<h1 style="text-align:center">Motions Pictures and the Internet</h1>

Paula M. Graves

Objectives

The purpose of this curriculum is to introduce young adolescent who may lack prior exposure to computers to the information superhighway (the Internet) by means of a favorite past time, motion pictures. This will be accomplished by encouraging the students to learn to: log onto the Internet, access various sites, download software and even create basic computer graphics.

In our present society movies have a pervasive presence which affects many facets of our lives-from what we eat, to the music we listen to, to the clothes we wear and even influencing the manner in which we speak. The movies have been chosen as the medium by which young children may be exposed to the cutting edge of technology considering that they are such a dominant force in American culture.

The Information Superhighway

Some call it cyberspace, or the "digital highway", yet the Internet is simply a global "network of computer networks." The Internet offers a vast array of services. From one of the most popular areas of cyberspace, the World Wide Web, is an ideal entry point. Typing in Internet domain names is the first step. A domain is simply an electronic address for a particular person, company or organization. Most domains have an extension that indicates what type of enterprise it is, i.e.: (.org) usually a nonprofit organization, (.com) typically a profit based company or corporation or (.edu) an educational institution public or private. In this case the user will be accessing domain for a search engine. A search engine is a computer software designed to find or search for specific information. There are a number of popular search engines on the web- including Yahoo, Excite and Alta Vista. By typing in the domain name i.e., www.yahoo.com, the student will be able to research information on their favorite motion picture by simply typing in the movies name. At that point the student will have access to a myriad of information by way of the hyperlinks or blue words on the screen. The links are a direct passage to other web pages exclusively tailored to the topic, in this case movie. Students could be required to find the name of two of the posting reference material i.e. news encyclopedias to conducting financial transactions. Students would also shop online, trade stocks, and experience communicating locally & long distance. E-mail and chat room uses or even for educational and entertainment purposes i.e. taking college courses or playing infinite number of computer games. These online activities are enhanced by accessing software and free public domain software.

This curriculum unit will enable students to apply hands on learning in order to acquire knowledge of computer technology, The Internet offers boundless opportunity to explore and discover alternate means or new methods of enhancing the learning process.

Students can access information in a variety of ways. One exercise would involve taking the students to the computer lab and having them log onto the Internet. Having accomplished this; "surfing" the Internet or visiting various sites would be their next step. Students would return to class and discuss this "hands on" experience. The student will navigate the Internet based on prior class instruction. The Internet is a user-friendly technology. It needs only basic instruction, the user simply follows computer links or Internet linked pages to a specific site. This method of instruction allows students to find specific information as well as make accidental but helpful discoveries in the process. The Teacher would be on hand to facilitate the process in the event that the students need assistance or help. Ultimately the students would become confident in their use of the computer as they search the net.

Demographics

This curriculum is aimed largely at lower-social economic background middle school youth, 11 to 13 years of age. Many of them with little or limited exposure to Computers will be able to access the Internet with some level of efficiency. Students of both low and higher level learning abilities will be able to experience Internet usage through simple instructions. The majority of the students do not have access to computers in their homes. Because of this factor it is necessary that time be provided during classroom period. The utilization of the public library system will be another means of accomplishing the assignments the students are expected to complete. Access to the computer lab at school should be available to students either in the early morning hours or after school hours. This unit will be a semester long 85-minute block scheduling sessions with the final major project encompassing the last six weeks period.

The Marriage of Motion Pictures and Computer Technology

There are numerous definitions for the word *computer*. The basic and advanced definition probably describes modern computers. It is an electronic machine that performs high speed mechanical calculations, which stores and processes information. The coming of this information revolution to be known as computers was predicted in the late 1940s when mathematician Norbert Wiener published a book called Cybernetics. These devices Wiener proclaimed would bring technical revolution greater than the Industrial revolution. Norbert Wiener and other scientists believed that such machines would eventually become complex enough to process information as well as the human mind. The computers have already fulfilled Wiener's prediction by bringing about dramatic changes in human culture. Major developments and improvements have come in such areas as communications, business, industry, space technology, education, health care, and in the field of entertainment.

Early photographs were produced on pieces of glass. Each new picture required a fresh piece of glass in the camera. In 1887 a man Hannibal Godwin took a piece of transparent material called celluloid and coated it with a special chemical film that was sensitive to light. When the celluloid was exposed to light, an image was retained on it.

George Eastman a manufacturer of photographic equipment saw the celluloid and began manufacturing it as Eastman Film. American inventor, Thomas Edison, experimented with the film and invented a box called the kinescope. By winding the film off one spool inside the box onto another, the pictures inside the box appeared to move. Next, Edison invented a projecting kinescope. The film was projected onto a screen and many people could watch at once. This invention was unveiled April 23, 1896 at the Koster and Bial's Music Hall in New York city. The film showed a prizefighter, a dancer, and waves rolling onto the beach. The "*movies*" had been born.

In 1903 an American film director, Edwin S. Porter realized that audiences wanted a story. He made an eleven-minute long film about men who robbed a train called "The Great Train Robbery". This film was a huge success. People across the country flocked to theaters named *Nickleodeons* (because of the nickle admittance fee). Movies soon became an institution of the American way of life.

Computers in film began in the early 1970's. Computers were used primarily to guide cameras. Several photos would be taken by cameras and conglomerated into one scene with all of the desired details incorporated into the "take". Today one of the most popular roles computers play in movies involve *Graphics*. Technicians "build" scenes on screen. They start by drawing crude "wireframe" models; then render them. A skin of lifelike textures and shadings is applied. Finally, they use the computer to animate the screen models. *Animation* is a series of scenes moving so rapidly they appear live.

