

## **ICT Across the Curriculum Policy**

### **1. Aim:**

- ? To establish a framework for the appropriate use of ICT across the curriculum in Kelso High School
- ? To establish the principles for the integration of ICT into all aspects of the teaching and learning process.

### **2. Rationale:**

- ? The effective use of ICT has the potential to enhance teaching and learning in every subject in the secondary curriculum.
- ? Encouraging the use of presentation skills in an ICT context enables children to become effective contributors, to take control over their learning, and present their work to a wider audience.
- ? Providing collaborative computing tools such as the Intranet, shared network folders and other communications facilities encourages children to cooperate confidently with each other as part of the learning process.
- ? Helping children to gain a clear understanding of the social implications of ICT, informing them of the potential dangers of the Internet and helping them to understand copyright issues enables them to become responsible citizens in the modern world.

### **3. Audience:**

This policy will be copied to all staff, will be available to parents and relevant extracts will be given to pupils.

### **4. Principles:**

- ? ICT should not be the sole preserve of those subjects traditionally associated with the technology, but should pervade the entire curriculum.
- ? Achieving the integration of ICT into the entire curriculum requires a high degree of communication and cooperation between departments.
- ? It should be accepted that the rate of technological change is very fast in ICT, and a continuing program of training will be required for all staff who wish it.
- ? The provision of high quality technical support is essential for the success of any attempt to encourage a genuine ICT across the curriculum program.
- ? We need to give pupils the research and evaluation skills necessary to make informed and safe use of the Internet and its associated resources.

## **5. Practice:**

### **a) Scottish Borders Council Internet Safety Policy:**

- ? This policy should take into account the Internet Safety requirements of the Scottish Borders Council policy. In particular, the following points should be noted:
  - ? Learners should never be left unsupervised when using use the Internet should not be permitted
  - ? Mobile phones, digital cameras and digital video cameras should only be used in classrooms as part of a planned lesson and under teacher supervision.
  - ? Staff and students should be made aware that their email and Internet use is monitored
  - ? Personal details and digital images which identify pupils should never be divulged outside the school, either in emails or on web sites.
  - ? Students should be made aware of the fact that material on the Internet is subject to copyright legislation.

### **b) ICT Group:**

- ? The remit of the ICT group is: responsibility for the day to day operation of ICT equipment in the school, monitoring the use of this equipment, encouraging good practice in using ICT across the curriculum, planning the strategy for ICT development in the school, advising on additional purchase of equipment to enhance teaching and learning through ICT and allocation of the ICT budget.
- ? Membership of the group will include a member of the Senior Management Team, the Principal teacher of Computing, the Computing Technician, and a number of teachers from a wide range of disciplines throughout the school
- ? Meetings will be held at least once a term and more frequently as circumstances require
- ? Minutes will be distributed among members of the group and will be posted in the staff section of the school intranet

### **c) Roles of PT Computing and ICT Technician**

The role of the PT Computing is to encourage the cross-curricular use of ICT wherever possible throughout the school. This may take the form of offering training, providing advice on the use of software or hardware, working with staff developing Intranet resources, developing tools for departmental administration or researching and piloting new technologies.

The role of the ICT Technician in addition to the day to day management of the network, is to support the PT Computing, to advise the ICT group and other staff on long term hardware and software strategies, to investigate and evaluate new technologies and to offer training and advice to staff in using hardware and software installed on the network.

Software installation: If a single licence has been purchased for a piece of software, then that software may be installed locally on a machine. If a multi user or network licence has been purchased then it may be necessary to request a package installation from SBC IT department using the QSM system. If software does not require installation and can run from a single file (such as some stand alone programs on CD or a set of web pages) then the ICT technician may install it on the P: drive of the network or on the school Intranet, subject to constraints such as disk space and backup capacity

#### **d) ICT Equipment Strategy:**

Our long term equipment strategy aims to provide access to modern ICT equipment for all pupils and staff

- ? Network access points in every classroom
- ? Digital projection equipment in every classroom
- ? Interactive whiteboards or interactive panels in classrooms where required
- ? School wide wireless access for laptops
- ? Modern computers with sufficient memory, hard disk space and displays to run the curricular software required by departments
- ? Colour and Monochrome printing resources for every department
- ? Sufficient video and audio equipment for departments to borrow when required
- ? Subject specific ICT equipment where appropriate

#### **e) ICT Curriculum Strategy:**

##### **Whole School ICT courses:**

Our whole school ICT strategy aims to give all pupils the ICT skills they need to access the school network resources and the confidence to use applications software whenever they might need it in order to enhance their learning throughout the school.

