



DESIGN TECHNOLOGY

BE BOLD, BE BRAVE, BE BRILLIANT

Design & Technology Learning Journey

Work Experience

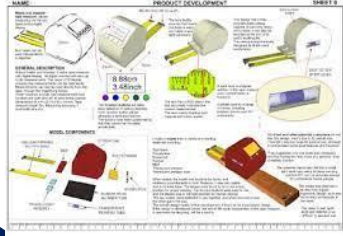
GCSE Written Exam

Non Exam Assessment

College? 6th Form?

Post 16 Choices

Apprenticeship?



Polymers Timbers

Final Assessed Projects



YEAR 11

Exam Theory

Mock NEA

YEAR 10

Eco

Design Strategies

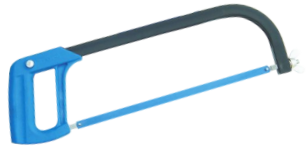
Project Planning

New Materials

Designers Prototyping



$$\text{Area} = \frac{1}{2} \times b \times h = \frac{bh}{2}$$



Impact on Environment

Textiles Wearable

Sensors & Switches Automation

9.2 Can you wear technology?

9.1 What if robots took over the world?

YEAR 9

Conductive Materials

Electronics & Circuits

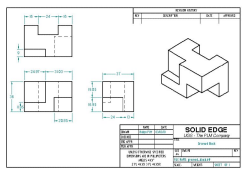
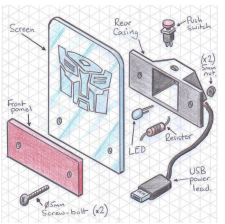
Nets

Metals

Biomimicry

Ethics & Sustainability

Smart? Is Packaging



Exploded Views

Orthographic Views

Electronics & Circuits

Nets

Metals

Biomimicry

8.2 Can products rescue humans?

YEAR 8

8.1. Should We Sleep In The Dark?

Packaging Nets

Cradle to Grave

Metal Forming

Eco Design



The 6 R's

Anthropometrics & Ergonomics

Product Analysis

Scales of Production

2D Design Skills & Rendering

Smart Materials

CAD

7.3 Can design make life easier?

7.2 What can pewter do?

7.1 Can Junk become funk?

YEAR 7

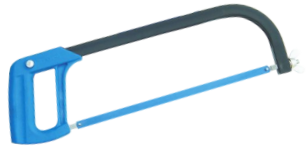
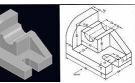
3D Printing

CAD

Material Types

Design Cycle

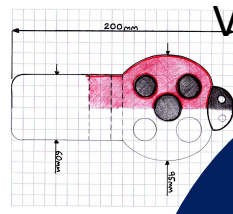
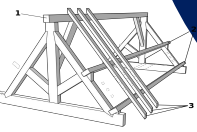
H&S / Identifying Workshop Hazards



Final Assessed Projects

Polymers Timbers

Design companies



A01: Explore & Identify

Investigate, research & Identify the needs and wants of your client or brief

Level 4	Level 3	Level 2	Level 1	Level 0
You have used a range of research skills to identify the needs and wants of your target market, brief and/or client. It is purposeful & effective	You have used research skills to identify the needs and wants of your target market but it lacks complexity and depth.	You have used some effective research skills in order to identify and the needs of your client or brief	You have attempted some research in order to identify and the needs of your client or brief	No evidence

A02: Design & Make

Design & make prototypes and models that are fit for purpose

Level 4	Level 3	Level 2	Level 1	Level 0
Imaginative ideas have been generated with consideration of functionality, aesthetics and innovation. Effective use of design strategies i.e sketching/prototypes.	Ideas have been generated that take some account of investigations carried out but may lack relevance and/or focus. Effective design strategies are evident.	Basic ideas have been generated with some design fixation and limited consideration of functionality, aesthetics and innovation.	Some ideas have been generated using a single design strategy, i.e sketching.	Little or no Ideas generated.

A03: Evaluate

Analyse and evaluate design decisions and outcomes

Level 4	Level 3	Level 2	Level 1	Level 0
Good evidence that iterations are as a result of testing, analysis and evaluation. Some consideration of feedback. Evaluating against the design brief and specification.	Some evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype, including basic consideration of feedback from third parties.	Limited evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype.	Superficial analysis and evaluation. Little influence on the design brief and the design and manufacturing specifications.	No evidence of analysis or evaluation.

A04: Technical Knowledge

Technical understanding of making principles and knowledge

Level 4	Level 3	Level 2	Level 1	Level 0
Tools, materials and equipment have been used safely. A prototype of sufficient quality has been produced that may have potential to be commercially viable, Further developments required.	Tools, materials and equipment have been used or operated safely at a basic level. Basic quality control is evident through measurements. Prototype shows a basic level of making/finishing skills.	Prototype or product shows a basic level of making/finishing skills which may not be appropriate for the desired outcome. Does not meet the needs of the client/user.	A prototype or product of basic quality has been produced with little or no potential to be commercially viable and does not meet the needs of the client/user.	No evidence

A01
A01
 DA 1 - develop detailed design specifications to guide their thinking
 DA 2 - use research including the study of different cultures, to identify and understand user need
 DA 3 - identify and solve their own design problems.
 DB 1 - use 2D and begin to use 3D CAD packages to model their ideas
 DB 2 - produce models of their ideas using CAM to test out their ideas

A02
 MA 1 - produce ordered sequences and schedules for manufacturing products they design, detailing resources required
 MA 2 - produce costings using spreadsheets for products they design and make
 MB 1 - make use of specialist equipment to mark out materials
 MB 2 - use a broad range of material joining techniques including stitching, mechanical fastenings, heat processes and adhesives
 MB 3 - use CAD/CAM to produce and apply surface finishing techniques, for example using dye sublimation

A03
 EA 1 - evaluate their products against their original specification and identify ways of improving them
 EA 2 - actively involve others in the testing of their products
 EB 3 - products that they are less familiar with using themselves
 EB 4 - products considering life cycle analysis
 EB 5 - how products can be developed considering the concept of 'cradle to grave'
 EB 6 - the concept of circular economy approaches in relation to product development and consumption

A04:
 TK 1 - how to classify materials by structure e.g. hard words, soft woods, ferrous and non-ferrous, thermoplastic and thermosetting plastics
 TK 2 - about the physical properties of materials e.g. grain, brittleness, flexibility, elasticity, malleability and thermal
 TK 3 - how more advanced electrical and electronic systems can be powered and used in their products
 TK 4 - how to use simple electronic circuits incorporating inputs and outputs
 TK 5 - about textile fibre sources e.g. natural and synthetic and fabrics e.g. plain and woven