Primary School

Information Technology Policy

Aims

- To stimulate and promote the use of Information Technology in order to support, enhance and extend learning opportunities.
- To use Information Technology as a specific curriculum area and as a cross curricular tool as part of the recommendations outlined in 5-14 Guidelines.
- To help both pupils and teachers to develop confidence and competence to use Information Technology in a range of situations and contexts appropriate to tasks in hand.

Objectives

The Environmental Studies 5-14 Guidelines (pages 68-69) state:

"The Information Technology outcome will be obtained through the study of;

- *features and characteristics of computers and other forms of IT*
- *techniques for using computer software to enter and process text and other information*
- *applications of information technology in society.*

  Pupils will also acquire skills in using computers and other devices relevant to IT.

  By the end of S2 each pupil's curriculum should have provided well-planned opportunities to use and learn about the distinctive features and characteristics of hardware and software which are readily accessible to schools, such as computers, word processors, database systems, spreadsheets, graphic packages, music systems, control teaching and learning, and learning across the 5-14 curriculum, for example:

- *in Language: text processing, simulations and adventure games and information handling;*
- *in Mathematics: spreadsheets, databases, graph drawing packages, turtle graphics, simulations;*
- *in Environmental Studies: control packages, data handling packages to collect, store, analyse and interpret information, simulations;*
- *in Expressive Arts: graphics, drawing and design packages, music-making packages*
- *in Religious and Moral Education: text processing, simulations."*

One of the most important aspects of Information Technology teaching is provision. Each child must be provided with opportunities to develop and practise their IT skills in a variety of situations.

Planning

Planning sheets can be found on the shelf above the photocopier.

The planning sheets cover the following aspects of IT; General skills, Word Processing Skills, Painting Skills, Database Skills, Programming Skills, Drawing Skills, Spreadsheet Skills, and Multimedia Skills. Whilst not prescriptive, these aspects and skills generally indicate the progression of IT throughout the school, i.e. Word Processing and Paintings Skills would be introduced in Primary 1 but it is unlikely that the children would tackle Databases at this stage. See the section on "Progression" for a more detailed explanation.

On each planning sheet there are some suggestions for software and possible contexts which can be used to develop the appropriate skills. However, these are not exhaustive and any other software and contexts which are used should also be noted.

During any particular planning period, it is unlikely that more than 1 or 2 aspects of IT will be covered and within each of these the focus will be on only 3 or 4 specific skills. These skills should be highlighted on the relevant planning sheet. It is understood that other skills will feature continuously in IT and these need not be highlighted. A balance of aspects and skills should be covered in a year.

The level of development is dependent on each pupil's ability and potential and should be in line with suggested progression detailed in the section on "Progression".

The areas covered by the plan should be developed as a discrete subject and as an integral part of other studies. Pupils should be given the opportunity to develop and apply their IT capabilities in a variety of subject areas.

Differentiation will be determined by the complexity of the task set, the support/independence involved and the quality and accuracy of work produced.

There are implications regarding the availability and capability of computers and the following points should be taken into consideration at the planning stage;

ū At present, each area has access to 3 or 4 BBC computers and this will continue as long as they remain operational.

ū The Apple Mac computers can be booked out for varying lengths of time. Timetables are posted in the staffroom and these should be consulted at the planning stage.

ū Due to heavy demand it is extremely important that if Apple Macs are booked out then full use is made of them. If for any reason they are not being used for an extended period then they should be made available for others to use.

ū It should be noted that not all the skills detailed in the plans can be developed using the BBC range of computers.

ū Relevant software and computers will be made available to allow development of the skills planned.

The use of other software to support the curriculum, (as opposed to that which develops IT skills) should continue to be recorded on the relevant forward planning sheets.

Classroom Organisation

Hardware: Staff need to ensure that each computer and peripherals (printer, concept keyboard, CD-ROM, mouse, etc.) are kept in working order, that all wires are safely tucked away and that a safe and tidy environment exists on and around the computer trolleys.