- ? The S1 ICT course: is designed to cover all the strands of the 5-14 ICT guidelines, giving pupils the basic ICT skills needed to make full use of the school computing resources.
- ? The S3 IT Core Skills Course is designed to cover the Intermediate 1 and 2 ICT core skills units, and to reinforce and build upon the skills gained in S1

See appendix 1 for course outlines

##### **Departments providing specialist ICT skills:**

Many departments will teach ICT skills using General Purpose Packages such as a word processor, spreadsheet or presentation software as part of the normal curriculum. A number of specialist ICT skills may require to be taught within specific departments where particular skills are required.

- ? Computing: programming, computer systems, web authoring, computer networking, and multimedia editing software
- ? Art: photo sequencing and digital imaging software
- ? Music: Midi editing, recording and musical notation software
- ? Graphical Communication: Computer Aided Design (CAD) and design software

##### **KHS Intranet and website:**

- ? The school intranet is a means of providing access for pupils to learning materials and subject specific Internet links. When these links are organised by topic and given clear descriptions on the web page, they can be easily found by pupils either by looking at the appropriate topic or by using the search engine. The school intranet can also be used to provide pupils with a platform to display their project work and other creative activities where ICT has been used. Material produced by pupils can also be published on the intranet to be used as a resource for other pupils.
- ? Departments are encouraged to place electronic versions of their curricular materials on their department web sites. This enables pupils to access these materials when

they need them for revision, if they have missed classes due to absence or are working from home for any reason.

- ? As a long term aim, all courses offered in the school should be available on the Intranet in electronic form.
- ? The school intranet also provides staff with a source of up to date policy documents and other administration materials. Policy groups should ensure that copies of their minutes are made available in the staff section of the school intranet.
- ? The school website provides an online mirror of the school Intranet minus pupil materials and those curricular resources which require a very high bandwidth connection.
- ? Pupils are able to access their school email and log into the Intranet from home. This enables pupils to access materials when they need them, either at evenings and weekends, or during the day if they are unable to attend school for any reason. Pupils can also access their My Documents folders from home enabling class-work to be accessed and updated remotely at any time.

#### **f) ICT Resources:**

- ? The school has 6 computer rooms based in Computing Studies, Technical and Business Studies, each with 20 or more machines and a ceiling mounted digital projector.
- ? There are some small resource rooms attached to departments, and at least one machine in every teaching room. Access to these rooms can be booked using the online booking system. (See appendix 2)
- ? There is a ceiling mounted digital projector and a DVD player is available in every teaching room.
- ? There are currently two interactive panels for use with digital projectors based in the Maths and Biology departments, and interactive whiteboards in the Chemistry and Modern Languages departments.
- ? Whole school audio visual resources include three DVD recorders, a number of digital camcorders and one suite of VHS editing equipment. The ICT technician has responsibility for maintenance and booking of this equipment.
- ? There are a number of school laptops available for presentations and use by pupils during exams, and there are 20 wireless laptops based in the Art, Physics, Chemistry and Modern Studies departments which can be booked through the online booking system.
- ? Occasionally laptops may be borrowed by pupils who are unable to write due to a temporary injury after consultation with their guidance teacher and the Learning Support department

The ICT group has responsibility for monitoring the use of these resources, and advising on additional purchase of equipment to enhance teaching and learning through ICT

#### **g) Skills Development:**

##### **Pupils**

Pupils will gain skills in ICT through the courses provided in S1 and S3, with specialised skills offered as part of specific courses in the Music, Art, Technical and Computing departments.

##### **Staff**

Staff are encouraged to make use of the ICT training courses offered as part of the CPD provision within the school. These courses may take the form of training in a particular piece of curricular software, specialised hardware or general productivity tools for departmental administration, and will be offered on request by the Computing department or the ICT technician.

##### **GLOW (Scottish Schools Intranet)**

The first phase of training for the GLOW mentor (currently the PT Computing) will take place in October 2008, and training of a number of In-School Tutors will take place subsequently. These In-School Tutors will be responsible for training and assisting the rest of the staff during in-service days and Collegiate Activity Time.

#### **h) Support Structures:**

##### **Pupils:**

- ? All pupils can make use of the services of the ICT technician and the Computing department for support in using the ICT equipment in the school. The service offered may vary from the allocation of printer credits, changing passwords and allocating hard disk space, to the resolving of specific hardware or software issues which affect a pupil's access to school ICT equipment.
- ? All pupils will have access to their My Documents folders, the school email and the Intranet from home.

