

## Next steps!

If you are interested in studying GCSE Manufacturing, you should start to find out more about the subject by:

- talking to the Head of Manufacturing at your school who will be able to describe the course in detail and advise you of what you need to do next when it comes to your options
- looking on the Edexcel website ([www.edexcel.com/gcse2009](http://www.edexcel.com/gcse2009)) where there is a lot of useful information about what you will be studying and how you will be assessed.

### Manufacturing Question:

The Terracotta Army was made in 215BC to be buried with the first Chinese Emperor. However it is one of the earliest examples of which industrial process?

### Manufacturing Answer:

(b) Assembly line

### Edexcel

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# Edexcel GCSE Manufacturing



### STUDENT GUIDE

## Is this the right subject for me?

GCSE Manufacturing is the right subject for you if you want to:

- learn in both a classroom and practical environment
- learn in a realistic way and apply your skills in work-related situations
- develop skills that are highly valued by employers and higher education
- carry out a range of activities, including an understanding of manufacturing, the related sector, and how they affect society and the economy
- gain a good understanding of the main principles of manufacturing and an insight into how companies operate
- cover a range of different types of manufacturing, which may include fabrication, electrical/electronic, automotive plus many others
- learn about manufacturing techniques and processes.

# What Is Manufacturing?

Manufacturing is the 'use of tools and labour to make things for use or sale'. Manufacturing covers a wide range of operations from the 'one-off' craftsperson to large-scale production. The GCSE Manufacturing course mainly covers industrial production, in which raw materials are transformed into finished goods on various scales of production.

## What do I need to know, or be able to do, before taking this course?

You will have developed some related knowledge, skills and understanding during your Design and Technology lessons at Key Stage 3. These will be useful during this course, but you do not need to have studied manufacturing before starting the GCSE.

## What will I learn?

There are three units which make up **GCSE in Manufacturing Double Award** (equal to two GCSEs).

### Unit 1: Designing Products for Manufacture

You will develop a design specification and design and manufacturing proposals for a product, produce a prototype and draw up a final design and manufacturing solution. You will present your design solution and make modifications based on feedback received.

### Unit 2: Manufactured Products

You will work as part of a team to manufacture a quantity of products. You will use a production plan, develop a schedule for manufacture, select and use suitable materials, tools, components and equipment and machinery, and apply a range of quality control techniques.

### Unit 3: Application of Technology in Engineering and Manufacturing

You will learn about the stages involved in manufacturing a product and the advantages and disadvantages of using modern technology in manufacturing. You will investigate the use of ICT, modern and smart materials and control technology in manufacturing, and the impact of modern technology on the design and manufacture of a product in a particular manufacturing or engineering sector. You will also learn about how new technologies can be used to benefit the workforce, the wider community and the global environment.

## How will I be assessed?

Unit 1 & 2 Course work (60%)	Unit 3 Examination (40%)
<p>You will carry out a number of assignments and activities based on Units 1 and 2. After completing your assignments and activities, your teacher will mark your work. During your course you'll build up two separate folders containing your work for Units 1 and 2. These folders count towards your final grade. Unit 1 is worth 30% of the total marks and Unit 2 is worth another 30% of the total marks.</p>	<p>You will take a written exam paper based on Unit 3, set and marked by Edexcel. The mark for your written exam also counts towards your final grade and is worth 40% of the total marks.</p> <ul style="list-style-type: none"><li>• The exam can be taken at the end of Year 10 or Year 11 and one resit is allowed.</li><li>• Questions are written for students with differing levels of ability to help you cope!</li></ul>

## What can I do after I've completed the course?

Students gaining a **GCSE in Manufacturing Double Award** will have access to a range of career and further education opportunities. You learn and use a variety of skills – that are in great demand – throughout the course. These skills are recognised and highly valued by employers. If you wish to continue studying, you could move on to, for example:

- a Diploma in Engineering or Manufacturing and Product Design at either Level 2 or Level 3
- a BTEC First or National course, such as Manufacturing, Mechanical Engineering, Art and Design or Hospitality and Catering
- an A Level or AS in Manufacturing or Design and Technology.

You could then continue your studies in higher education, on a BTEC Higher National or on a degree course, either full time or part time whilst working.

### Manufacturing Question:

The Terracotta Army was made in 215BC to be buried with the first Chinese Emperor. However it is one of the earliest examples of which industrial process?

(a) Sand casting    (b) Assembly line    (c) Sintering    (d) Scaffolding