and ends with examination tips specific to this subject.

**Course Title and Exam Board**

|  |  |
| --- | --- |
| Exam board | AQA |
| Course title | GCSE Design and Technology |
| Course structure and assessment | Paper 1 Written Exam 2 Hours  Non-exam assessment (NEA) Portfolio and practical. 35 Hours. |
| Key date | 24/05/2019 |

**GCSE Examinations**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Paper | Marks | Duration | Weighting | Topics on this paper |
| Paper 1 | 100 | 2 Hours | 50% | **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. |
| Non-exam assessment (NEA) Portfolio and practical. | 100 | 35 Hours. | 50% | Practical application of:  • Core technical principles  • Specialist technical principles  • Designing and making principles |

**Course Components (a more detailed explanation of skills and topics)**

**Examination Paper 1 –**

Students apply knowledge and understanding of:

* New and emerging technologies- *Students must know and understand the impact of new and emerging technologies on*
* *contemporary and potential future scenarios*
  + Industry
  + Enterprise
  + Sustainability
  + People
  + Culture
  + Society
  + Environment
  + Production Techniques & Systems
  + How the critical evaluation of new and emerging technologies informs design decisions
* Energy generation and storage - *Students should understand how energy is generated and stored and how this is used as the basis*
* *for the selection of products and power systems.*
  + Fossil Fuels
  + Nuclear Power
  + Renewable Energy
  + Energy Storage Systems (Inc Batteries)
* Developments in new materials - *Students should be aware of developments in new materials.*
  + *Modern Materials*
  + *Smart Materials*
  + *Composite Materials*
  + *Technical Textiles*
* Systems approach to designing - *Students should consider electronic systems including programmable components to provide functionality to products and processes, and enhance and customise their operation.*
  + *Inputs*
  + *Processes*
  + *Outputs*
* Mechanical devices
  + Different Types of Movement
  + Changing Magnitude and Direction of Force
* Materials and their working properties - *Students should know and understand the categorisation of the types and properties of the following materials.*
  + *Papers & Boards*
  + *Natural & Manufactured Boards*
  + *Metals & Alloys*
  + *Polymers*
  + *Textiles*
* Specialist technical principles - *In addition to the core technical principles, all students should develop an in-depth knowledge and understanding of the following specialist technical principles* ***in at least one*** *material category:*
  + Selection of materials or components
  + Forces and stresses
  + Ecological and social footprint
  + Sources and origins
  + Using and working with materials
  + Stock forms, types and sizes
  + Scales of production
  + Specialist techniques and processes
  + Surface treatments and finishes
* Designing and making principles
  + Investigation, primary and secondary data
  + Environmental, social and economic challenge
  + The work of others
  + Design strategies
  + Communication of design ideas
  + Prototype development
  + Selection of materials and components
  + Tolerances
  + Material management
  + Specialist tools and equipment
  + Specialist techniques and processes

**Where are the revision resources?**

|  |  |
| --- | --- |
| Revision topics | What resources to use (website links, student: drive titles of folders/ documents; books recommended etc.) |
| **Paper 1** | [Technologystudent.](mailto:http://www.technologystudent.com/)  This is a comprehensive website written by a Technology Teacher.  [NEW AQA D&T BBC Bitesize](mailto:https://www.bbc.com/bitesize/examspecs/zby2bdm)  [Exam practice questions](file:///P:\Students\REVISION%20Y11\Design&Technology\Exam%20Papers)  Collins AQA GCSE 9-1revision Design and Technology ISBN 978-0-00-822740-1 |
| Fill in the topic for this paper here. |

**Three Examination Tips Specific to this Subject**

* Some design based questions will ask you to explain using “notes and sketches” or “annotated sketches”. Ensure all sketches with annotations referring directly to the question.
* Take note of the available marks. Responses should meet or exceed them.
* Evaluation based questions require comparisons to be made. Bullet points are a good way to provide clarity. Clearly show where you are giving reasons for an answer and where you obtained the information. Make sure everything you write is relevant to the question.