##### **Staff:**

- ? All staff have access to the services of the ICT technician and the Computing department, for both hardware and software support.
- ? This support may take the form of resolving single hardware and software issues on school equipment, aiding the transfer of work from home to school and vice versa, training in the use of existing or new software or advice on the purchase of hardware or software.
- ? Where issues arise which are relevant to a number of staff, training will be offered as part of the CPD provision within the school.
- ? Staff from other schools may attend these training sessions as part of their CPD activity and these courses will be offered on the SBC online CPD register.
- ? Support will also be made available for staff wishing to convert or develop curricular materials for publishing on the school Intranet.

#### **i) Cross Curricular Issues:**

##### **ICT Courses:**

ICT courses offered to pupils have been designed to complement and encourage the use of ICT within departments. See appendix 1 for course outlines.

##### **Study skills:**

The clues which we use to evaluate sources of information in books, newspapers or even from people we meet are familiar to most of us. The clues which give us an idea of how to evaluate information on the web are quite different and need to be taught. These skills should be embedded in every ICT course and should include:

- ? searching and researching,
- ? evaluating sources of information,
- ? modelling and presenting information

##### **Using computers collaboratively:**

Departments are encouraged to make use of collaborative computing facilities including:

- ? Using email collaboratively to combine pieces of work to create whole class or group projects.
- ? Using email to publicise competitions, events and initiatives.
- ? Using the school news server and bulletin board to share ideas.

- ? Using instant messaging for class discussions (pupils who are reluctant to speak out in traditional classroom discussions often find it easier to contribute in "cyberspace")
- ? Using video conferencing between schools
- ? Using the Intranet to display projects and reports.
- ? Using the Intranet to deliver curricular materials
- ? Using blogs to keep a diary of progress in projects or to inform pupils about homework or other resources
- ? Making homework details available on the school web site.
- ? Using RM Tutor to demonstrate or annotate pupil work in a class
- ? Using an interactive slate to enable pupils to edit a document showing on a projector

**Heriot Watt Scholar programme:**

- ? The Heriot Watt Scholar program, makes it possible to offer a more flexible S5/S6 curriculum, with pupils able to take courses without being specifically timetabled for that subject. On-line courses need a higher degree of commitment from the pupil than conventional courses and our pupil monitoring system will reflect this.
- ? The video conferencing equipment is also available for pupils to take courses offered in other schools remotely.

**GLOW:**

- ? GLOW will provide access to the Scottish Schools Intranet which includes Discussion Groups, Email, Resource Sharing, Instant Messaging (staff only) Chat (moderated) Web Hosting, and a Virtual Learning Environment with a wide selection of teaching resources. More information can be seen on this web page:

<http://www.glowscotland.org.uk/index.asp>

**j) Audit:**

A whole school audit of hardware and software resources will be carried out by the ICT group as an ongoing process. The ICT technician in consultation with the Principal Teacher of Computing is responsible for hardware and software installation throughout the school and keeps a record of all installations.

A whole school audit of cross curricular use of ICT will be carried out by the ICT group will be repeated on a four yearly basis as part of the school's self evaluation cycle. Online questionnaires are available for pupils to give feedback on courses and these can be adapted to enable staff to respond to questions departmental use of ICT.

See appendix 4 for a copy of the latest cross curricular ICT audit

## **6. Implementation**

The revised policy will operate in draft form from August 2008

## **7. Monitoring**

The operation of the policy will be monitored on an ongoing basis by the ICT group

## **8. Review**

The policy will be reviewed in 2010 /11 as part of the school's self evaluation cycle

## **9. Responsibility**

The Principal Teacher of Computing Studies will have overall responsibility for this policy

## **10. Date**

The first draft of this policy was completed in April 2003

The second draft of this policy was completed in May 2003

The third draft of this policy was completed in May 2006

The final draft of this policy was completed in August 2006

The first revision of this policy was completed in March 2008

### **Appendices:**

Appendix 1 S1 ICT Course outline

Appendix 2 Using the Resource Booking system to book computer rooms

Appendix 3 ICT Audit (session 2007 /2008):

## **Appendix 1**

### **S1 ICT Course outline:**

Ideally the S1 ICT course should be driven by the content and timing of other departmental courses - e.g. if History are doing a unit on the Celts or RME are doing a unit on Buddhism, then the IT classes could be using the Internet to search for relevant information and word processing and presentation tools to create their reports or publish them on-line. An arrangement like this needs departments to be able to predict with a fair amount of accuracy what topics are being covered at different times of the year. It also needs good planning as they will need to prepare their resources for the ICT teacher well in advance of the units actually being taught.

