

Beecholme First School

ICT Development Plan
1998 - 2002

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1. The Technology Team

Title	Role
Project Managers : Headteacher ICT Co-ordinator	To monitor and evaluate projects
ICT Co-ordinator	To help, advise and help train teachers To help to prepare documentation for the projects
Implementation Team (All staff, teaching & non-teaching)	To deliver planned projects in the classroom
Governors	To support the school in the implementation of projects

2. The Client Group

Clients	ICT Needs
The School	Network system and hardware
Teaching Staff	Training to use equipment
Pupils	Appropriate software and training
Support Staff	Training to support children and maintain hardware
Parents	Training to support children at home
Local community / Lifelong learners	Possible evening courses & other use of equipment outside school hours

3. Aims and Objectives

Overall Aim

- To fully exploit the potential of ICT as a teaching and learning tool

Short term aims :

- To improve teaching, and pupils' learning in Information and Communication technology
- To enable all staff and pupils to use confidently and effectively the full range of information technologies on offer
- To upskill teachers in the use of ICT to improve and enhance the delivery of the National Curriculum, National Literacy Strategy and National Numeracy initiatives
- To improve pupils' standards of achievement in the core subjects of English and Mathematics
- To improve teachers' and pupils' access to research materials via the use of the Internet

Medium to long term aims :

- To have Internet access throughout the school to aid research and communication skills
- To enable teachers and children to develop communications with the wider world using technologies such as e-mail and video conferencing
- To train teachers and other adults in the possibilities of technology so that they can broaden the children's horizons
- To enable the children to use multimedia to present their work both in school and on the Internet
- To create a school Website which may be accessed by children and parents from home
- To enable staff to make better use of the school's information systems to support effective teaching and learning
- To take full advantage of the opportunities provided by the Merton Learning Net
- To involve the local community and lifelong learners

4. Vision

Our children are growing up in a world where technology is developing at an increasingly rapid rate. They will need skills in the future of which we have little concept at present. There can be no doubt that they will need to be "lifelong learners" with the confidence and ability to develop skills and understanding when meeting new challenges in the workplace. They need to become fully conversant with current technologies and be able to adapt their skills and learning style to accommodate changes. They need to be able to use technology to present information, communicate and find out. They are also entitled to expect their learning environment in school to contribute to the development of these skills and to have access to suitable, up-to-date equipment.

The intentions of this plan are :

- to train teachers and pupils to use ICT confidently and effectively
- make cutting-edge technology available to all within the school and local community
- to raise levels of achievement within the client group, equipping all those involved with the skills and competencies necessary for the future.

5. Available Technology

Hardware : 4 RISC PCs with printer
 2 Acorn A7000s with CDROM drive & printer
 1 Acorn A3020 with printer
 2 Acorn A3000s with printer
 3 BBC Master 128s with printer
 1 Apple Powerbook 1400 with printer

Software : There is a wide range of software available.
 This was purchased with the requirements of the National Curriculum and the range of topics studied in the school in mind.

Networking : Network cabling has been installed, linking all classrooms throughout the school

6. Assessment of organisation

Beecholme First School provides education for 3 - 8 year olds in the racially diverse area of North East Mitcham. As a result, there are a large number of children within the school with English as an additional language. There is also a significant number of pupils with Special Educational Needs. Recent experience has shown that the use of ICT with these pupils has improved their confidence and raised their self-esteem and therefore, their levels of achievement.

The governing body made a major commitment to IT within the school in 1997, when much of the school's obsolete IT equipment was replaced. This generated interest in and enthusiasm for IT among both staff and pupils. The governors' finance committee has recently decided to make ICT a major priority for the next 4 years and has recommended that the school budget be adjusted accordingly.

Our recent OFSTED inspection noted that :

"New computers are significantly helping to raise standards across both key stages." A rolling programme of upgrading and replacement of equipment should help to maintain this improvement.

In the 1998 End of Key Stage 1 tests our results were in line with the national average in English and Science, slightly below average in Maths, and targets for improvement are in the process of being set.

We feel that we are ideally placed to take full advantage of the opportunities which will be provided by the Merton Learning Net.

It is intended to conduct a pupil/home survey in the Spring Term 1999, auditing experience and skills. An action plan will be agreed upon on completion of the collected data and any issues arising will be addressed.

7. Teachers' Capabilities

All staff (both teaching and non-teaching) have recently contributed to an audit of skills and levels of confidence by means of a questionnaire. These are being forwarded to The Learning Circuit for detailed analysis. At first glance, they show a wide range of skills and interests and highlight areas which need further development. Many of the staff have access to a computer at home and are eager to extend their knowledge and skills. All are committed to the improvement of teaching and learning and acknowledge the role that ICT can play in this.

