



DIGITAL VIDEO TIPS FOR THE CLASSROOM

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I. Value of Using Video

- ☒ Learn to Use the 21st Century Skills
- ☒ Learn to Use Higher Order Thinking Skills
- ☒ Improve Decision Making
- ☒ Increase Creative Thinking
- ☒ Improve Collaboration Skills
- ☒ Build and Reinforce Content Knowledge
- ☒ Appeal to Multiple Intelligence
- ☒ Increase Visual Literacy
- ☒ Increase Media Literacy
- ☒ Meet National and State Technology Standards

II. Pre-Production Skills

- ☒ The quality of an audio/video project is directly proportional to the time spent in preparation.
- ☒ The first and most important step is to identify the goals and purposes of the video.
- ☒ A Production Checklist should include comments and date completed for these categories:
 - ✿ Purpose of Video, Audience Identified, Storyboard Drafted, Personnel Identified, Locations Identified, Props Identified, Narrative Written, Identify Graphics, Photos, Audio, or Video Clips Required, Permission Forms and Copyright Clearance, Rehearse and Shoot Video Segments, Edit and Review Video, Publish Video

III. Preparing a Storyboard

- ☞ Storyboards are a rough approximation of what will be produced.
- ☞ Storyboards always a work in progress.
- ☞ The type of the storyboard is based on the type of the video.
 - ✿ Semi-scripted video for interviews, discussions, ad-lib shows, demonstrations, and variety shows would need only a basic outline, with only the show segments and their times indicated on the script.
 - ✿ A fully scripted video will need a storyboard that includes:
 - ◆ A sketch of the video of each scene,
 - ◆ Narration, music or other audio background,
 - ◆ Size, color, and placement of graphics,
 - ◆ The actual text, along with its color, size, and font,
 - ◆ Anything else the production.
- ☞ Sources for a Storyboard Format
 - ✿ A storyboard can be made with the drawing tools or organization chart in: Microsoft Word, PowerPoint or Microsoft Publisher.
 - ✿ Concept mapping software, *Inspiration*, can be used.
 - ✿ Several software packages are design specifically for storyboard preparation.
 - ✿ A popular free storyboard preparation package is *Atomic Learning's FREE Video StoryBoard Pro*.
<<http://www.atomiclearning.com/freestoryboard.shtml>>
 - ✿ Kids Video is an online storyboard to help younger students visualize movie idea.
<<http://kidsvid.hprtec.org/scripting.html>>

IV. Setting up a School Video Studio

- ☞ Audio in a School Studio
 - ✿ The best location for a school video studio is dependant on the acoustics of the area.
 - ✿ Audio is most affected by the acoustics within the room itself.

- ✿ Rooms that are totally void of natural sounds will produce flat and lifeless audio.
- ✿ Some sound needs to be scattered, for a sound source to sound “real.”
- ✿ Some of the sound waves need to be absorbed by objects in the room.
 - ◆ Sound is scattered by the metal and plastic in TV studio equipment and bounces back from the floor and the cinderblocks in the walls the tiles.
 - ◆ A cloth backdrop is an excellent source for absorbing the random sound waves.
 - ◆ Other good sources for absorbing sound waves are a rug and chairs made with fabric.

📺 Design of a School Video Studio

- ✿ Standard News Show – Includes an Anchor Desk
- ✿ Informal Talk Show Set – Includes office or reception area with chairs placed close together in a living room style.
- ✿ Platform
 - ◆ If possible, the set needs to be placed on a platform approximately two feet tall, five to six feet long, and, four to five feet wide.
 - ◆ The platform will allow normal camera operation while eliminating a downward tilt of the camera and keep the cameraperson from having to bend over constantly.
 - ◆ The platform allows for better angle shots with most of those shots being at eye-level.
- ✿ Backdrop
 - ◆ The background of a set should be subtle and unobtrusive, yet not bland.
 - ◆ It should be at least ten feet high and thirteen feet wide.
 - ◆ A drop cloth or two king size bed sheets painted with latex water-based, light colored paint can serve as an inexpensive backdrop.

VI. Using an Outdoor Location

- 📹 It cannot be assumed that if a videographer is on public property he does not need to ask permission to videotape on that site.
- 📹 After the events of 9-11-01 and the creation of The Department of Homeland Security, greater precautions must be taken before videotaping in a public area.
- 📹 Local law enforcement may need to be contacted as to the videotaping policies in any given location.
- 📹 Homeland Security officials are training local citizens to be vigilant in reporting those videotaping under unusual circumstances.
- 📹 When videotaping on a city street, a signed release from any business whose sign may be in the background of a shoot should include:
 - 📌 The impact of interruption of normal activities in the area during the shooting of the video,
 - 📌 Where and how the video will be distributed.
- 📹 Agreement between property owner and video producer should include:
 - 📌 The name of the video project,
 - 📌 The dates of production,
 - 📌 The purpose of the project,
 - 📌 Names of those involved in producing the video,
 - 📌 The intended audience,
 - 📌 Location or setting of the video shoot,
 - 📌 Explanation of any interruption of normal use of property while the video is being shot,
 - 📌 Guarantee of the return of property to the same condition as when they arrived,
 - 📌 Method of duplication or distribution,
 - 📌 Signatures of property owner and those responsible for the video production.