### **Strand 1: Using the Technology**

Network ID and Password

Computer Organisation

Input Process Output

Memory

Backing storage

Benefits of a network:

Communications (email, shared documents), shared peripherals (printers, scanners), shared resources (disk space, Internet connection, Intranet) central backup and software installation.

Services available on KHS network:

Intranet, shared documents, printing, software, disk space.

Managing your computer:

Difference between Save and Save-as

Managing printing

Managing disk space

Managing folders

Sensible file names

Making backups

Using on-line Help \*

Technical specifications:

Technical terms for parts of computer and how they interact.

Effects of processor speed, hard disk capacity and memory on performance \*

Different types of computer:

Server, desktop, laptop

Peripherals:

Mouse, keyboard, Camera, scanner.

Monitor, printer, speakers, data projector.

Floppy disk, Hard Disk, CDROM – relative capacities

\* denotes extension material

## **Strand 2: Searching and researching**

### Internet

- Describing the Internet
- Safety on the Internet
- KHS Acceptable Use Policy
- Navigating using a Browser
- Bookmarks: saving, organising
- Capturing text and graphics: copyright

### Communications

- Email
- Email Etiquette
- Sending attachments
- Working collaboratively: conferences, sharing documents \*

### Searching for Information

- Using a CDROM Encyclopaedia
- Using a search engine: opening multiple windows, refining searches
- Finding pictures and sounds
- Searching web sites e.g. timetables, buying online

## **Strand 3: Collecting and Analyzing**

### Spreadsheets

- Enter data
- Set up a spreadsheet (Labels, data, formulae)
- Formula replication \*
- Sorting\*
- Draw chart, select appropriate chart for data
- Writing reports using charts, text and pictures

### Databases

- Browse a database
- Search a database
- Sort a database
- create a database (field types) \*
- adding a picture field using the digital camera\*

**Strand 4: Creating and Presenting**

Web authoring

- Text
- Creating Links
- Graphics
- Importing graphics from the web

Multimedia Presentation

- Text
- Graphics
- Animations
- Video\*
- Sound\*
- Interactive presentations\*

Desk Top Publishing

- Text
- Graphics
- Background pages
- Page numbers\*
- Margins and guides\*

Word Processing

- Save and save-as
- Copy and paste
- Hidden characters
- Spell check
- Graphics, clipart

Computer Graphics

- Copy, rotate, reflect graphics
- Edit at pixel level
- Screen-grab
- Digital Camera
- Scanner

**Strand 5: Controlling and Modeling**

Computer Programming

- Logo commands
- Writing and saving a program
- Using procedures
- Using programs with more than one procedure
- Using parameters\*
- Procedures with more than one parameter\*
- Recursion\*

Mind Mapping

- Multiple Intelligences
- Learning styles
- Creating a mind map

Computer animation

- Symbols
- Layers
- Motion tweening
- Shape tweening

**S3 ICT Core Skills course Outline:**

**Word Processing**

- Edit text
  - Insert
  - Delete
  - amend
- Format text
  - Bold
  - Font
  - Underline
- Format paragraphs
  - Indent
  - Border
- Format documents
  - Header
  - Footer
  - Margins
- Insert Images
  - Move
  - resize

**Numeric Processing**

- Label
- Data
- Formula
  - Sum
  - Multiply
- Create chart
  - Column
  - Pie

**Desk Top Publishing**

- Insert text
- Format text
- Insert Graphics
- Rotate text
- Text wrap
- Background/foreground

**Search**

- Use search engine
- Copy and paste
  - Text
  - Graphics
- Insert web address (URL)