Two members of staff (the ICT co-ordinator and the Deputy Head) are participating in the BECTa Portables for Teachers 98 project. Both teachers have reported an increase in skills and confidence since using the portable equipment provided and now feel able to help colleagues extend their understanding and competence. The value of the Internet as a tool for learning has also been realised through this project - with possibilities having been examined and materials available having been scrutinised. Valuable connections with other teachers and schools have also been forged via the project.

8. Support and Advice

School resources	At least £3000 p.a. for next 4 years
Standards Fund	Not known
Mike Duffy	LEA Inspector for Science & IT
The Learning Circuit	Advice & Support
Xemplar Education	" "

9. Project Plans

Establishing Priorities

Year	Priorities
1 (1998-99)	Replace obsolete equipment Introduce a school network to enable more efficient use of resources Establish clear Scheme of Work for ICT (Nursery to Y3) Update software as necessary Basic training for staff
2 (1999-2000)	ISDN2 access to the Internet for Years 2 & 3 and in Library E-mail communication with other schools Staff training for Internet/e-mail Upgrade office administration equipment
3 (2000-2001)	Develop school Website Possible after school club/ evening courses Develop multimedia authoring Purchase class pack of portable computers (e.g. E mates)
4 (2001-2002)	Upgrade of equipment and software Video conferencing All classes with Internet access Link office to school network

(Availability of funds and time constraints may lead to changes in this timetable)

Monitoring

The project managers will be responsible for the monitoring of the project and regular meetings will be held to discuss progress made and areas for development. Feedback will be sought from all members of staff. Observations in the classrooms of ICT use will be carried out and the progress made by the children will be reviewed regularly. The project managers will provide both verbal and written reports to the governing body on a termly basis.

Evaluation and Review

The ICT development plan will be reviewed annually by the project team in conjunction with the LEA. Progress will be evaluated and budget decisions will be made for the following year

Project Number 1

- a) To update existing hardware
- b) To network all classroom computers
- c) To make more efficient use of resources
- d) To ensure full curriculum coverage

a) In the last two years we have updated all computers in Years 2 & 3 and one computer in both Reception and Year 1. This new equipment has made a significant contribution to the improvement in the use of ICT within the school and in the children's increased capability. The equipment in the Nursery has already been earmarked for upgrading using Post-OFSTED action plan funds.

We now wish to bring the rest of Year 1 and Reception, along with the SEN support room, up to the same level of resourcing. This will entail the purchase of 3 new computers, ideally Acorn A7000s with CDROM drive, to maintain the continuity of hardware platform throughout the school.

b) The LEA has already installed network cabling throughout the school. We now need a hub and Ethernet cards for all machines for the network to become operational.

c) The advantage of having a network will be the efficient use of resources. The issue of site licences will need to be addressed for the most frequently used software once the network is operational.

d) We wish to see all areas of the ICT curriculum covered as well as full integration of ICT into all other curriculum areas. A detailed scheme of work with suggestions for teaching activities has been written and now needs to be put into action.

Schedule

September 1998 - July 1999

323 pupils Nursery - Year 3

10 teachers

10 support staff

Strategies for achieving this goal

- New scheme of work for ICT to be implemented in classroom practice.
- ICT activities to be included in teachers' medium and short term plans.
- New equipment to be installed and teachers/support staff trained where necessary
- Cable box to be fitted with hub and all computers with Ethernet card
- Children save all their ICT work on their own personal disk, building up a record of their achievement
- Support and advice will be sought to aid ICT co-ordinator to run the network efficiently.

Activities

- Planning to show clear objectives for ICT each half term and coverage of all strands of the ICT curriculum over the whole year.
- Scheme of work to be evaluated after the first year to review suggested activities and expectations where appropriate.
- Teachers to be encouraged to plan for the use of ICT in the Literacy Hour.
- Subject co-ordinators to review CD-ROMs and other software linked to their subject area and advise ICT co-ordinator re: purchase.
- Teachers to be encouraged to incorporate ICT into their own work pattern to produce planning documents, teaching resources and end of year reports. The school has access to 3 portable notebook computers that may be borrowed for use at home.

Monitoring and evaluation & Assessment and record-keeping

- Feedback from staff to be sought at end of first term of network use to determine impact of new equipment upon children's achievement and upon teaching and learning in each particular classroom.
- Computer usage in each classroom to be monitored by ICT co-ordinator to ensure equality of opportunity and continuity.

- Pupil survey to be carried out and analysed and issues arising to be addressed.

