

Computer Animation 10

District Name: Mission
District Number: 75
Developed by: Shelly Bryant
School Name: Heritage Park Secondary
Principal's Name: Kevin Kaardal
Board/Authority Approval Date: February 10, 2004

Board/Authority Signature:

Course Name: Computer Animation
Grade Level of Course: 10
Number of Course Credits: 2
Number of Hours of Instruction: 60

Prerequisite(s): None, suggested Animation 9 or successful completion of Art 8

Special Training, Facilities or Equipment Required:

Equipment required: Computers (500 MHZ or higher), editing software, animation software. Teacher or resource person will need experience with editing software, and animation software.

Course Synopsis:

This course has been developed to introduce the student to computer animation techniques. Students will explore various computer animation programs. The students will be expected to think creatively, designing their own characters, stories and animations.

Rationale:

This course has been developed as an introduction to the computer animation. The students will explore a few different computer animation programs. Drawing skills will be stressed as well as student creativity. They will be expected to create storyboards, characters (both in 2D and in 3D), explore a few animation programs and create a short animation by the end of the course.

Organizational Structure:

Unit	Title	Time
Unit 1	Introduction to Strata Vision	5 hours
Unit 2	Strata Vision - modeling and backgrounds	12 hours
Unit 3	Strata Vision – colour, lighting and Photoshop	3 hours
Unit 4	Strata Vision – animation	15 hours
Unit 5	Strata Vision – short animation	10 hours
Unit 6	3D Studio Max/Softimage introduction	15 hours
	Total Hours	60 hours

Unit one: Introduction to Animation

The students will be introduced to the basics of Strata Vision. They will explore the desktop and experiment with the tool bars. Through this exploration the student will become more familiar with the program. It is expected that the student will demonstrate their understanding of the basics by creating a variety of small projects.

It is expected that the students will be able to:

- Create a variety of 3Dimensional objects using Strata Vision Software.
- Apply colours and textures to objects in Strata Vision
- Create backgrounds and middle grounds in order to create an environment for future characters.

Unit Two:

The students will continue to study animation by creating characters in 2D. The students will be taught how to create a character using pencil and paper. After completing their characters, the students will then work towards modeling their characters in Strata Vision. Various animation videos will be studied for ideas and for content. Students will analyze the videos for techniques used and for the development of the characters.

It is expected that the students will be able to:

- Create their own two Dimensional characters showing 5 different views that express thought, feeling or action.
- Model their characters using a variety of modeling techniques within Strata Vision

Unit Three:

The students in this unit will create their own colours and textures in Photoshop for their characters and backgrounds. They will learn how to place these colours and textures on their objects in Strata Vision. Students will learn about polygons and the effect of these on the rendering of a scene. A variety of video games will be looked at for their polygon number and discussions about how to make low polygon images will be studied.

It is expected that the students will be able to

- Create textures and colours from digital photographs or scanned objects using Photoshop.
- Differentiate between a high polygon object and a low polygon object and how that affects the rendering of any animation.
- Create low polygon models within Strata Vision

Unit Four:

The students in this unit will be introduced to the 3D computer animation process. A basic understanding of movement in a 3D environment will be developed. Students will create a walk cycle, a bouncing ball and rotation movements of planets. Storyboard techniques will be introduced at this time. All students must complete a storyboard from a section of a book that they choose.

It is expected that the students will be able to

- Demonstrate an understanding of the development of storyboards and the steps required to create a storyboard, including changes in camera view, backgrounds, and foregrounds.
- Create a walk cycle using Strata Vision Software
- Create a bouncing ball using Strata Vision Software
- Create orbiting planets using Strata Vision Software

Unit Five:

The students at this time should have a basic understanding of the program Strata Vision and are expected to create a short animation complete with storyboard and character design. This project should show the students understanding of the program and of the basics of animation.

It is expected that the students will be able to

- Create a short animated film
- Create a detailed storyboard for an animation from a story book
- Create a character study (showing all views) for all of the characters in their animations.
- Use and understand the specific vocabulary as it pertains to animation.

Unit Six:

If time permits, students will be introduced to other animation programs. Basic modeling techniques will be studied. Short projects will be assigned.

It is expected that the students will be able to:

- Create simple models within higher level animation programs such as Softimage and 3Dstudio Max
- Create simple animations with a higher-level animation program.
- Differentiate between low-end animation programs and high-end programs.

Instructional Components:

- Direct instruction
- Indirect instruction
- Interactive instruction
- Independent instruction
- Modeling
- Tutorials
- Analysis of commercial film and video (animation and special effects)
- Analysis of commercial computer games

Assessment Components:

Due to the nature of this course, evaluation is on going. Each unit builds on principals studied before. Successful completion of each of the units is necessary for success in the course. The process use to get to the final product is as important as the final product; therefore, all assignments will be graded equally. 20% per unit will be given with the final unit being an indicator of understanding of the course throughout the year.

Product Evaluation:

The following will be given a mark on a scale of 1-5:

- Storyboards
- Character development
- Backgrounds
- Characters
- Animation
- Finished product

Learning resources:

On-line tutorials for various animation software

- Video and editing equipment manuals
- Books

Additional course information:

This is a beginning course, which will help the student develop an understanding of the basics of computer animation, and the various jobs associated with in the industry. It is a must to have an adequate number of

computers available. Computer animation programs are expensive and therefore can limit the time the student has on the computer. Groups may be used in some instances where there are limited facilities. The end product can be used in a portfolio for future studies.