**Appendix 2**

**Using the Resource Booking system to book computer rooms:**

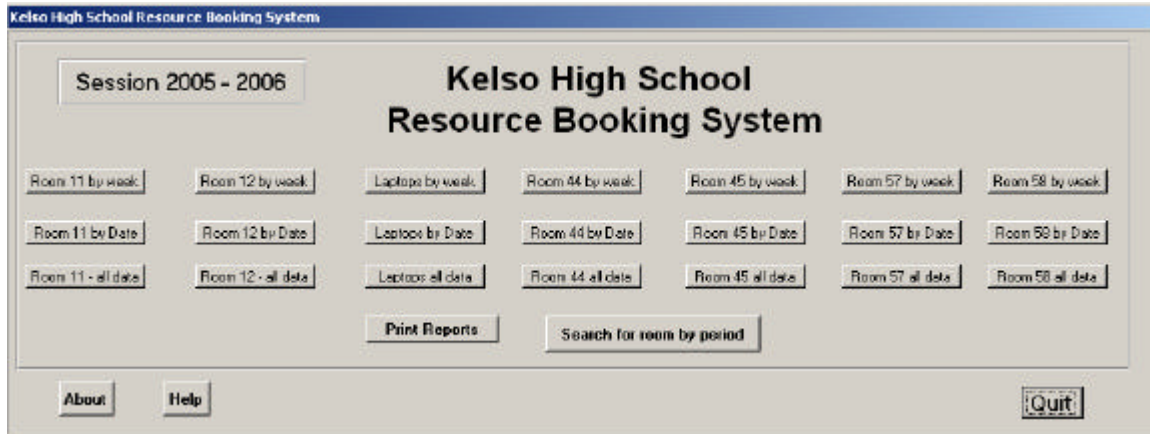
The booking system can be accessed from an icon on the staff desktop:



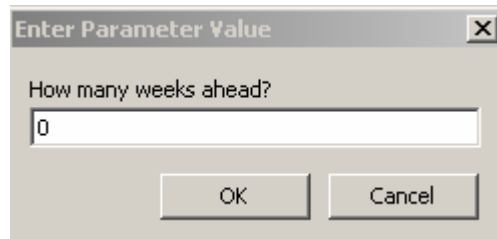
resource  
Booking

When the program starts, you can select a computer room from the opening

screen



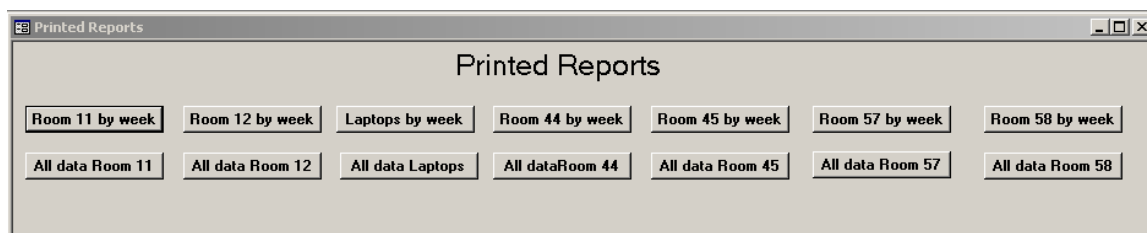
When you click on a room you will be asked how many weeks ahead you want to book



Then you can view the timetable and add your initials to any blank periods to book them

Date	Period1	Period2	Period3	Morningbreak	Period4	Period5	Lunchbreak	Period6	Period7	Period8	Afterschool
Mon 15 May 2006	Int2/H	Int2/H	SG3b		SG4	SG4			SG3a	SG3a	
Tue 16 May 2006	S14	S14	SG3a		BH S2				Int2/H	Int2/H	
Wed 17 May 2006			SG3b		Int2/H	Int2/H			S4MM	S4MM	
Thu 18 May 2006	WG S1	SG4	SG4					S5 Study	S17	S17	
Fri 19 May 2006	SG3b	SG3b	SG3a		S13	S13		EW 1D	S15	S15	
*											

If you wish a printout of your booking, click on the Print Reports button and again say how many weeks ahead you wish to view.



**Appendix 3****ICT Audit (session 2007 /2008):****History:**

<b>Pupil use</b>	<b>Staff use</b>
Portable recording devices for local history project – will be using audio editing software, digital photographs and video to be put on to a website Internet research	Digital Video for trips & visits Digital video of local sites to show to pupils Projector used for displaying slides and videos. Presentations by pupils are videoed and then the presentations are assessed by the whole class.

