DESIGN & TECHNOLOGY
Learning Journey

KS5
YEARS 12/13
Bishop Luffa Sixth Form
UCAS
APPRENTICESHIP
Start a degree level apprenticeship

AO1:Research & investigation
Follow on from your summer task to further understand the context. Client interviews, product, site analysis and designer research.

Initial Concept Sketches:
What ideas do you have already? Can you visualize them?

AO1: Specification & Brief:
Clarify the needs and wants of the project writing your own brief & specification

AO2: Generate & Develop Design Ideas:
Develop your sketches and communicate ideas. Developing them using modelling techniques

AO2: Realise Design ideas:
Manufacture your product using skills and processes used throughout your DT journey.

AO3: Evaluate & Test:
Gain feedback throughout your project, and test your final product – have you met your brief?

Core content and specialist knowledge:
Revise and practice exam papers in preparation for your final exam in DT.

FINAL GCSE EXAM

EXAM REVISION

NEA COURSEWORK

YEAR 11

Investigate the design possibilities:
What is the design context? What research can you carry out to gather ideas?.

Materials / Make:
Use materials you have not combined before such as acrylic , paper, card and grow your CAD/CAM confidence to develop a unique stylized product.

Design:
Reference key design movements to develop a stylish functional product.

Make:
Use a wide range of tools and processes to produce your final product. You decide!

Testing / Modelling:
Use various testing and modelling methods to develop your product

Materials:
What materials will be appropriate for your product? What materials are sustainable?

Design:
Designing for a user of your choice. How do we make a product unique to the users needs?

GCSE NEA CONTEXTS

GRAPHICS PROJECT

Clock Project

KS4

YEAR 10

Materials:
Working with specialist timbers. Working properties and recognizing materials.

Design:
Practicing Isometric Projection and rendering skills. Orthographic projection.

Make:
Addition processes & wood joints. Using skills to develop high quality craftsmanship products.

Evaluate:
Does your product work? How can you fix problems?

Materials:
Working with Softwoods

Design:
Focus your idea on the work of famous designers, for inspiration.

Evaluate:
What skills have you developed? Test your product and consider how you would improve it.

Make:
Use a wide range of skills, materials and processes to develop your unique product.

Swivel Picture Frame

ANGLE POISE LAMP

After choosing DT options in year 8, focus your studies in DT in year 9 with real life projects. **Deepen your understanding** of DT in the world around us whilst developing products that help various needs and users.

Evaluate:
How has CAD / CAM helped you make a product?

Make:
Use the laser cutter to produce your final product

Design: CAD/CAM
Mastering computer aided design. Moving forward with confidence use of 2D software to design products

Materials:
Working with Plywood and Acrylic and finishing techniques.

Evaluate:
What skills have you developed? Test your product and consider how you would improve it.

CAD/CAM PROJECT 2

YEAR 9

Analysis
Passive Amplification

Product Analysis/Research
Of existing products

Design Specification
ACCESSFM

Target Market:
Clients needs

Sound / Amplification:
How does sound travel? How to increase amplification? Best shape / material

Design:
Isometric projection, CAD development

Design:
Designing for users
Initial drawings and final design development

Materials:
Working with MDF
Machine and hand tool development

Make:
Can you make an accurate product using machines and tools independently?

PASSIVE AMPLIFIER PROJECT

Work in more depth on projects, honing your practical skills, improving your resilience & problem solving whilst **developing independence** in the workshop.

Evaluate:
How has CAD / CAM helped you make a product?

Make:
What is CAM? Use the laser cutter to produce your final product!

Design: CAD
What is computer aided design? Learn to use the basics of 2D software to design products

Materials:
Working with paper and Card, cutting and finishing techniques.

Evaluate:
What makes a Safety Light? How can you improve your skills?

Testing / Modelling:
Will my product work? What can I do to improve it?

CAD/CAM PROJECT 1

YEAR 8

Make:
Thermo - Forming
Shaping cutting use of hand tools
Basic circuitry and soldering

Resilience
Problem Solving
Confidence
Listening Skills
Teamwork
Discover New Skills

What do you already know about DT?

Experience a wide range of fun and exciting projects that teach you valuable skills in the workshop, **understanding** different materials and how they work.

Introduction to the workshop:
Health and Safety

Analysis of Products that keep us safe

Product Analysis/Research
Existing light products

ACCESSFM

Materials:
Manufactured board
Timbers
Finishes
Polymers Classification.
What is a polymer?
What is a circuit?

Electronic components Soldering a PCB

Sketching and Annotating

Design:
Designing for users
Initial drawings and final design development

Isometric drawing

SAFETY LIGHT PROJECT

YEAR 7

KS3