

GCSE Design and Technology Theory checklist – core only

Your assessment will be based on core only theory; *Booklets 1.1 – 1.17*

Use BBC bite size to help revise: <https://www.bbc.co.uk/bitesize/examspecs/zb6h92p>

Core

New and emerging technologies

Impact on industry
Impact on enterprise
Impact on sustainability
Impact on the environment
Impact on people
Impact on society and culture
Production techniques
Informing design decisions

Energy generation and storage

Fossil fuels
Nuclear power
Renewable energy
Powering systems
Choosing energy sources

Developments in modern materials

Modern and Smart materials
Composite materials
Technical textiles

Electronic systems

Inputs
Micro controllers as process devices
Programming microcontrollers
Control devices
Outputs

Mechanical devices

Types of movement
Levers
Linkages
Cams and followers
Gear types and trains
Pullys and belts

Material categories and properties

Paper and boards
Natural and manufactured timbers
Ferrous and non ferrous metals
Polymers
Textiles

Design contexts

Materials properties
Manufacturing properties

Environmental, social and economical challenges

Social, ethnic, economic groups and human capability
Environmental, social and economic issues
Recycling, reusing and green design
Cost and manufacturing capability
Environmental impact

Investigating past work

Analysing products
Designers and design companies

Design Strategies

Collaboration and design fixation
User centred design
Systems approach
Iterative design process

Communication of ideas

Sketching and annotation
Isometric and oblique projection
Perspective drawing
System and schematic diagrams
2D and 3D drawing techniques
Digital photography and media
CAD
3D modelling