**RME:**

<b>Pupil use</b>	<b>Staff use</b>
Desk top publishing and word processing software for projects and reports frequent users of computer rooms Digital video editing with senior pupils Internet used for research Homework and classwork submitted by email	Projector used for showing pupil videos

**English**

<b>Pupil use</b>	<b>Staff use</b>
Word processing used for book reviews, folios etc. Topic based Internet research Senior pupils use Sparknotes for research on novels Email used to send essays, folio pieces etc.	Projector used to show DVDs of plays and novels PowerPoint presentations

**Art:**

<b>Pupil use</b>	<b>Staff use</b>
Adobe Photoshop for projects	Projector used for displaying examples of artists work

**Technical:**

<b>Pupil use</b>	<b>Staff use</b>
CAD software used in Design Microsoft Publisher used as part of design course. Pro Desktop used by pupils	Projector used for demonstrating software Digital camera used to record and display pupil work

**Music:**

<b>Pupil use</b>	<b>Staff use</b>
<p>Sibelius software used for composition Recording and sequencing equipment used to produce pupil music compositions.</p> <p>recording studio commissioned (Macintosh)</p>	

**Maths:**

<b>Pupil use</b>	<b>Staff use</b>
<p>Graphic calculators used by pupils. Calculator games Maths games on Internet Scholar Links and documents in learning Resources area</p> <p>pupil Wiki set up using Moodle – forum + shared resource area (Barry)</p> <p>Online evaluation questionnaire using Webquiz (Les)</p> <p>Graphics tablet used to annotate classroom activities (Barry)</p>	<p>Projector used for maths games – countdown, weakest link etc to increase numerical skills Barry is creating PowerPoint slides for the department as well as revision podcasts</p> <p>Recording assessments and sharing with staff using Excel Staff Wiki set up using Moodle – forum + shared resource area (Pauline)</p> <p>Maths website updates (Les)</p>

**Geography:**

<b>Pupil use</b>	<b>Staff use</b>
<p>Internet research Online OS maps Movie maker used to create multimedia resources Google Earth Plans to use blog and Flickr account to record Alps trip.(Gordon) Blog set up and in use with S2 Plans to set up online homework submission for pupils (Gareth)</p>	<p>Slides now in electronic form. Investigating use of Airliner slate to use as annotating tool. Projector used to show Internet pages in class to illustrate concepts Powerpoint slides being created for class lessons</p>

**PE:**

<b>Pupil use</b>	<b>Staff use</b>
<p>Internet: for researching skills and Bytesize revision Digital video editing</p>	<p>Digital video used to analyse technique (training in Dartfish software required) Internet for lesson plans Coaching websites</p> <p>New website design in progress (Tom)</p>

**Modern Languages:**

<b>Pupil use</b>	<b>Staff use</b>
Video cameral used by pupils to act out scenes in a language Listening assessments on CD and MP3 players Digital camera used to create descriptions of pupil work	Interactive whiteboard used in class demonstrations  Boardworks for S1 to S4 French and German  Foreign language videos and DVDs  Blog used to record foreign exchange

**Chemistry:**

<b>Pupil use</b>	<b>Staff use</b>
Scholar Data capture Networked CD ROMs in S1 and S2 Teacher generated Animations on Intranet S6 use Chemdraw and Equation editor for reports  VLE Pilot (Gordon)	Extensive use of interactive whiteboards and animation software.

**Biology:**

<b>Pupil use</b>	<b>Staff use</b>
Scholar Digital probes Internet research Homework submitted by email Digital camera used to illustrate reports Links and Documents in Learning Resources area	Digital projector used for DVDs and PowerPoint presentations Recording assessments and sharing with staff using Excel

**Physics:**

<b>Pupil use</b>	<b>Staff use</b>
Crocodile clips simulation software used for electronic circuits Scholar Formative assessment package	Digital projector used for DVDs and PowerPoint presentations Lesson planning package

**Home Economics:**

<b>Pupil use</b>	<b>Staff use</b>
Online CD Roms Internet research	Powerpoint presentations

**Business Studies:**

<b>Pupil use</b>	<b>Staff use</b>
Business applications as part of coursework Using Organiser Running online CD Roms Scanner, photocopier and Fax machine Keyboarding software  Online Calendar	Projector used for demonstrating applications, presenting exemplar exercises and playing DVDs

**Modern Studies:**

<b>Pupil use</b>	<b>Staff use</b>
Digital camera used for presentations and illustrating reports Internet used for research	Projector used for PowerPoint presentations, showing DVDs and Internet pages

**Computing:**

<b>Pupil use</b>	<b>Staff use</b>
Office applications and programming as part of coursework Scholar PowerPoint to display results of investigations Web authoring Video and audio editing Homework on Internet and submitted by email Pupils create online quizzes on topics studied Links and Documents in Learning Resources area.  Blogs used by S6 to record project progress	Projector used for PowerPoint slides, videos and demonstrating software  Recording assessments and sharing with staff using Excel