

Kirkstead Junior School

Providing for the education needs of 260 pupils aged between 7 and 11 years, Kirkstead Junior School is very much part of the local close-knit community in the rural Derbyshire village of Pinxton.

Martin Hughes has been the Headteacher since 2000, and is chiefly responsible for the IT systems at the school. According to Martin the school's IT needs are shared between two mutually exclusive user groups, the children and the teachers/staff.

“Our teachers require ready access to assessment details and other pupil information in order to fulfil curriculum organisation and planning, and to download teaching and learning information from the Internet. Furthermore, our staff need to manage day to day information concerning the running of the school.”

“Pupils on the other hand require extremely safe and secure access to the Internet for research and study. Each child is also provided with personal server files to store documents on the computer network.”

The Challenge

The development of an ICT infrastructure at Kirkstead had previously been limited by the structure and layout of the school. Made up of a mixture of old pre-1920s buildings and temporary classrooms, most rooms at Kirkstead are very small. This, coupled with the distribution of buildings around a large central playground, necessitated a flexible ICT solution. “We had insufficient space to increase the number of our PCs, or to organise a sufficient ICT suite,” explained Hughes. “This effectively meant that children faced the prospect of being unable to access the ICT curriculum. We wanted flexible access to ICT for the pupils, to support both whole class teaching and small groups in a cross-curricular fashion.”

The school had recently addressed significant issues in literacy and to support this needed to ensure that staff and children could access an infrastructure to bring about the delivery of ICT. “We saw better ICT infrastructure as a valuable way of enabling better literacy among pupils,” added Hughes.

Previously Kirkstead had one PC per class plus a small central ICT suite running a network of 10 machines, but with room for only about 14 children at a maximum. This unfortunately fell short of new Government targets for ICT literacy that demand a ratio of children to computers of 8:1. With their base of 260 pupils, this meant the School required over 30 computers in total.

The Solution

By early 2003, it became apparent that the circumstances of the school lent itself to a wireless networking solution, rather than any other mode of LAN. The expense of a fibre optic solution and the danger of traditional copper wiring (i.e. in the event of a lightning strike) both compared poorly against the ease, freedom and flexibility that a wireless solution could offer. This led to the school making an autonomous decision to deploy a wireless network at Kirkstead. Several companies were asked to quote to

supply laptops plus a wireless network solution that would provide coverage to all the areas in the School.

“Once the School Governors had selected the preferred supplier and agreed to release funds, we wanted the provision as soon as possible,” added Hughes. The project began in Easter 2003.

The school was rightly concerned about the security implications of having a suite of laptop computers that – owing to their size and portability – could be easy pickings for thieves. Moreover, concerns about the security of any wireless network provision would need to be dealt with.

Kirkstead selected Midlands-based ICT Networks Ltd to provide the solution, and found that the costs associated with the procurement were much lower than anticipated. “Liaison with ICT Networks was good,” said Hughes. “The financial package they put together was very good, allowing us to buy three more laptops than we thought we would be able to.”

Steve Groom – Managing Director at ICT Networks – explained the technical components of the network: “The wireless solution consisted of five D-Link DWL-2000AP wireless access points giving 54 Mbps connectivity to 16 wireless PCMCIA cards (DWL-G650) – one for each of the school’s Toshiba laptops. We also installed two DWL-M60AT (Directional Indoor Desk Antennae) to provide enhanced wireless coverage amongst the various buildings.”

“The D-Link wireless kit features strong 128bit WEP data encryption security, while laptops are housed in a purpose built, padlocked trolley unit which is heavily protected against intrusion.” continued Groom. “This trolley unit serves as the school’s mini-ICT suite which can be brought to where the children are, rather than the other way around.”

“Overall – the solution has allowed a quantum leap in our pupil access to ICT,” says Hughes. “We have come a long way in a short space of time. We still have much to learn, but we are extremely positive about what the solution now enables us and the children to do.”

The Future

Following the successful integration of the D-Link based wireless solution at Kirkstead, the school has surpassed the 8:1 computer ratio target.

In the future, Headteacher Martin Hughes hopes that the provision of interactive whiteboards at Kirkstead will enable yet more effective teaching in the classroom. According to Steve Groom, the wireless network will play its part in making these additions as flexible as possible: “Many schools choose to implement a static network hardware connection to wherever they think each interactive whiteboard will spend most of its working life,” he explains. “These constraints just don’t exist at Kirkstead.”

“The Kirkstead School project illustrates the benefits of adopting wireless networking in the education environment, and proves the quality and cost-effectiveness of solutions on offer,” said Tahira Perveen, Country Sales Manager UK & Ireland at D-Link. “Together with partners like ICT Networks, we hope to help other schools in the UK - large and small – in similar ways.”