Software: Software will be held centrally in the cupboard opposite the staff room. All disks and additional teaching materials should be returned once a topic has been completed. It is particularly important that programs held on BBC disks are stored in their dust jackets in a plastic disk box when not in use. Whilst programs stored on CD-ROM and Apple Macintosh disks is less vulnerable to damage, these should still be stored in the appropriate boxes and covers when not being used.

Information regarding program content, subject area and level can be found in the Software Database. Instructions on how to use this are available in the central cupboard along with a copy of the database disk. **Please make sure that this copy is returned.** The database will be updated as new software is purchased.

Each pupil can be given their own disk(s) on which to save their work (both for the BBC and Apple Mac computers). This not only encourages good management skills but also serves as a record of the pupil's progress. Again, these disks should be stored in their covers and disk boxes when not in use.

Record Keeping

The planning sheets will be used for record keeping and the appropriate "Comments" box(es) should be completed at the end of each planning period.

A record of each pupil's progress can also be kept by giving each pupil a disk as described above.

Samples of work should be printed out and included in Profile Folders.

Pupils should be encouraged to incorporate their IT output into the presentation of their individual and group work.

Assessment

As with all other subject areas, pupils should be assessed and appraised of their progress in understanding and applying IT. This will be self evident from the work produced in a situation where no teacher support is given once a task has been assigned.

In-Service Training

Information Technology is a constantly evolving subject and we will endeavour to give staff the opportunity to familiarise themselves with new hardware and software as it becomes available in the school and to provide In-Service training to meet individual needs.

Progression

Pupils should not only develop skills in IT but also in the ability to choose appropriate software for a given task (word processor, database, spreadsheet, etc.) and to decide when the use of IT would be an advantage over using another method when producing a piece of work.

The ability to use IT to solve problems is both a valuable learning tool and an important life skill in itself. The development of the relevant skills, knowledge and understanding requires progressive experience, preferably from an early age and across all major curriculum areas, of using a variety of software in different contexts. To demonstrate that there is increasing progression of skills, consider the following questions relating to word processing:

- Do the children use the computer?
- Do they use it to communicate their thoughts and ideas in a meaningful way?
- Do they create, then edit and present their work?
- Do they then save and retrieve it at a later date?
- Do they enhance their work by using different styles and formats?
- Do they use different forms of information eg. text and sounds, text and graphics for a specific purpose?

At each level, the children are required to use progressively more complex IT skills and to make increasing use of the features and capabilities of a software package. The skills for each aspect of IT detailed on the planning sheets are listed roughly in order of complexity. By focusing on skills in turn the child will build on skills previously learned.

As in all subject areas, children will have different aptitudes and abilities in IT and will progress at differing rates. However, it is important that staff systematically give every pupil the opportunity to develop their skills in this curricular area.

The following table only serves as a guide to the skills that children may attain by the end of Primary 3 and Primary 7.

Progression

Skills	Nursery - Primary 3	Primary 4 - 7
General	By the end of Primary 3, most pupils should be able to turn on a computer, load appropriate software and a previously saved piece work. They should be able to redraft, print and save the edited copy.	Pupils should continue to develop keyboard skills.
Word Processing	Pupils should be able to insert or delete text using a simple word processor. They should be able to modify the style, size, colour and font used for text. A concept keyboard and/or the computer keyboard can be used.	Pupils should be able to use a word processing package to edit, organise and redraft text. Such a package can be used in any situation where text will benefit from a number of drafts in order to achieve a carefully considered result. They should be familiar with a variety of styles and formats and know when it is appropriate to use them.
Painting	Pupils should be experimenting with lines and shapes of different colours, thickness and texture. Using, where appropriate, pre-drawn shapes and graphics (eg. "stamps" in KidPix). Pictures may contain text annotation and/or recorded sounds	Pupils should be able to use a painting package to allow a freehand approach to design by using a variety of tools, colours and effects. They should be able to transform the appearance of a painting by using a variety of tools and insert graphics, text and clipart files.
Database	Where appropriate, pupils may enter information into a database and to make a very simple search, for example to find objects which float.	Pupils should be able to, organise, display and interpret information in a database. Specifically, to be able to sort information and to be able to search on more than one field using logical operators - for example "brown hair **AND** blue eyes". Pupils should also be able to build their own database and to produce and interpret graphical information derived from the database.
Programming	Pupils should be able to use a programmable toy such as Pip, to explore simple pathways and shapes or to negotiate a simple maze using commands such as Forward 30 and Right 1 (right angle).	Pupils should be able to use a turtle graphics program to create pictures and patterns. They should be able to write procedures to create regular shapes such as squares, hexagons and circles.

