



Stage 5 Graphics Technology

Unit of work: Year 10 elective module: *Computer animation*

Rationale

Prior to beginning this unit it is essential to remember that this course is not Technical Drawing. Therefore computer animation is not necessarily limited to only CAD style drawing. In fact it is the aim of this unit to move away from only CAD as this has been done all through the Core. In the corresponding course plan Cabramatta High students will have done the CAD elective so it is the aim of this unit to introduce a slightly different form of animation. I have chosen to develop a unit based around *Flash* animation. This style of animation is highly popular for Internet delivered media and as such is highly relevant to graphics.

Software to be used

One of the major downsides to this elective is simply cost. Most software costs money and a majority of advanced software is very expensive. Fortunately at Cabramatta High School we have the following software for use with this unit.

Macromedia Studio MX 2004

This provides four major programs with three being of prime importance. One is *Flash MX* another is *Freehand MX* and the final one is *Fireworks MX*. *Flash* develops advanced *Flash* animations, *Freehand* is a vector drawing package to modify images for animations and *Fireworks* is a mixture of vector and bitmap image editing software.

Corel DRAW 11 Suite

This package provides *Corel DRAW 11* which is used for vector image manipulation, *Corel PHOTO-PAINT* for photo/pixel based graphics manipulation (similar to *Photoshop*) and *Corel R.A.V.E*, which is a simple *Flash* animator.

PTC ProDesktop

This CAD package is an excellent deal for schools. If a teacher is trained in the use of it then they are entitled to a 300-user site licence. This is enough for each computer in the school and often for each student to take it home and install it on a home PC. As such it makes it an excellent CAD package for assignments and the like. *ProDesktop* is a lightweight version of *ProEngineer*, a highly advanced industry package. Teachers interested in being trained in *ProDesktop* should contact the Institute of Industrial Arts Technology Education (IIATE).

Comment

At Cabramatta High School Year 10 Graphics Technology students will have thirty five 50-minute lessons per elective module. This will mean there is very little time to deviate from the outlined time structure. The final assignment has been allocated five weeks (approx 17 lessons) because it is quite intensive and I feel all that time will be required. If your class is struggling with this time structure shorten the *Flash* animation.

Flash alternatives

Two cheaper alternatives to *Macromedia Flash* are *SWiSH* and *AXEL*. Both of these programs have been given away on cover CDs for computer magazines.



Unit outline

Week/s	Content	Resources	Method	Comments
1	<ul style="list-style-type: none"> • Introduction to computer animation. • Discussion of animation terminology. • OHS in Graphics. • Path and cell based animation, morphing and warping. 	OH transparency OH transparency	<ul style="list-style-type: none"> • Class discussion to find class ideas about computer animation. • Introduction of animation and terminology. • Read through notes stopping at various points to discuss implications. • Class discussion about the different methods of animation. • Examples of where they are used. 	It would be useful to have some demonstrations of <i>Flash</i> animations or CAD based animations to show students.
2	<ul style="list-style-type: none"> • Animation in design. Why is it used? • Input methods for animation: scanners and digital cameras. 	Whiteboard Scanner Digital camera	<ul style="list-style-type: none"> • Brainstorming in groups. • Class discussion of group findings. • Exercise: students are to bring in an image and scan it. Once this is done they are to take a digital image of something in the school. Save for later. 	
3	<ul style="list-style-type: none"> • Introduction to storyboards. • Investigation of 3D CAD animation using <i>ProDesktop</i> software. 	OH transparency Whiteboard for demonstration Student PCs	<ul style="list-style-type: none"> • Read through notes and discuss the importance of storyboards. • Students are to draw a basic shape, e.g. chamfered block and investigate rendering and animating it using <i>ProDesktop</i>. 	Students have learnt to use <i>ProDesktop</i> in the previous elective module.
4	<ul style="list-style-type: none"> • Introduction to Macromedia Flash MX. 	<i>Flash MX</i> tutorial Teacher PC with data projector	<ul style="list-style-type: none"> • Students will spend this week doing the tutorial to learn the basics of Flash-based animation. 	It may be necessary for some students to spend longer on this than others. <i>Macromedia Flash</i> is a complex program and some students may struggle with it.



Weeks	Content	Resources	Method	Comments
5	<ul style="list-style-type: none"> Continuation of <i>Macromedia Flash</i> tutorial. Preparation of images for <i>Flash</i> animation. 	Tutorial Students PCs Image manipulation software	<ul style="list-style-type: none"> Students will finish off the tutorial. Students will be shown how to modify non-CAD digital images for use in <i>Flash</i> animation. Students will use the images from week 2 and manipulate them and merge them together in <i>Corel PHOTO PAINT</i>. 	There are a number of tutorials bundled with PHOTO PAINT. Alternatives are Adobe <i>Photoshop</i> or Jasc <i>Paint Shop Pro</i>
6–10	<ul style="list-style-type: none"> <i>Elective assignment</i>: Create a 20-second <i>Flash</i> animation which incorporates the movement over or past a CAD image of a household appliance. A folio is to be produced with the assignment that details the development of the animation. 	Assignment sheets	<ul style="list-style-type: none"> Students are to be handed out an assignment. The assignment will be explained. The remainder of the elective time will be spent completing the assignment. 	Teachers will primarily act as a facilitator here, assisting students with their projects. Some students will need extensive tutelage.

Elective assessment

Task	Weighting %
Scanner/Photo task	10
CAD image	10
Image manipulation	20
Flash Assignment**	60

**The *Flash* assignment will be a major component of the yearly assessment.