Existing technology

Network cabling

9 Acorn computers : 4 RISC PCs 2 A7000 1 A3020 2 A3000

Colour printers

Appropriate software (purpose/age/curriculum area)

Technology requirements

Hub

3 Acorn A7000+ machines

Ethernet cards & cables

Maintenance

Manufacturer's warranties

Sustainability strategies

- There is a strong commitment from the whole school community, including the governors to upgrade or replace ageing equipment.
- One of the school's main aims is to promote equal opportunities throughout the school.

Internal/external influences

- Changes in available manufacturer's software and hardware
- Changes in the number of classes/organisation of the school
- Changes in the National Curriculum

Staff Development Needs

- Major areas for staff development are expected to be highlighted when results of staff audit are received.

- Skilled teachers within the school may be paired with others to provide support.
- ICT co-ordinator to provide "mini-guides" to most commonly-used software - to be kept in classrooms for reference purposes for both teaching and support staff.
- The use of external experts and commercially produced materials will be used to provide extra support.

Project 1 Costings

Item	Description and price	Approximate price guide
Multimedia computer with CD-ROM drive	3 x Acorn A7000+ Hard Disc CD Stereo System - £819 per machine	£2457
Ethernet cards & cables	1 card & cable per machine 10 required @ £99 each	£990
Hub	Suitable hub for cable network @ £100-200	£100-200

Source : Xemplar Education (October 1998)

Project Number 2

- a) To introduce staff and pupils to the Internet as a means of developing their research and information retrieval skills
 - b) To introduce staff and pupils to communication via e-mail
- a)** The teachers involved in the Portables for Teachers project have spent a considerable amount of time researching the possible uses of the Internet in the classroom and have been impressed by the amount of good quality learning materials available. Many subject co-ordinators have also reported that they are being sent lists of useful websites for their curriculum areas. Connecting to the National Grid for Learning and the Merton Learning Net will further increase the materials available. Initially Years 2 and 3 would be involved, with an additional machine located in the Library.
- b)** The recent QCA Scheme of Work for Information Technology recommends communicating via e-mail as an activity for Year 3 children. Communicating with others and, therefore, writing for a specific audience is a powerful tool for raising achievement in composition and presentation skills. The children in Year 2 study "Contrasting Locations" and would benefit from the opportunity to communicate with children in a contrasting geographical location, either in this country or abroad. Staff can make important links with teachers in other schools via e-mail far more effectively and efficiently than by any other means.

Schedule

September 1999 - July 2000

140 children (Years 2 & 3)

11 teachers

10 support staff

Strategies for achieving this goal

- Develop teacher and support staff expertise in using the Internet and e-mail
- Formulate policy for preventing pupil access to undesirable material via the Internet, discuss with ISP
- Establish which classroom activities would benefit from research carried out via the Internet and incorporate these into medium term planning, allowing flexibility to take account of the spontaneous use which may arise. Distribute time spent on the Internet equally between all children involved
- Set up after-school computer club for Year 3 children

Activities

- INSET sessions for teachers and support staff to familiarise them with the Internet and sending and receiving e-mail (Autumn term)
- Introduce the concept of the Internet to those classes who will be using it (Spring Term)
- Establish links with another school in contrasting location for Year 2 pupils, set up correspondence via e-mail
- Year 3 after-school computer club focussing on Internet skills and communicating via e-mail - begin to collect ideas for content of school website.

Monitoring and evaluation & Assessment and record-keeping

- Audit of skills amongst staff and pupils at beginning and end of project
- Spring Term planning for Years 2 & 3 to include the following skills:
 - Children know what the Internet is and understand the Internet concept
 - Children have all accessed the Internet independently
 - Children can use Website addresses
 - Children can use a mouse to navigate around a Website
 - Children can access information for research purposes

- Staff have received training in INSET sessions, spending time actively using the Internet, and have considered its uses in developing their own and their pupils' learning
- Impact of the use of the Internet to be monitored during its first term's use by pupils and teachers, issues arising to be addressed.

Existing technology

Network cabling

Technology requirements

Upgrade RISC PCs to suitable memory capacity (minimum 32MB)

Browser software

Router and ISDN line

Internet Service Provider

Computer for Library

Maintenance

Manufacturers' warranties

Sustainability strategies

- There is a strong commitment from the whole school community, including the governing body, to take full advantage of the benefits of the National Grid for Learning and the Merton Learning Net. The governing body has agreed to cover Internet costs for the next 4 years (phone & ISP charges).