Drawing		Pupils should be able to use a drawing package to make objects such as lines, rectangles and ellipses and join these together to make more complex object. Using a variety of tools, such as scale and rotate, transform the appearance of drawn objects and include text to produce an annotated diagram or plan.
Spreadsheets		Pupils should be able to collect, organise, display and interpret information using a spreadsheet and to produce and interpret graphical information derived from a spreadsheet. Where appropriate, pupils should be able to manipulate statistics by entering formulae using simple mathematical processes such as addition, subtraction and percentages.
Multimedia		Pupils should be able to make a presentation using an appropriate piece of software such as ClarisWorks or Amazing Animation. In particular to select from a range of media such as graphics, sound and text to create a story or summary eg. of an environmental studies topic or an anthology of pupils' poetry with pictures and music.

Class	Date

Aspect	Possible Contexts	Skills	Comments
General **Possible Software-**	**Language** **Maths** **R.M.E.** **Environmental Studies** **Expressive Arts** **P. & S.D.**	ü Switch on the computer. ü Run software from floppy disk, CD-ROM and hard disk. ü Develop keyboard skills. ü Develop mouse skills. ü Use the concept keyboard. ü Use keyboard shortcuts. ü Start a fresh piece of work. ü Save a piece of work to floppy disk or hard disk. ü Open and edit an existing piece of work. ü Print a piece of work. ü Print specific page(s). ü Change print options. ü Quit a program. ü Shut down and turn off the computer.	

| Word Processing.

**P ossible
S oftw are-**

M ac;
    L ink w ord
    C laris W or
k s, W riter's
T oolk it,
B B C;
    P endow n,
    P rom pt/W
riter
    S tyle,
W ordw ise. | **Environmental Studies.
R.M.E.
Language**; L etter
w riting, list of
instructions,
report, short
description,
poetry, short
story, etc. | ü H ighlighting tex t.
ü S pellcheck the docum ent.
ü C hange font, size and style.
ü C hange page orientation.
ü C reate a new page.
ü Justify tex t to centre, left, right
  and full.
ü U se tabs and indents.
ü C hange m argins.
ü U se colum ns.
ü U se find and replace.
ü U se copy, cut, paste and undo.
ü F orm at a character, paragraph or
  full docum ent.
ü U se the clipboard, notepad and
  scrapbook .
ü I nsert a graphic, picture, tex t or
  spreadsheet file.
ü U se page num bering, headers and
  footers. | |

Class	Date

Aspect	Possible Contexts	Skills	Comments
Painting **Possible Software-** **Mac; ClarisWor ks, KidPix. BBC; None**	**Expressive Arts;** experimenting with technique, altering ready made images, a wallpaper design. a textile design, an illustration, a map. **Environmental Studies;** a map, an illustration. **Language.**	☐ Use predefined shapes (eg. "stamps" in KidPix). ▼ **Use following paint tools;** lines, polygons, ellipses, curves, paintbrush and pencil. ☐ Use different colour fills and styles. ☐ Add text. ☐ Change page orientation. ☐ Align objects on page. ☐ Use zoom. ☐ Use copy, cut, paste and undo. ☐ Insert a graphic or picture. ☐ Set patterns, gradient fills, colour fills and line widths. ☐ Set spraycan, paintbrush and pencil. ▼ **Transform a painting using;** rotate, resize, add perspective, distort, shear, flip horizontally/vertically.	

