



Engineering



Archdiocese of Liverpool

Curriculum intent:

The purpose of the year 10 curriculum is to enable learners to learn in such a way that they develop:

- skills required for independent learning and development;
- a range of generic and transferable skills;
- the ability to solve problems;
- the skills of project based research, development and presentation;
- the ability to apply learning in vocational contexts.

All Pupils will undertake a range of mini NEA projects which follow a 'plan, do, review' approach to learning. With this, learners are introduced to a context for learning, review previous learning to plan activities, carry out activities and review outcomes and learning. This approach mirrors engineering production and design processes and also provides for learning in a range of contexts thus enabling learners to apply and extend their learning.

The curriculum has been designed to build on the skills, knowledge and understanding acquired at Key Stage 3.

Year 10

	Content	Concepts and Skills
TERM 1	CAD – OnShape Mini make projects, Technical drawing, Engineering terminology (Tier 3)	<ul style="list-style-type: none"> • User needs and Design Context, • Understanding computer aided design, • Materials, Sources and Properties • Workshop independence • Making Techniques
TERM 2	NEA Unit 2	Designing Engineering Products: <ul style="list-style-type: none"> • 2.1 Understanding function and meeting requirements • 2.2 Proposing design solutions • 2.3 Communicating an engineered design solution • 2.4 Solving applied engineering problems
TERM 3	Unit 1 – practical, engineers clamp (practice)	Solving Engineering Problems <ul style="list-style-type: none"> • 3.1 Understanding the effects of engineering achievements • 3.2 Understanding properties of engineering materials • 3.3 Understanding methods of preparation, forming, joining and finishing of engineering materials • 3.4 Solving engineering problems.

