

Case Study

Parmiter's School

The school, ICT and science

School profile

Parmiter's School is a mixed comprehensive school situated just outside Watford. There are 1200 students on the school roll and 80 teaching staff.

The school has good ICT provision. It has a multimedia centre with 32 computers and four other networked rooms, each with 20–26 computers. There are also varying numbers of individual desktop machines and laptops in subject departments.

In the science department there is a suite of six computers for students to use and one computer for staff use only. In addition, there are eight laptops. These laptops are sometimes used by students for experiments involving data-logging, while at other times they are used by teachers with one of two projectors for teaching at the front of the class.

John Way is the head of science at Parmiter's School. His teaching career spans 29 years, 23 of which have been at Parmiter's School.

Our modes of using Multimedia Science School 11–16 Edition

The science department at Parmiter's School has been using Multimedia Science School (MSS) 11–16 Edition for two years now. We like its flexibility – we can use it for individual learning by asking students to work with the SlideShows and worksheets, or we can use it for whole-class teaching with a laptop and digital projector in our teaching rooms.



We have used MSS 11–16 Edition to demonstrate all kinds of science, for example: dangerous experiments involving radioactive substances; abstract concepts such as the forces acting at terminal velocity; and ideas that are difficult to illustrate, such as cell division. We are developing the use of MSS 11–16 Edition all the time and gradually

incorporating it into our schemes of work so that good practice with ICT may be spread across the science department.

A lesson using Multimedia Science School 11–16 Edition

Recently I wanted to teach elements, mixtures and compounds to a year 8 class. I could have taken a practical approach showing a mixture of the elements sulphur and iron, and then heating sulphur and iron to make the compound iron sulphide.

However, there is a health and safety risk. When heating sulphur and iron there is a danger that the sulphur will catch fire and produce sulphur dioxide, which can cause breathing difficulties if released in an open laboratory. I could have chosen to conduct the experiment in the fume cupboard as an alternative, but then it is difficult to ensure that every student can see what is happening.

Instead, I chose to use the Elements, Compounds and Mixtures Teaching Tool from MSS 11–16 Edition to teach the year 8 class. Not only did the tool allow me to show a video clip of the hazardous experiment safely, but I could also switch to an animation to show students a simulation of the changing configuration of the atoms as the compound is being made. This is a highly abstract idea that would have been very difficult for me to illustrate successfully without the help of MSS 11–16 Edition. The use of a laptop and projector also meant I could be sure that every student could see exactly what was happening.

As a follow-up I asked students to work independently using MSS 11–16 Edition to explore the differences in the way the mixture of iron and sulphur powder behaved compared to the compound of iron sulphide. The flexibility of MSS 11–16 Edition made my task much easier as I was able to take the SlideShow and worksheet accompanying the Elements, Compounds and Elements Teaching Tool and simply adapt parts of it to suit my particular students' needs.

Finally, the students and I returned to look at the tool using the projector to discuss the key points that we had learnt.