

## Nuffield Placement Unipart Manufacturing



'He's ahead of the game.'

**Phil Carter and Paul Gardner work at Unipart Manufacturing in Coventry as members of the Finance Department. During July and August 2008, the company welcomed Peter Williams, a Year 12 student from Blue Coat School in Coventry. Peter completed a 6 week placement under the Nuffield Bursary Scheme.**

### Can you tell us a little about your roles at Unipart?

**Phil:** I'm a Principal Engineer and have been with Unipart for about 12 years. Throughout this time my role has been to generate improvements in the company. I have recently been working in Finance to review the way we generate our quotations to the customer

**Paul:** I'm the Finance Manager here and I am a chartered accountant. One of my jobs is costing of products.

### What made you interested in the Nuffield Bursary Scheme?

**Peter:** I have been planning for most of my life to be an accountant and I thought this would be a great opportunity to experience the world of work.

**Paul:** We were quite excited to hear about the scheme because we had a project coming up which we thought would fit very well with the student. We saw that the project could be a perfect introduction to the notion of costing and the industry side of accounting.

### Can you describe the project which was completed during the placement?

**Paul:** As a manufacturing company we have to explain to our customers exactly what the costs are of the products we make for them. A key element of that is saying what overheads the business uses. The project aimed to look at a new approach to our system for dealing with this which involves re-costing with a machine rate per hour. This is something which we had never tried before. It was an ambitious project to collect all the data, analyse the costs and understand these.

**Peter:** I had to use a lot of creative thinking derived from Statistics modules at school to determine how to cost specific components. The main difference I found between working here with maths and at school was that the data which I was working with was a lot less neat and sometimes not even easily available. I also had to use some concepts from Mechanics and a lot of spreadsheet tools.

**Phil:** This project was very exciting because we really didn't know what the outcome would be. Peter has really been at the very ground floor. He has been learning as we have been learning.

### What have you learned from the project?

**Paul:** Peter obviously has a very good mathematical background and he has brought fresh ideas to the task. He has used a lot of common sense in his work which has been great

**Peter:** I know a lot more about the industry now. Before I was going into it blind but I have gained a valuable insight into how the workplace operates. It's been brilliant.

**Phil:** Peter has experienced something at a very early age which some of our Finance people haven't experienced. He has been down on the shop floor and understood how everything comes together in the actual working environment. That is something which he would not pick up in his accountancy course at university and will prepare him well for the future. He's ahead of the game.



Career Fairs

Career Profiles & Materials

Enrichment and Motivational Activities  
in Schools and at Coventry University

Student Ambassador Scheme

Teacher Workshops

Collaboration with Mathematics  
Promoting Organisations

Employer Engagement

### Want to get involved?

For more information about the 'more maths grads' project in the

West Midlands contact: **024 7688 8569**

[www.moremathsgrads.org.uk](http://www.moremathsgrads.org.uk)



Rolls-Royce

QinetiQ



## Mathematics Enrichment Activities



**more maths grads**

multiplying opportunities





'I thought it was ace! It was really good and exciting...I would love to do it again! Maths is cool!'

**Adam Harrison**, Year 6 pupil at Hollyfast Primary School, commenting on his experiences of the day at Coventry University with the 'more maths grads' team.



'This was my first session with the 'more maths grads' team. Thought it was a brilliant SAT activity...the children absolutely loved it and came up with some brilliant ideas for the poster competition.



**Mrs Godman** Maths Teacher at Hollyfast Primary School, Coventry

It was well worth the effort to get involved, as the kids got to use their skills learnt in class, with some practical activities. I'll certainly be recommending 'more maths grads' to my colleagues!

'The Nuffield – 'more maths grads' mathematics placement at NHS Arden Cancer Centre gave me an insight of how Maths can be applied in the real world. A lot of people question why they have to learn Maths and think they are never going to use it again. Here I have seen how Maths can be applied to very important and everyday situations.'



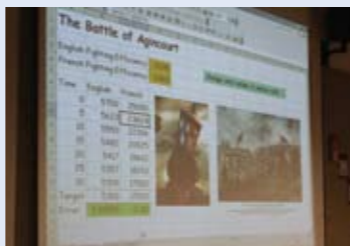
**Chandni Mistry**, Yr 12 Student at President Kennedy School and Community College, Coventry

'The increase in resources and expertise acquired by the partnership would never be achieved by the school alone. Pupils also develop relationships with Student Ambassadors and raise their subject attainment.'

Comments on Student Ambassador Scheme from **Mr. Eddy Pryce**, Head of Mathematics at Barr's Hill School and Community College, Coventry



## Mathematics Master Classes at Coventry University



## Public talks on the Application of Mathematics at Coventry University



## Nuffield- 'more maths grads' Summer placements for Yr-12 Mathematics students in various Industries/Organisations.

'I had not heard about the scheme before, but thought it was a fantastic opportunity which could give my students an insight which they would not get in any other way. I was invited to participate in the scheme by the 'more maths grads' team. We were really grateful we managed to get three placements. Two of our students went to Rolls Royce – there is no better place to give students' experience of real mathematics. As staff we can lose touch sometimes with the applications of the subject. Being aware of the jobs out there is crucial for us.'



**Mr Martyn Rice**, Head of Mathematics, Coventry Blue Coat Church of England School and Music College

'I have personally found it very rewarding to have some role in hopefully filling some of the gaps between the text book and the real world applications.'

Nuffield Placement Supervisor - **Mr Andy Dryden**, Logistics Manager Unipart Group

## Nuffield Placement NHS Arden Cancer Centre



'Mathematics is very applicable to real-life scenarios.'

**Kevin Young works at the Arden Cancer Centre in Coventry where he is a Medical Physicist. During July and August 2008, the centre welcomed Chandni Mistry, a Year 12 student from President Kennedy School & Community College in Coventry. Chandni completed a 5 week placement under the Nuffield Bursary Scheme. During the placement she worked on an original and exciting mathematics project.**

### Can you tell us a little about the Arden Cancer Centre?

**Kevin:** The Centre is primarily concerned with the treatment of cancer. I work in the Medical Physics division where we look after all the equipment which makes use of radiation. It is our job to ensure that patients are treated correctly with this radiation. My speciality is intensity modulated radiotherapy which is the use of high intensity radiation beams to treat tumours accurately. I think that one of the attractions of my area is that the Maths is very applicable to real-life scenarios such as patient care.

### How did you become involved with the Nuffield Bursary Scheme?

**Kevin:** As a department we are always keen to attract students so that we can ensure that future generations will continue carrying out the essential work in radiotherapy.

### Can you describe the project which was completed in the placement?

**Chandni:** I had to model the flight path of a linear accelerator. In order to do this I had to revise a lot of my school Maths on vectors. I also had to do a lot of background research on linear accelerators and the vector cross product. Forces of momentum and Newton's Laws from Mechanics were also essential for this project.

**Kevin:** Calculating the flight path of the electrons in variable magnetic fields requires a lot of mathematical concepts and some electrodynamics was also new material which Chandni had to become familiar with.

### How did you find working at the Centre compared to school?

**Chandni:** Well I definitely didn't feel as spoon-fed as it can sometimes feel at school. This was very much a research project where neither of us knew what was coming.

**Kevin:** We didn't know if it would work to be quite honest because it was something which was quite novel. We had to check that the equations we derived made physical sense. It was a great feeling when our results worked and I think we could look to publish some of these results in an academic journal perhaps.

### What have you learned in the project?

**Chandni:** It has made me see how Maths can be applied in the real world. A lot of people question why they have to learn Maths and think they are never going to use it again. Here I have seen how Maths can be applied to very important and everyday situations.