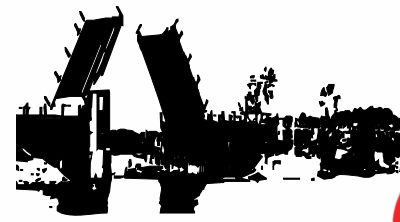
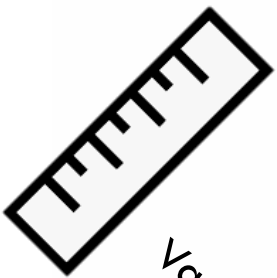


Year 9 Engineering CURRICULUM AT WATERFRONT UTC

What next?
YEAR 10 OPTION CHOICES

Include Literacy skills (Skimming and Scanning)
Numeracy skills (Problem Solving)



Electrical motors and transmission

TERM 5

Cross-curriculum project

Electrical theory
Ohms Law

TERM 4

Soldering Skills

Project Preparation

Testing and evaluation

Working drawings

Scale Modelling

3D CAD
SOLIDWORKS

Metallic Material

2D Design (CAD)

Plan for make

Evaluation

Metal finishing
Casting theory

Welding theory

CAM theory

Shading/Rendering

Isometric Drawing

Basic 2D Drawing

PPE

Workshop Safety

Health and safety

Basic hand tools

Engineering Processes

TERM 1

Engineering Processes
Marking out and measurement

How to mark out and measure

Engineering Processes

Vacuum forming Theory

Cutting and drilling metals

Line Bending Theory

Non Metallic materials

Material choices

Modelling/Prototyping

2D Design (CAD) Vacuum forming
Laser Cutter

TERM 2

Engineering Material

Health and Safety

Workshop Equipment

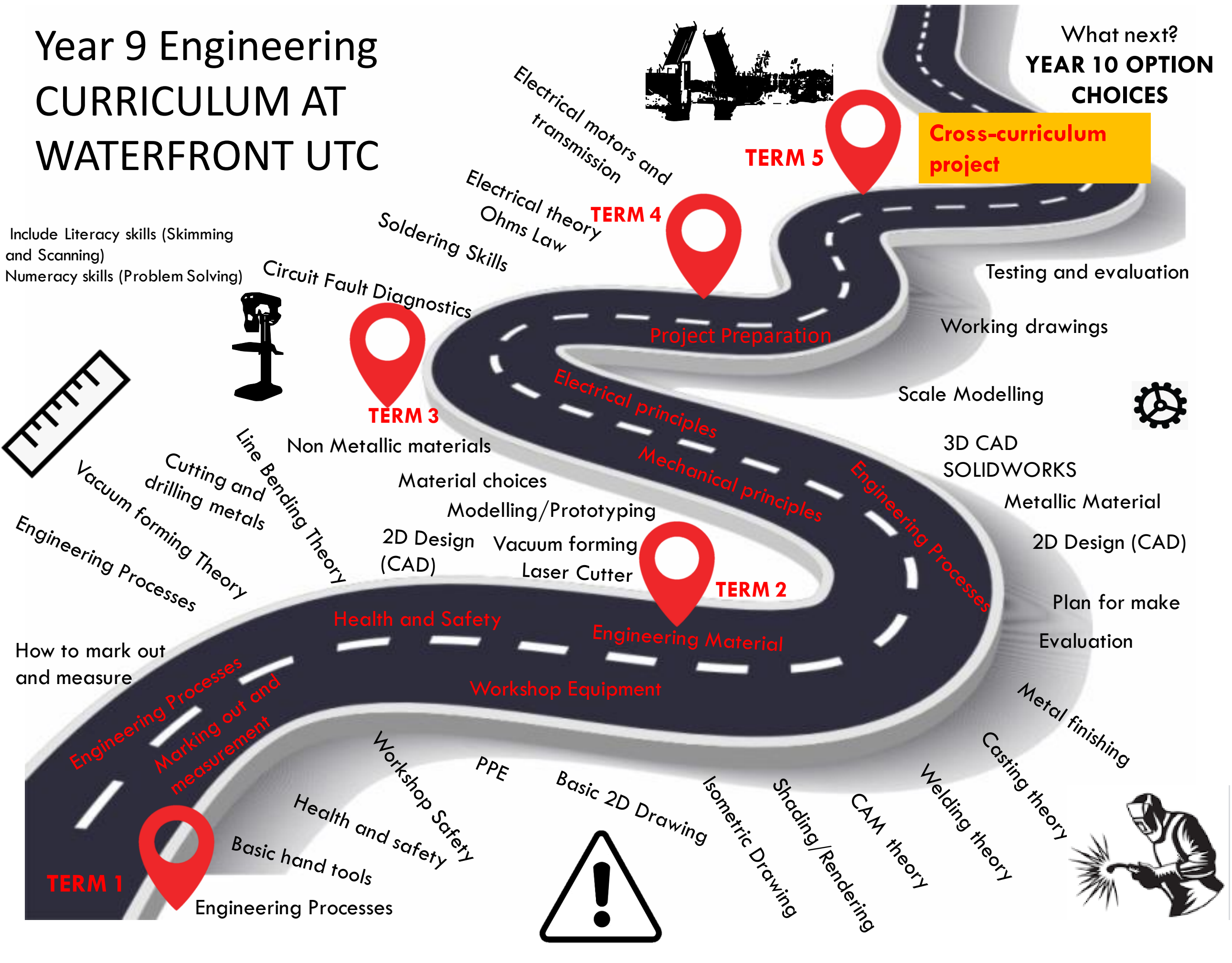
Electrical principles

Mechanical principles

Engineering Processes

Circuit Fault Diagnostics

TERM 3

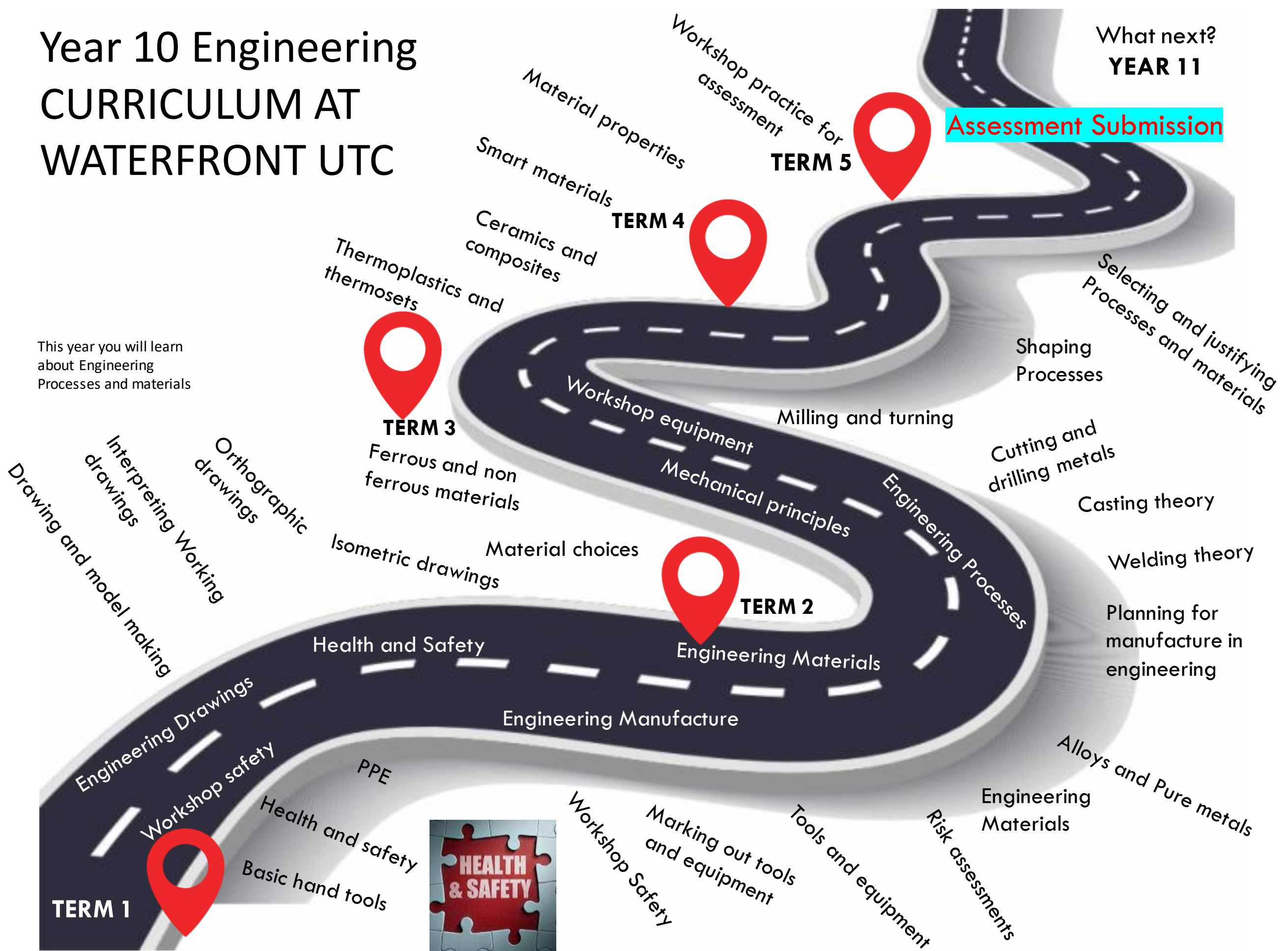


Year 10 Engineering CURRICULUM AT WATERFRONT UTC

