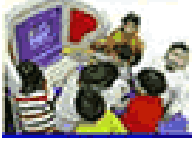


## ICT in the Nursery School

**KidSmart**

IBM Kidsmart Programme found:



*'Children need to see ICT used in a meaningful context & for real purposes'. (Siraj Blachford & Siraj Blachford 2003).*

In the Early Years, ICT should not be solely computer based. An integrated, holistic, valid and emergent approach is required.

In the Revised Curriculum Primary, there are five key elements to ICT - Explore, Express, Exchange, Evaluate and Exhibit. Whilst pre-school education is not included in the Revised Curriculum Northern Ireland, within the Curricular Guidance for Pre-School Education, there is a strong emphasis on *'Exploration'*

*'Children should have opportunities to use a range of ICT resources ( for example cameras, listening centres and computers), which will motivate them, enhance and extend their learning, and give them opportunities to engage in self-directed learning'.*

The use of ICT provides children with the opportunity to extend & develop their learning throughout the six areas of the curriculum. For example, ICT may assist in the following ways:

### ◇ **Personal, social and emotional development**

- To develop collaborative skills.
- To gain positive dispositions towards learning
- To show curiosity;
- To develop confidence and perseverance in the use of ICT
- To appreciate the challenge and sense of responsibility inherent in the appropriate use of a range of ICT resources;
- To wait, share, take turns and negotiate with others;
- To take pleasure in achievements - i.e. in learning new skills;
- To make choices
- To develop confidence and levels of self-esteem



◇ **Language development**

- To develop listening and memory skills.
- To express thoughts, ideas and feelings
- To give and obtain information
- To extend vocabulary related to themes, topics or concepts.
- To listen to and join in with rhymes & stories.
- To become aware that the printed word has meaning
- To develop questioning skills



◇ **Early mathematical experiences**

To develop a deeper understanding of:-

- number,
- shape,
- size,
- quantity
- pattern
- relationships
- spatial awareness.

◇ **Physical Development & Movement**

- To enhance fine & gross motor skills within a range of technological contexts
- To develop precision in terms of fine & gross motor control
- To develop an awareness of space
- To develop eye/ hand co-ordination

◇ **The Arts**

- To enjoy and appreciate various forms of media
- To create own images
- To listen to and appreciate music, songs and rhymes;
- To express ideas
- To develop originality of thought
- To extend appreciation of shape, form, texture & colour



### ◇ **The World Around Us**

- To make use of all of the senses to investigate and explore
- To develop skills of observation
- To appreciate the way in which ICT resources may be used in the environment (home, the community and school).
- To develop an understanding of the rules associated with ICT resources, especially in relation to safety.
- To select appropriate ICT resources for specific purposes and in a range of situations
- To ask questions about why things happen and how things work



## **ICT within the Curriculum**

Children should have opportunities to explore & investigate a range of ICT safely, naturally and at their own pace.

It is important that Pre-school children should find out about & identify the uses of technology in their everyday lives

They should be encouraged to observe & talk about the use of ICT in their environment e.g. when on local walks or Educational Visits.

There is enormous scope for the integration of ICT into Pre-school children's play environments:

### **Use of computers**

- ◇ Functioning computers can be integrated into play choices using a range of relevant & quality software (see possible suggestions at end).
- ◇ Arcade type games provide little encouragement towards creativity or any other worthwhile learning outcome.
- ◇ Adults working with children in this area should avoid programmes which include violence or stereotyping.
- ◇ Whilst it is important for children to have the opportunity to actually go out on real visits or have visitors into their setting, programmes such as *At the Café/ At the Vets* provide children with the opportunity to draw on their own experiences and to also imitate adult role behaviours, acting



them out in their own play and learning to understand them better. Children can make use of their imagination as they continue the scenario which the computer may have initiated.

- ◇ In terms of TS&PC, computers can offer the child a range of opportunities such as problem solving, coming up with ideas, trying things out & if strategies don't work out, trying something else.