Producer George Lucas founded the Industrial Light and Magic or the *ILM* company. ILM was a pioneer in the use of Computers in film. Mr. Lucas founded ILM to devise special effects for his 1976 space saga "*Star Trek*". Later, on computer "*Graphics*" in the film began as well as other modes of computers in film. One of the first such uses was in the movie Star Wars.

Computer Graphics occur when the computer "*generates*" a scene or object. Computer Graphics are recorded by the movie camera directly off the monitor screen. This technique is more detailed than engineers simulating the design of a car on computers, although it is a similar process.

The author of the book <u>Space Jammin</u> states that "Animation is much more than pictures that move. It's an American artform in which tens of thousands of drawings - work of hundreds of hands- blend to create living, breathing, beings . . . It turns characters into performers ". In animation, when dozens of animators are working on scenes involving the same character, they require a guide to help give them the consistent look of a single artist. These guides, called model sheets, dictate the style in which the graphics will be drawn. Model sheets are drawn by the animation director (or a trusted artist). They usually include a variety of facial expressions, a proportion sketch, action poses, and a turnaround. Even though the animators are working with exactly the same style graphics, their individual personalities come through in the way the specific character moves and the expressions it displays. These graphs are then set on a "storyboard", and

later scanned into a computer and painted with a special software program. In animating a character, the directors want every close interaction between animated and living actors to look authentic. This is achieved through the photo-roto process. Photo-roto is used merely as a placement guide for the animating artist. The animators establish an eye-line with the actor and the animated character that allows a match of proportions and sizes for a film. *Cinesite* is animation's visual effect in which graphics are manipulated into live action. Through *Cinesite composites* physical interaction between actors and animated characters coexist. After a graphic is "inked" and painted in the computer, it is sent by phone line to Cinesite for compositing. This is a step that brings all the layers together so that they look like they were photographed through a single camera. Another area in which animation is used is termed "*virtuality*". Virtual environments are background scenes created in the computer. They are built to realistically move to match the movements of the characters in front of the scene. Visual harmony is easily achieved by repositioning overlays of film to apply or subtract elements of a scene or background as needed. Texture maps of wood, concrete, plaster, etc. are used over the flat computer surface in much the same way one would use chicken wire and paper mache to create a three dimensional object.

The students will be given an opportunity to get on the Internet to view the Internet display of any information regarding special effects through the Walt Disney website and other computer displays. Graphics and Digital effects in movies will also be discussed. If available, Digital Animation could be explored in the classroom through the use of Digital cameras available presently on many school campuses. Written text could used to evaluate student's performance and test assessments. For this portion of the curriculum the students will write a practice Essay on their experience while viewing movies. Previously discussed Digital and Visual effects would be expounded upon i.e. group discussion.

The essay would incorporate computer techniques learned using the five paragraph format. Handouts would show graphic drawings of the various styles used in the movie viewed (see Animation graphics). In addition there will be an evaluation of different forms of computer usage. This would include a Teacher guided discussion of the various computer usages, with the students response indicating a movie or animation depiction. Digital techniques such as Wire Framing used in Jurassic Park, Morphing such as that which was used in Terminator II, and Pixel Stretching would be discussed in depth. The students will focus on these major techniques used in computerized films today.

Wire Framing is the technique by which the film makers enable characters like Bugs Bunny to run, jump, play, and talk just as though he was a person. Bugs made jokes during the movie. He jumped for goals as a player on the basketball team. Wire Framing assists the artists in determining the correct shape and size for the animated characters. These sizes are made in proportion to the actor sizes.

Lesson I & II
Assuming that the children already have some exposure to computers (not necessarily the Internet) an appropriate starting point would be: Instruction on logging onto the Internet. They would proceed by searching for names of stars or stars of the film, and printing them out once found. Once this information is obtained, other assignments could require the students to seek out more detailed information. Another integral component of this project emphasizes the importance of cooperative learning. The students should be broken into small groups (2 to 3 students ideally) where they may reinforce each other's actions as they interact. The opportunity for the students to *assist each other* in "surfing" the web is of extreme importance for children who may be more " computerophobic" or shy about attempting the assignment. As a result, the more curious children might lead the group in seeking out the requested information. Each child becoming comfortable with his or her own pace is a central theme of this project.

Lesson III
Once the pupils feel secure with using the hyperlinks and typing in domain names to traveling the net, they will attempt to download software in order to explore another facility of the net. To access some of the particular features of the net, often times a user may need special types of software. For example, a student might be on a movie sight and desire to view the preview of the film or listen to an audio clip from the movie. By downloading a program such as Microsoft Mediaplayer or Real Video player the student can enjoy streaming video and real time audio. This basically allows for a more enjoyable experience as the students employ more of their senses in the learning process. The instructions for downloading particular software are typically simple, in that they are a succession of point and click commands that do not require any computer programming ability. There are also help functions installed within the software to aid in the instance of any complications. These types of situations would more than likely be resolved with the aid of the instructor however. Once installed, the media software will run the particular audio or video clip at the click of a button.

Lesson IV
The final part of this curriculum unit will offer students the opportunity to exhibit their artistic talents. This will be achieved by allowing the students to create a mock movie poster using computer graphics software. Once again, creating the poster will allow for students to become more comfortable with the technology by encouraging the to fulfill them creative pursuits. Using such software as Adobe, Photoshop, CorelDraw or Microsoft-Paint the students can create graphics embellished with text in order to simulate an actual movie poster. Please note that the graphics icons within these software make the learning process simple and more attractive to the students.

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