For 14-19s

Manufacturing and product design

The scene in Sheffield

What is manufacturing and product design?

Take any everyday Item , e.g. a mobile phone, a handbag or a football. Now think of all the people involved in producing it - deciding how it will work, how it will look, what it should cost.

This is manufacturing and product design. It includes food and drink, textiles and clothing, chemicals, pharmaceuticals, engineering and more. It employs around 4.3 million people – that's about one in ten of all workers in the UK. Jobs include research, design, engineering, sales and marketing.

"Sheffield is a centre of excellence and innovation."

What's happening in the sector?

- The sector has had to make changes because many of the goods that we used to produce in the UK can now be made more cheaply overseas. In response, some companies are focussing more on using cutting edge technology to produce high quality, 'top of the range' goods. This is often called advanced manufacturing.
- South Yorkshire is a centre for advanced manufacturing. There is an Advanced Manufacturing Park (AMP) in Rotherham which is used by some of the world's leading high technology manufacturing companies and research centres.
- Many jobs in manufacturing are now highly skilled and need at least NVQ level 3 qualifications and often a degree. The number of lower skilled jobs (not needing qualifications) has fallen.
- 2009 was a tough year with heavy job losses and more than four out of five firms freezing pay. Employers are reported to be more hopeful about the coming year, although they believe that a full recovery could still take some time.

What jobs are there?

Job	Salary range (£)	Job	Salary range (£)
Industrial/Product Designer	17,000-40,000	Mechanical Engineer	19,000-40,000
Manufacturing Engineer	22,000-40,000	Production Manager	18,000-40,000
Manufacturing Supervisor	18,000-25,000	Quality Control Technician	12,000-25,000
Marketing Manager	25,000-50,000	Sales Manager	18,000-55,000
Materials Technician	14,000-25,000	Textile Technologist	21,000-40,000

These are national average salaries for qualified workers and the higher rates are for experienced staff and for supervisors. Pay rates in Yorkshire and the Humber may be lower.

Sheffield Futures

Want to know more?

www.getconnectedsheffield.com & www.applysheffield.org.uk – for local vacancies
www.apprenticeships.org.uk – for apprenticeship vacancies across the country

Sheffield City Council

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The routes in

If you're choosing options in Year 9 (or Year 8) pick a broad range of subjects. Good grades in English, Science and Maths are important.

Some schools also offer qualifications which involve learning about the sector e.g.

- Diploma in Manufacturing and Product Design, GCSE Manufacturing, NVQ Performing Engineering Operations or NVQ Performing Manufacturing Operations
- Young Apprenticeships in Engineering
- Vocational Skills Programmes in Manufacturing and Product Design or Engineering.

Ask at your school, use the *Look Ahead* booklet from Sheffield Futures or visit **www.applysheffield.org.uk**

After Year 11 there are full time courses and work based learning at different levels:

- **Level 1** might be right for you if you're expecting grades E-G.
- **Level 2** normally needs some GCSE grades D.
- **Level 3** normally needs at least 4 or 5 GCSE grades A*-C.

If you have equivalent qualifications check whether you still need some GCSEs, particularly in English and Maths.

Where can I learn after Year 11?

Here is a basic guide to opportunities in local colleges, sixth forms and work based learning.
Warning: This information can change – always check it on **www.applysheffield.org.uk**

Subject	Level 1	Level 2	Level 3
Job specific qualifications (e.g. NVQ)*			
Manufacturing		Brinsworth Training, MetTECH	Brinsworth Training, MetTECH
Engineering Manufacture Production	Sheffield City College	Sheffield City College	
Work related qualifications (e.g. Diploma, BTEC)			
Engineering	Sheffield Academies	Sheffield Academies, Sheffield City College	Sheffield Academies, Sheffield City College, King Edward V11
General qualifications			
A Levels (Discuss subject choice with your Personal Adviser - Maths and Sciences may be needed.)			All colleges and sixth forms

2009 was a difficult year and 2010 will be challenging too - but we think the worst is now over.

"You need to be highly skilled and well qualified."

*You normally complete Levels 1-2 before Level 3

Sheffield City College is part of The Sheffield College.

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