## **Further ICT suggestions**

*(This list is not exhaustive but offers some starting points)*

### ◇ **Outdoors**

The outdoors offers a wide scope of opportunities to explore ICT. Some suggestions are detailed below.

- Resources such as play vehicles & other toys, for example, could be controlled by traffic lights.
- Metal detectors may also provide scope for exploration and discovery.
- Remote controlled vehicles, walkie talkies etc, may be used both outdoors & in, providing children with the opportunity to use technology in a real & meaningful context.

### ◇ **Role Play**

Within Role Play children should be encouraged to make use of real items with either functioning or non-functioning technology. For example:-

- In the Home Area, electrical equipment such as clocks, radios, answering machines, etc. may be made safe by removing wires and used within play on a regular basis as can dysfunctional remote controllers which can be used alongside old televisions & DVD players.  
Attention may also be drawn to the specifics of technology e.g. the need for washing machines to be programmed for different materials etc.
- The use of real technological resources can be extended further through a range of additional role play contexts such as:-

- The Hairdressers - using telephones and answer machines
- The Office - photocopiers, calculators and mobile phones,
- The Supermarket - bar code scanners and cash registers
- The Travel Agents - computers,
- The 'X' factor - Karaoke machines , dance mats & microphones,
- The Space Station - use of a tape recorder to tape a countdown and Blast Off,
- The Toy Shop - providing a range of wind up or programmable toys such as wind up toys & robots.

In this way, children can imitate, make use of and simulate the technological world.

◇ **Areas which include The Arts**

- Recyclable materials may be used to recreate elements of technology such as computers or scanners.
- Creativity may be further enhanced through the use of drawing and sketching computer software, musical software & those which promote the development of children's imagination.

◇ **Quiet Room/Book Area**

- CD players & listening centres are valuable resources to assist in the enhancement of early language & literacy skills.
- Devising and using Talking Books may also extend children's learning as they make use of a range of ICT elements.

◇ **Floor Play**

- Programmable and switch operated toys provide opportunities for development in a range of curricular areas, for example, within mathematics and numeracy where there are opportunities to develop counting, spatial awareness and problem solving skills.



◇ **Topics & themes**

- When considering topics & themes or out on visits, children using the digital camera can



enhance their own learning, deepening & consolidating observational skills whilst also developing fine motor control.

- This is also the case when using a computer mouse & a printer, but resources should not be used specifically for this purpose.
- Elements of investigating cause and effect can also be explored.
- Interest areas may be set up for children to investigate and find out about the workings of appropriate ICT resources.
- Light boxes can also be used to develop and extend learning.
- Children should be encouraged to be aware of ICT in their environment, both indoors & out.

### **Some possible examples of ICT in the Wider Environment**

- Traffic lights
- Public Telephones
- CCTV
- Bank links
- Scanners
- Weighing machines
- Photograph Booths
- Petrol pumps
- Automatic doors
- Satellite dishes
- Escalators
- Lifts

### **ICT in the home & at school**

- Televisions
- DVD players
- CD players
- iPods
- Washing machines
- Dish washers
- Microwaves
- Lawnmowers
- Mobile phones
- Photocopiers

## Home school links

- ◇ The use of the digital camera & laptops are powerful tools to facilitate communication with parents/ carers.
- ◇ Home school links can be further promoted through the use of a disposable / digital camera with a soft toy to share in home experiences
- ◇ Parents may trial software/ resources
- ◇ CDs/ Taped stories & rhymes may be provided by staff to share with parents & children
- ◇ Whiteboards/ Plasma screens are useful resources to convey information to parents

### Adult Role

- ◇ Adults should match their use of ICT to each child's needs, learning styles & individual preferences.
- ◇ When using ICT, adult involvement is often required to gain the most from resources - to scaffold & support as in any other area of the curriculum.
- ◇ Adults can also act as positive role models by modelling to children the value that they place on their own use of ICT on a regular and relevant basis

