



## Manufacturing

GCSE Engineering and Manufacturing involves exploring products, which surround us all, to develop an awareness of industrial issues, such as emerging manufacturing technologies and new modern materials available. Its scope extends beyond production or fabrication by machines and robotics. It seeks to do more with less in the face of dwindling natural resources. It seeks to analyse, manage and optimise industrial policy, manufacturing operations, supply chains and networks, technologies and systems to discover and apply the right tool or tools for the job, be they physical or procedural.



At Castlederg High School pupils have opportunities to develop their design and manufacturing thinking and technical skills using computer aided design (CAD) and computer aided manufacture (CAM).





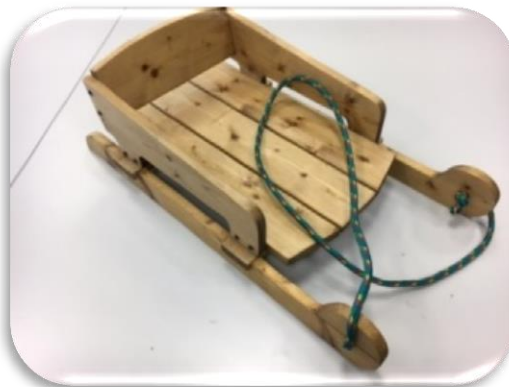
Through relevant industrial visits during year 11 and 12, pupils can further their understanding of the impact these new technologies have within industry and on society and can see first-hand the wider environmental issues involved. Past visits have included companies such as Terex Omagh and Bombardier aerospace to study production techniques.



## **Key Stage 4**

Pupils spend two-thirds of the course carrying out practical and design work for their portfolios. This accounts for 60% of the GCSE grade. The other one third of the course is used to prepare for the exam which makes up the other 40% of the GCSE.

The course provides a sound foundation for progression into our GCE Design and Technology in Resistant materials. Other progression routes may include employment opportunities, modern apprenticeships and further education courses such as BTEC National Diplomas in Manufacturing and Engineering or Product Design.





## What will I study?

	TASK	ASSESSMENT
<b>Unit 1</b>	This unit is about how the manufacturing industry brings a product to the marketplace. From a client brief you will develop and test a design solution and use CAD to create working drawings.	Produce a design portfolio  25%
<b>Unit 2</b>	In this unit you will manufacture a quantity of products which must include two components of different materials and must be made within the set tolerances.	Workshop based manufacturing task  25%
<b>Unit 3</b>	For this unit you will learn about the manufacturing and engineering sectors; production details and constraints; materials and components; new technologies used in and by the manufacturing industries; and the impact of modern technologies.	One 2 hour Exam paper  50%

CCEA Celebrating Excellence 2012



CCEA Celebrating Excellence 2011



Celebrating Excellence 2014



CCEA Celebrating Excellence





# Castlederg High School

*A High Performing, Non-Selective, Post Primary School*