# A-Level Design & Technology Product Design



Curriculum Map

## **NEA Section:** Section E

- Analysing and evaluating
- Critical analysis
- Critical evaluation Modification

NEA Section: Section D -Development of design prototypes

- The use of high level practical skills to develop and refine
- The use of CAM

AO3: Analyse and evaluate

- design decisions and outcomes,
  - including for prototypes made by themselves and
- wider issues in design and technology.

### Written exam Paper 1 **Technical Principles**

- 30% of overall grade
- •120 marks
- Mixture od short answer and extended response

## AO4: Demonstrate and apply

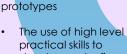
#### knowledge and understanding of:

- technical principles
- designing and making principles.

#### Written exam Paper 2

#### **Designing & Making Principles** 20% of overall grade

- •1 hour and 30 minutes
- •80 marks
- Mixture of short answer and extended response questions
- •Section A:Product Analysis: 30 marks
- •Up to 6 short answer questions based on visual stimulus of product(s).
- •Section B:Commercial manufacture: 50
- Mixture of short and extended response



design prototypes





- Design proposals
- Further
- investigation
- Modelling
- Working drawings
- **Plans**
- Use of CAD



and wants.

#### **NEA Section:**

AO1: Identify, investigate and outline

design possibilities to address needs

Section B -Producing and design brief and



**NEA Section:** Section A Research and investigation.

- Context
- Potential User
- Investigation (primary & Secondary)
- Practical Examination
- Concept ideas





purpose.

AO2: Design and make

prototypes that are fit for

Unit learning: This term pupils will cover the

Major developments in technology



- Critical analysis
- Selecting tool and processes for the correct material
- Accuracy in design and manufacture
- Responsible design
- Design for manufacture



**Begin Non Examined Assessment** (coursework) worth 50% of overall A level.



## **Designing & Making** principles

following topics:

Design methods Design history

Key designers

Design movements

Design processes









Unit learning: This term pupils will cover the following topics:

- Requirements of product design
- Health and safety issues within manufacture.
- Protecting designs
- Design for manufacture
- Feasibility studies
- Enterprise
- Design communication



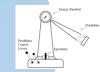




- Unit learning: Material properties physical and working, The classifications, uses and material properties for
- Woods
- Smart materials Modern materials
- Metals Glass Polymers
- Ceramics Paper & Boards Textiles
- Composites







**Unit learning:** This term pupils will cover the following topics:

- Workshop material testing
- Industrial material testing
- **Enhancement of materials**
- Wasting processes Redistribution
- Fabrication
- Finishes
- Scales of production
- Digital design



**Technical principles** 















**Kindness** 

Respect

Curiosity

Collaboration

Endeavour