Writing Simple Programs **Possible Software-** **Mac; Logo** **BBC; Logo** **Also PIP.**	**Math; Shapes, angles, bearings.** **Language**	ü Use simple drawing commands; left, right, forward, back penup, pendown, clearscreen, hide/show turtle, repeat etc. (full words and abbreviations). ü Combine commands to draw simple shapes. ü Write simple procedures using drawing commands. ü Use the editor to edit procedures. ü Use editor commands; edall, edit, poall, erall, etc. ü Write procedures which include variables. ü Combine procedures to draw more complex shapes and scenes. (The following skills are fairly advanced.) ü Use "LIST" commands to create procedures which manipulate words and sentences.	

Class	Date

Aspect	Possible Contexts	Skills	Comments
Database **Possible Software-** **Mac;** **ClarisWorks, 2nd Base,** **3rd Base** **BBC; Find, Masterfile** **(See software catalogue)**	**Environmental Studies. Maths**	ü **Highlighting text.** ü **Spell check document.** ü **Change font, size and style.** ü **Change page orientation.** ü **Enter data into an existing database.** ü **Simple search (1 condition).** ü **Sort records.** ü **Duplicate and delete records.** ü **Create a graph from data (where appropriate).** ü **More complex search (2 or more conditions.)** ü **Use find and replace.** ü **Use copy, cut, paste and undo.** ü **Define fields and records.** ü **Create a database** ü **Create/change the layout.** ü **Use the notepad, scrapbook and clipboard.** ü **Insert a graphic, picture or text.**	

| Drawing

Possible Software-

Mac; ClarisWorks
BBC; None | Environmental Studies; a map and illustration, drawing of a building, annotated diagram. | ▾ **Create the following objects**; lines, polygons, ellipses and curves.
ü Change/set object's fill pattern, colour, design or properties.
ü Add text.
ü Change page orientation.
ü Align objects on page.
ü Use zoom.
ü Use copy, cut, paste and undo.
ü Insert a graphic, picture or painting.
ü Wrap text around an object or graphic.
▾ **Transform objects using**; rotate, flip horizontally/vertically,
ü Group and ungroup objects.
ü Use layering to create effect.
ü Create and use a Master page. | |

Class	Date

Aspect	**Possible Contexts**	**Skills**	**Comments**

Spreadsheet. **Possible Software-** **Mac;** ClarisWorks, **BBC;** None.	**Maths;** surveys, function machine, problem solving, weather data, etc.	ü Highlight text/cells. ü Spell check document. ü Change font, size, style and colour. ü Change page orientation. ü Justify text to centre, left, right and full. ü Change margins. ü Format cell width and height. ü Use headings in rows and columns. ü Add/delete rows and columns. ü Enter data into cells. ü Modify existing data. ü Create a graph from data. ü Use find and replace. ü Enter formula to calculate data. ü Use copy, cut, paste and undo. ü Insert a graphic, picture or text.	
Multimedia **Possible Software-** **Mac;** Amazing Animation. KidPix ClarisWorks. **BBC;** None	**Language;** Stories **Expressive Arts** **Environmental Studies**	ü Use predefined graphics (stamps) on a predefined background (scenes). ü Add sound into the animation. ü Record a sound and add to animation. ü Delete sounds and graphics from animation. ü Copy, delete, paste and insert frames. ü Insert a tile screen. ü Add titles and text. ü Modify existing background using paint tools. ü Add different backgrounds to the animation. ü Create own backgrounds using paint tools. ü Modify text and graphics using special tools (spin, resize and move).	