



# Classroom ICT Projects

"Integrating the use of innovative technology in schools."



Comics



Game Making

LEGO



Animation



Podcasting



3D Design



Video Making

**COMMUNITY LINKS  
PROGRAMME**

creating opportunity for all



# ICT IN THE CURRICULUM

The Introduction to the Primary School Curriculum 1999, p. 29 states:

*Technological skills are increasingly important for advancement in education, work, and leisure. The curriculum integrates ICT into the teaching and learning process and provides children with opportunities to use modern technology to enhance their learning in all subjects.*

DI SC projects are designed to help teachers meet the ICT requirements of the Primary School Curriculum. The projects range in difficulty but start at a level that does not involve a steep learning curve.

The purpose of doing a project is to move the learning experience on from simply exploring the functions of computer programs and games to the point where the computer is used as a tool to discover and learn, under the guidance of a teacher, specific areas of the national curriculum.

The key benefits of doing an ICT project with a class include:

- Provide a different type of learning experience for children that is both engaging and enjoyable
- Develop social skills through cooperative learning and problem-solving
- It extends the range of learning experiences afforded to children, offering opportunities to learn through visual, audio, and kinaesthetic media.
- **Electronic or digital portfolios provide durable records of children's** work using a variety of ICT tools that include writing, presentation and multimedia authoring which may be easily presented to parents on prize giving days or as a positive record for assessment purposes.

This booklet outlines each DI SC project a class can participate in, how it relates to the Primary School Curriculum and the benefits they hold for teachers and students. It lists the equipment needed and the average time a teacher will need to learn the necessary skills to lead the project.

# COMIC MAKING

Comic books have been a popular storytelling medium for over 100 years. Although initially targeted at all age groups they soon became the perfect storytelling medium for children. This familiarity children have with comics provides an excellent starting point for engaging them in the process of creating their own publications using ICT.



Comic making involves many interdisciplinary activities that can be applied to any area of the curriculum. In addition to reading and writing, comics-based projects can develop drawing, computer, and research skills. Many of the skills used in comic creation can be applied to video making, illustration, and Web design.

## Possible Curriculum Links

Subject	Gaeilge, English	History	Visual Arts	SPHE
Strand/s	Competence and confidence in using language	Early people and ancient society	Making prints	Myself and the wider world
Strand Unit/s	Writing: developing competence, confidence and the ability to write independently	Egyptians Early Christian Ireland	Use a variety of print-making techniques	Developing citizenship Media education

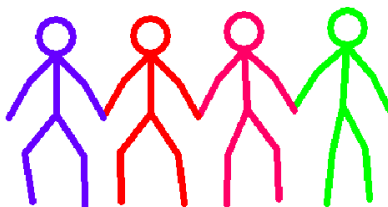
Recommended Program: Comic Life

**Cost: €1.00 per license through DISC**

Instruction: 30 minutes + 1 hour self learning

# ANIMATION

Animation has many uses and benefits in the curriculum. It teaches teamwork, structural thinking, planning and provides immediate satisfaction. Animation provides a different type of learning experience for children that is both engaging and enjoyable. It extends the



range of learning experiences afforded to children, offering opportunities to learn through visual, audio, and kinaesthetic media.

*The children have completely engaged in this project and there is constant talk about it throughout the week. At the moment the children are making very simple animations only 2 or 3 seconds long but what is very appealing for our children is that the results of their work is very immediate. First they make their characters and background, decide what will happen and then it is filmed and shown. The children are so proud of their simple creations. Every day they come and ask me can they look at the animations.*

*Louise Kelly, Rutland Street National School*

Subject	English	Science	Drama	Visual Arts
Strand/s	Emotional and imaginative development through language	Environmental awareness and care	Drama to explore feelings, knowledge and ideas, leading to understanding	Clay
Strand Unit/s	Developing emotional and imaginative life through writing	I identify, discuss and implement simple strategies for improving and caring for the environment	Co-operating and communicating in making drama	Explore and discover the possibilities of clay as a medium

## Stick Figure Animator

Everyone has drawn stick men on the corners of copy and flicked the pages to see the animation effect. Pivot Stick Figure Animator is a computer version of this. It is an easy to use program and provides quick results. It is a great program to use with junior and senior infants but some transition year students have taken a fancy to it also. With some imagination and a little skill the software can be used to tell a story or make a commercial.