Internal/external influences

- Changes in charges for telecommunications and Internet service
- Increase in difficulties in filtering unsuitable material

Staff Development Needs

- Use staff meeting/INSET day sessions to give staff specific training and access to the Internet for "hands on" experience.

Project 2 Costings

Item	Description and price	Approximate price guide
RISC PC memory upgrade	Minimum 32MB @ £50 each 4 required	£200
Browser software	!Browse for Acorn	Check current pricing with Xemplar
Installation of ISDN line	ISDN line installed in library	Check current pricing with BT
ISDN line charges	Routed ISDN, 64Kbps, up to 5 users, 20 hours average use per week. £790 per year (includes connection)	£790
Internet service provider	Edex Internet Service and filter Web space and e-mail addresses	£795
StrongARM Risc PC	233Mhz 32MB RAM 1.7GB £1099 per machine	£1099

Source : Xemplar Education (October 1998)

Project Number 3

- a) To upgrade/replace office administration equipment
 - b) To make more efficient use of administration systems
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- a) The machines currently in use in the office areas are not Year 2000 compliant. Some money has already been earmarked to replace the Admin. Officer's machine in order to use SIMS for Windows. The remaining 2 machines, used by the Head Teacher and the School Helper, will need replacing before January 2000. We feel that this is a matter of some urgency.
 - b) The machines currently in use are extremely slow, particularly when dealing with large amounts of information. Attendance records are now kept electronically and the Merton Learning Net advocates transferring data files between schools and a central database. Faster machines would make more efficient use of the office staff's time. Via the Nation Grid for Learning the Government aims to conduct at least a quarter of its business electronically by the year 2002. By improving the equipment at this stage we will be ideally placed to take advantage of this innovation.

Schedule

September - December 1999

Head Teacher
Admin. Officer
School Helper

Strategies for achieving this goal

- Install 2 new machines with sufficient memory and faster processing speed
- Ensure delivery and installation before end of December 1999
- Provide training for those staff using machines where necessary

Activities

- Investigate ways of incorporating ICT into day-to-day tasks of administration staff
- Make data in electronic form available to teachers to aid their administration and planning

Monitoring and evaluation & Assessment and record-keeping

- Project team will seek feedback from users on a regular basis, regarding training issues, technical problems etc.
- Impact of new equipment will be monitored by Project team, future developments will be discussed.

Existing technology

None

Technology requirements

2 Pentium II Desktop systems (minimum 300Mhz, 32MB RAM, 4.3 GB hard disc)

Maintenance

Manufacturer's warranties
LEA IT Services

Sustainability strategies

- There is a strong commitment from the whole school community, including the governors to upgrade or replace ageing equipment.

Internal/external influence

- Changes in available manufacturer's software and hardware
- Changes in the organisation of the school

Staff Development Needs

- The office staff completed questionnaires as part of the staff audit and have highlighted their perceived training needs.
- A further audit of training needs will be carried out once the new equipment has been installed.

Project 3 Costings

Item	Description and price	Approximate price guide
Pentium II desktop system	Fujitsu ErgoPro e365/300 Pentium II desktop system 4.3. GB hard disc x24 CDROM 32MB SDRAM 2 required @ £944 per machine	£1888

Source : Xemplar Education (October 1998)

Project Number 4

- a) To use portable computers to improve performance and raise standards in Literacy
 - b) To introduce multimedia authoring
- a)** The National Literacy Strategy has set challenging targets for each school to achieve. During the past year there has been particular emphasis throughout the school upon raising standards in writing, encouraging children to focus upon improving the content of their work. Many of the children find it difficult to combine the elements of interesting content, accurate spelling and grammar and clear handwriting. The use of a word processor takes away the necessity to check one's own spelling, corrections can be made easily and the finished product is clear and neat. With only one computer per classroom it can be a time-consuming process to allow each child his/her "turn". We want to make word-processing a more regular feature of classroom activities and a class pack of portable computers would allow this to happen.
- b)** We would also like to extend the children's understanding of writing for a particular audience by introducing them to multimedia authoring. We intend to develop a school Website which would include contributions from the children. As this is rather specific and specialised and would require a great deal of teacher support, it may be a suitable as an activity in the after-school club for the Year 3 children.