What next?
YEAR 11

Assessment Submission

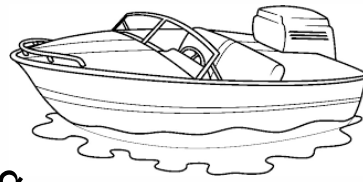
This year you will learn about Engineering Processes and materials



Year 11 Engineering CURRICULUM AT WATERFRONT UTC

Include Literacy skills (Skimming and Scanning)
Numeracy skills (Problem Solving)

What next?
**Year 12 /
Progression**



Measurement

Cutting and finishing processes

TERM 5

**Component 3
External
assessment**

TERM 4



The Mock

Testing and evaluation

Product evaluation

Hand Skills
Working from drawings



TERM 3

Forming processes

Disassembly techniques



Engineering process choices

Manufacturing processes

Electrical principles
Mechanical principles

Engineering Processes

CAM and
CNC
Processes.

Welding Processes

Turning

Milling

Manufacturing scales

Quality control

TERM 2

Engineering Material

Cutting and
drilling metals

Material selection

Health and Safety

Workshop Equipment

Polymers theory
Ferrous and
non ferrous theory
CAM theory

Analysing designs

Workshop Safety

Computer Aided
Manufacturing

Finishing Techniques

Evaluation

Iterations

Engineering Sectors

Careers in Engineering

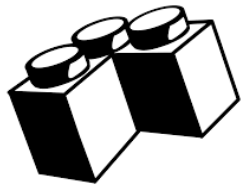
Design and sketching

Quality Cycles

Design proposals



TERM 1



Basic 2D Drawing

Creating specifications

Hazards and Risks

Engineering Processes