**Cost: €0.00**

Instruction: 40 minutes + 1 hour self learning

## Clay Animation

Clay animation allows children to use their imaginations as they have always done but now their creations can come alive. Any poem or story that the children are doing in class can be given the clay animation treatment. Children that might find it difficult to participate in the written or oral process can often engage with a clay animation project and participate more fully in the class as model makers or voice performers.

Recommended Program: Stop Motion Animator (Does not work with Vista)

**Cost: €0.00 for the software**

Instruction: 40 minutes + 1 hour self learning

## Crazy Talk

Crazy Talk takes two main elements of animation production, facial expressions and lip-sync, and makes them exceptionally easy to achieve. The benefits of this for teaching children are that they can draw a face, write a first person story, record it and within ten minutes produce an animation of their drawn face. The results can stand alone as a teaching aid to engage children in writing and communicating or can be incorporated into a larger project for instance in getting characters from history to talk in a video.

**Cost: €25.00 with matching funding from DISC**

Instruction: 40 minutes + 1 hour self learning

# VIDEO MAKING

**Electronic or digital portfolios provide durable records of children's work** using a variety of ICT tools that include writing, presentation and multimedia authoring. A good multimedia presentation made by the children can provide an interesting tool for reinforcing learning. They can also be useful for motivating children both at the time of their making and when it comes to view the final product.

As with every ICT project, the older the children the more of the technical elements of the process they will be able to contribute towards. With a younger class the children may just appear or provide voice-overs but much of the recording and editing will need to be done by the teacher or SNA. With older groups the camera work can easily be done by the children and they can make a larger contribution to the editing. By the time video making is attempted in secondary school nearly all work can be done by the students provided initial training is provided.

## Curriculum Link Examples

Subject	English	Geography	PE	Music
Strand/s	Competence and confidence in using language	Environmental awareness and care	Games	Composing
Strand Unit/s	Learn to use questions as a mechanism for expanding and developing a story	Examine a number of ways in which local and other environments could be improved or enhanced	Create and develop games with a partner or with a small group	Select sounds from a variety of sources to illustrate a character or a sequence of events

**Recommended Program: Movie Maker/iMovie Cost: €0.00.**

**Video cameras are around €200. PCs might also need firewire €80.**

Instruction: 1 hour video camera use + 1 1/2 hours video editing

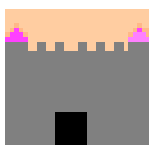
# COMPUTER/VIDEO GAME MAKING

The computer/video games industry is nearly as profitable and popular as the film industry.



**Computer game making can help build students'**

story telling skills. It helps encourage cooperative learning and engages students in problem solving and higher order thinking. It can be a multi-disciplinary exercise - developing a good game can involve composing music, script writing, story development, physics, visual arts, spatial arts and more.



As the game design process involves students drawing on their multiple intelligences, it often provides students who are typically not good at school with a chance to see themselves as capable members of the classroom learning community.

## Curriculum Link Examples

Subject	English	Mathematics	Science	Visual Arts
Strand/s	Developing cognitive abilities through language	Algebra	Forces	Print
Strand Unit/s	Sketch an ordered summary of ideas and draft a writing assignment based on it	I identify positive and negative numbers	Come to appreciate that gravity is a force	Use a computer art program to create original images that are not dependent on clip art

Recommended Programs: Game Maker/Alice/Scratch

**Cost: €0.00**

Instruction: 8 hours or use self-teaching manuals with class

## CLASSROOM BLOG

At its simplest a classroom blog can consist of a short paragraph describing something interesting that was done in the class during that **week/2weeks/month. This wouldn't be any longer**



than an email. This in itself would be a good way of communicating with parents and any interested parties. Text however could easily be enhanced with photos and videos of classroom activities. Podcasts, made by the children, can also be added.

Comments can be invited from teachers and children in other schools. The blog can be used as a means of sharing information and collaborating on a small project with another class from anywhere in the world. Children can be assigned their own blog space. They can type out short diary entries, interesting typing assignments, procedural writing work etc. The teacher **moderates everything so children's work doesn't go live until it is checked.** The best work can be put on the first page of the classroom blog.

### Curriculum Link Examples

Subject	English	Geography	History	SPHE
Strand/s	Developing emotional and imaginative life through oral language	People and other lands	Early people and ancient societies	Relating to others
Strand Unit/s	Discuss the concerns of other children	Study some aspects of the environments and lives of people in another part of the world	Australasian peoples e.g. Maori	Give and receive compliments and constructive criticism in different situations

Recommended Program: [www.classblogmeister.com](http://www.classblogmeister.com)

**Cost: €0.00**

Instruction: 1 hour

# PODCASTING

Podcasts at a basic level are voice recordings done on a computer. They demand good levels of communication from participants which will improve their vocabulary and language skills.

