

## Case Study

### Penistone Grammar School

The school, ICT and science

### School profile

Penistone Grammar School is a mixed comprehensive located on the outskirts of the market town of Penistone, about six miles from Barnsley. The school has over 1200 students on the school roll and 85 teaching staff.

The school has three networked computer suites, each with 31 computers. The science department has varied provision of ICT equipment, including an interactive whiteboard, 30 laptops, data-logging sensors, remote loggers, a printer and a digital camera.

Alison Fletcher is the head of science at Penistone Grammar School. Before becoming head of department, Alison was ICT representative for the science department. She has been teaching for 20 years, six of which have been at Penistone Grammar School.

### Use of Multimedia Science School 11-16 Edition

*by Alison Fletcher, Head of Science*

### Our modes of using Multimedia Science School 11–16 Edition

I quickly grew to like Multimedia Science School (MSS) 11–16 Edition. I could instantly see how the animated models with their accompanying worksheets and teacher's notes could aid my teaching of certain topics. Moreover, unlike other software, it took very little time for me to learn my way around MSS 11–16 Edition. I became confident with its use in my classroom and very soon began not only using the accompanying resources as they were provided, but also using the editing facility to tailor some of the resources to suit my own particular classes' needs.



I don't always use MSS 11–16 Edition Teaching Tools in their entirety though. Sometimes I use the interactive whiteboard and a MSS 11–16 Edition tool for a two-

minute demonstration to illustrate a small part of a concept or to recap on a concept that we have visited before. I probably make use of some aspect of MSS 11–16 Edition two or three times a week, and it is now becoming an integral part of our science department's schemes of work.

### **A lesson using Multimedia Science School 11–16 Edition**

I particularly like using MSS 11–16 Edition's heart animation. It deals with a topic that I think naturally fascinates children and the simulation is presented in such a way that makes it easily adaptable for use by all age groups. For example, the animation is not too difficult for my year 7 group and so I have used the Heart Teaching Tool on my interactive whiteboard as a demonstration tool for them. At the same time, the animation is not too patronising for my year 10 and year 11 groups and I have used it as a revision tool for them. However, on the particular occasion I wish to describe I was teaching a year 9 group.

My year 9 students needed to learn about the structure of the heart and its associated blood vessels. MSS 11–16 Edition's dynamic representation of the heart allowed students to actually see and understand the concept of blood flow. The alternative to using this dynamic tool would have been a diagram of the blood flow drawn by me on the whiteboard or presented on a printed page, which with no movement is actually quite difficult to imagine.

I issued each student with a laptop. I then used my interactive whiteboard to show the students how to load the heart tool and which buttons they might like to click to explore the blood flow. It wasn't long before the students were following the blood's dynamic journey through the heart and answering the accompanying worksheet questions along the way. I didn't even need to adapt the worksheet accompanying the simulation for this particular group.

The students were so absorbed I hardly heard a peep out of them all lesson. They were far more motivated than they would otherwise have been if I had asked them to copy and label a diagram of blood flow from a book. The SlideShow, which made suggestions about what to click and look at, and the accompanying worksheet were easy to follow and the whole-class discussion at the end of the lesson suggested to me that the students had developed a good understanding of the structure of the heart through the use of MSS 11–16 Edition.