Creating Digital Animations

What is animation?

Animation is incremental changes to drawings or objects to produce slightly different images. Playing back these images creates the illusion of movement. Software like Stop Motion Pro or Monkey Jam can be used to shoot a succession of photos and then plays them in the form of a video.

Animation for Education

With the creation of animations by the pupils, the classroom will be transformed into a place where pupils are encouraged to use their curiosity and imagination and to convey their ideas in a different way. The pupils will also have the possibility to solve simple problems and to work in groups. Animation creation can be easily integrated across the curriculum. Language can be included to write a script for the animation as the animation is created to tell a story; ICT is included through the use of software and hardware like the webcam; Arts and Crafts are needed to draw or create the models; Drama is important with the models’ roles and actions...

For more information about Animation for Education visit Stan’s website at http://schoolnet.gov.mt/stan/

Organisation

Group work is very important when creating digital animations, since a variety of tasks have to be done simultaneously. It is important that each member of the group is given his/her tasks before the shooting of the animation starts. The first step is to create a storyboard to be able to know which props and background scenes are needed, the sequence of events and which motions are necessary.

Models

Animation can be done to both 2D and 3D models. One can do simple line drawings and change them slightly each time the shot is taken to create the animation. Digital drawings can also be created through various software and used for animation too.
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Plasticine models are very colourful and appealing too. Young children love to create models with plasticine or even the class-made play dough. It is important to convey to the pupils some basic techniques about building models like:

- design the main features of the models, such as the eyes, ears, hands, legs... relatively large.
- keep the weight of the model at the bottom, not at the top.
- don’t be clumsy when moving parts of the model for animation or it might break.
- the smaller the movements, the smoother the action will look when you play it back.

Playdough Recipe

To make play dough you need 2 cups flour, 1 cup salt, 4 teaspoons cream of tartar, 2 tablespoons oil, 2 cups water and poster colour or food colouring. Mix all the ingredients in a saucepan and cook over medium heat for 3 to 5 minutes. Stir constantly till the mixture gets very thick. Knead dough and have fun! Store in an airtight container. (by Miriam Schembri, Computerwise, June 2007, Issue 18)

Shooting the animation

To shoot digital animation you need to have a webcam connected to your laptop with its driver installed. You also need a software which shoots digital animation, like StopMotion Pro (a commercial software requiring licence) or Monkey Jam (a free downloadable software at http://www.giantscreamingrobotmonkeys.com/monkeyjam/download.html).

- It is suggested that the rate of frames per second for Primary school use should be 15fps, meaning that 15 shots will be played in 1 second.
- To start the animation it is also important to take six same shots of the scene for the eyes of the viewer to settle down to what s/he is watching.
- Use 1 or 2 shots for every move for smooth animation.
- Each time you need to have a pause to change an action, you should take 3 or 4 shots. At the end of a scene, 6 shots should be used again.