Podcasting provides a very useful medium for engaging and motivating children at many different levels including writing, reading, speaking and listening. From the teachers point of view, podcasting is only one added step to the work that would already be done in class in the area of essays and project work.

Podcasts can be easily uploaded and shared on the internet providing a **wider audience for the class's work** . **They naturally link in with a classroom blog and it doesn't matter if there is five or fifty people listening to the podcast**, children will write better in their effort to improve each time they attempt a new recording.

## Curriculum Link Examples

Subject	English	Music	History	SPHE
Strand/s	Receptiveness to language	Talking about and recording compositions	Story	Self identity
Strand Unit/s	Listen to, retell and tape a narrative or a description, taking turns giving the account	Record compositions on electronic media	Listen to, discuss, retell and record a wide range of stories from the lives of people	Develop further the ability to express personal opinions

Recommended Program: Audacity/Garage Band

**Other Program: Cost: €0.00 (Microphones start from €10)**

Instruction: 1 1/2 hours

## 3D DESIGN

Google SketchUp is software that you can use to create, modify and share 3D models. It's easier to learn than other 3D modelling programs such as CAD. It has a simplified toolset, guided drawing system and clean look-and-feel to help get work done as efficiently as possible.



It is enjoyable to use. The technology is not so difficult as to stifle **students' imaginations**. The creative student will quickly be producing drawings of their ideal rooms and buildings. Teachers are able to use the program to incorporate learning in areas of maths, technology and art. Descriptive writing can also be encouraged.

SketchUp models can be exported into Google Earth. Google Earth allows SketchUp to import modeling context (photographic + terrain model) from Google Earth for modeling reference.

### Suggested Curriculum Links

Subject	English	Geography	Mathematics	Visual Arts
Strand/s	Competence and confidence in using language	Environmental awareness and care	Shape and space	Construction
Strand Unit/s	Write fluently and relevantly in other areas of the curriculum	I identify, discuss and appreciate elements of natural and human environments	I identify and examine 3-D shapes and explore relationships, including faces, edges and vertices	Using a suitable CAD program to design a structure.

**Cost: €0.00**

Instruction: 4 hours or use self-teaching manuals with class

# LEGO ROBOTICS

The use of LEGO Robotics can facilitate cross-disciplinary projects and enable collaborative learning. It can introduce children to basic computer programming and robotics. Projects in LEGO improve oral language development, as students are motivated to learn descriptive, scientific and technical language while engaging in discussions with peers and with teachers. They can assist the writing process, as children plan strategies and record actions when problem solving. It can include all students in mixed ability group.

It allows children to create and develop their own models based on a range of topics within the curriculum. Theories that can be difficult to comprehend when learned from a book are far more easily understood with the benefit of a LEGO model. Young people can improve their understanding of engineering concepts, for example, how gears, pulleys and levers operate. They can gain a better understanding of scientific concepts by conducting experiments based on behaviour, feedback and control.

## Suggested Curriculum Links

Subject	English	Geography	Science	Visual Arts
Strand/s	Competence and confidence in using language	Human environments	Forces	Construction
Strand Unit/s	Choose a register of language appropriate to subject and audience	Learn about the methods of transport and transport routes	I identify and explore how objects and materials may be moved	Make imaginative structures

**Cost: €1000.00 with matching funding from DISC**

Instruction: 8 hours



# COMMUNITY LINKS PROGRAMME

creating opportunity for all



[www.discproject.ie](http://www.discproject.ie) - [www.communitylinks.ie/disc](http://www.communitylinks.ie/disc)

DISC is part of the Community Links Programme in the Dublin Institute of Technology. It operates in 38 inner-city disadvantaged primary and secondary schools. Our objective is to integrate the use of computers into the teaching/learning process in all curricular areas, in order to maximise the benefit of ICT for all students and convert ICT into a primary learning mechanism for all subjects. To this end we have devised a number of projects that help us to meet this objective and are applicable across all curricular areas. These projects include the use of comic creation, clay animation, video production, class blogs, podcasting, video game making, 3D design and robotic Lego to capture the imagination and open up a world of possibilities for young people in Dublin inner-city schools.



*"The best things happen when teachers and students meet in the middle as learners!"*



National Centre for Technology in Education  
Ionad Náisiúnta don Teicneolaíocht san Oideachas