Schedule

September 2000 - July 2001

Portable computers - Years 1,2 & 3 210 pupils

Multimedia authoring - Year 3 70 pupils

6 teachers

7 support staff

Strategies for achieving this goal

- Sessions to familiarise the staff with using the eMates
- Rota or booking system for eMates to ensure use in the classroom
- Teaching children to use the software provided
- Identifying opportunities for using ICT for literacy activities within other curriculum areas

Activities

- Lessons planned to teach skills needed for word processing (on any machine or platform)
- Lessons planned to teach skills specific to the eMates
- Work produced stored on child's personal disc
- Work produced to be published on school Website
- Training sessions in school for staff

Monitoring and evaluation & Assessment and record-keeping

- Existing skills to be identified and next steps planned
- Specific lesson plans and evaluations for use of eMates in class
- Section on all lesson plans for IT
- Record of use of eMates to be kept, detailing all activities
- Project team to monitor usage and collect data relating to improvement and achievement, discuss whether to extend project after first year to younger children/more eMates etc

Existing technology

2 portable computers with multimedia authoring software - Microsoft Word & Publisher

Technology required

Class pack of portable computers (Apple eMates)
Infra-red printer
Storage facilities/charging trolley

Maintenance

Manufacturer's warranty - first year

Sustainability strategies

- One of the school's main aims is to promote equal opportunities throughout the school. Using portable computers would give more children access to ICT on a regular basis and would particularly be of benefit to those children with SEN who have trouble with the mechanics of writing.

Internal/external influences

- Changes in available manufacturer's hardware or software
- Staff can take eMates home to develop expertise

Staff Development Needs

- Staff will need training and support in the use of the eMates and associated software

Project 4 Costings

Item	Description and price	Approximate price guide
Portable computer	Apple eMate 300 @£450 each	Class pack of 8 £3300 Leasing costs £433 per term over 3 years
Infra-red printer	Hewlett Packard DeskJet 340 with Infra-red Kit £199 each	£199
Storage/charging trolley	eMate 300 charging trolley - 3 pin socket on each shelf for charger unit - stores 8 eMates £289	£289

Source : Xemplar Education (October 1998)

Project Number 5

- a) To upgrade/replace hardware bought in 1997 (Risc PCs & A7000s)
 - b) To review software provision and update as necessary
 - c) To provide all classrooms with Internet access
 - d) To link office systems to school network
 - e) To develop video conferencing
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- a) The hardware purchased in 1997 will be reaching the end of its useful life in its current state. Assessment of needs will need to be made by the Project team as to whether to upgrade or replace the equipment.
 - b) The rate at which technology develops makes the ICT curriculum unique amongst other subjects. By 2001 there may well have been major changes in the ICT curriculum which may require the purchase of additional software packages.
 - c) After the results of Project 2 have been analysed and any issues addressed the next step will be to connect the whole school to the Internet and, therefore, the National Grid for Learning.
 - d) The office system will need to be connected to the school network for Internet and e-mail access as well as allowing teachers access to the databases stored on the office machines.
 - e) A video conferencing link would open up a whole new aspect of ICT. The possibilities are endless and the benefit to teaching and learning would be considerable.

Schedule

September 2001 - July 2002

323 pupils Nursery - Year 3
10 teachers
10 support staff

Strategies for achieving this goal

- All teachers and support staff (including office staff) using the Internet routinely as part of their day-to-day activities
- ICT co-ordinator to investigate the development of video conferencing facilities
- Collaboration between ICT co-ordinator and other subject leaders to assess software requirements to cover whole curriculum
- Staff training where necessary and appropriate

Activities

- Links forged with other schools via e-mail and video conferencing
- Widespread use of ICT in all curriculum areas
- ICT embedded into planning and activities

Monitoring and evaluation & Assessment and record-keeping

- Project team to review project termly to identify ways forward and check that it is in line with LEA strategy and the NGfL targets
- Children's ICT usage recorded systematically either on disc or in diary form (especially for Internet usage)

Existing technology

See Project Number 1

Technology requirements

Upgrade machines over 5 years old to current standard

Appropriate software

Internet access for Nursery, Reception and Year 1

Upgrade machines to Internet-ready specifications

Video conferencing facilities

Maintenance

Manufacturer's warranties

Sustainability strategies

- There is a strong commitment from the whole school community, including the governors, to upgrade or replace ageing equipment.

Internal/external influences

- Changes in available manufacturer's software and hardware
- Changes in the number of classes/organisation of the school
- Changes in the National Curriculum

Staff Development Needs

- Specific training may be needed in the use of the new hardware
- ICT co-ordinator will need training in use of video conferencing facilities

Project 5 Costings

Item	Description and price	Approximate price guide
Multimedia desktop computer	StrongARM Risc PC (or equivalent) £1099 each	6 @ £1099 = £6594 Leasing costs ?
Internet access for 8 more users	ISDN costs & ISP charges	£2250
Upgrade existing machines	Extra memory & Browser	£500
Video conferencing facilities	BT to install via PC	£1081

Source : Xemplar Education & BT (October 1998)