Preparing an On-Location Site

-  Survey the site before the shoot.
-  Making sure the background will not draw the viewer's attention from the main subject.
-  Avoid background clutter or distracting objects, like an overflowing garbage bin.
 - ◆ Background clutter can best be avoided by repositioning the camera (moving it left or right, framing a tighter shot, changing the camera angle) or moving the subject.

Major Considerations

-  Is there enough room for the camera, crew, and subject?
-  What will be behind the subject when shooting?
-  Will the group need AC power or run on batteries?
-  Will tungsten light be mixing with sunlight?
-  Will the video be shot in front of a window or with the sun to the subject's back?
-  Are there any other noises occurring other than the subject's such as light hum, equipment buzz, children playing, cars going by, planes flying over, etc.
-  Who is in charge of letting us into the location to shoot and how can we contact them?

VII. Working with Lighting

Selecting Lighting

-  The camcorder light is the most convenient external lighting option.
-  A built-in camera light is limited by size and displays a relatively narrow beam, which is only acceptable for shooting close-up scenes.
-  Professional-grade lighting sets are often outside a school budget.
-  Clip-on utility lamps purchased in a hardware store can be clipped to stands or held by students during production.
-  A DIY (Do It Yourself) light kit can be purchased at a local hardware store. It has a 1000-watt Dual Head telescoping tripod work light

(composed of two 500-watt lights) for around \$50. Each 500-watt halogen light can be turned on and off separately.



- Photoflood incandescent light bulbs with different wattages can provide various levels of brightness
- types and colors of light are often more realistic.

📺 Modifying the Lighting

- Reflectors bounce natural light back onto the subject to lessen the shadows created by direct sunlight.
 - ◆ Professional-grade reflectors are extremely expensive for school projects.
 - ◆ Collapsible car dashboard sun blockers can provide durable, inexpensive reflectors.
 - ◆ Reflectors can be made from three 3' x 3' sheets of one-inch white foam core board, oven-broiler-grade aluminum foil, and masking tape.
 - ◆ Collapsible cloth reflectors are even more convenient.
 - ◆ Barn doors are adjustable black metal flaps can be attached to some lights to mask off unwanted light and keep it from spilling into areas where it is not needed.
- When adding lights, first add a fill light that focus the light and heat away from the subject.
- If it is necessary to aim lights directly at subjects, keep them as far away as practical. The farther to the side they are, the less they shine in the talent's eyes.
- The danger in using natural light, or a single key light with reflector fill, is that the background can be neglected so that the subjects appear in a muddy limbo.

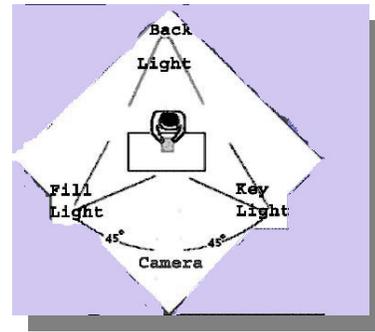
📺 Lighting Configurations

- Key Light – Main, Most Direct Light
- Back Light – Eliminates Back Shadows

- Fill Light – Softens the Shadows and Lowers the Contrasts

- One Point Lighting

- ◆ Uses the key light, or main light
- ◆ Attention to this light is extremely important when videotaping someone's face because subtle nuances of light can flatter or distort a facial feature.
- ◆ Establishes the dimension, form, and surface detail of subject matter.
- ◆ Placed in front of the subject at a forty-five degree angle and aimed down at the subject at a forty-five degree angle.



- Two Point Lighting

- ◆ The fill light and the key light work together.
- The fill light softens the harsh shadows from the key light.
 - ◆ The fill light is placed closer to the subject than the key light and about 90 degrees away from the key light.
 - ◆ Since the fill light is less powerful than the key light, it should not be pointed directly at the subject.
 - ◆ The fill light should be a floodlight, not a spotlight.

- Three Point Lighting – Back Light

- ◆ Placed above and in the back of the subject at a sixty to seventy degree angle of elevation.
- ◆ Separates the subject from the background, adds highlights to the subject's hair, and creates a three-dimensional effect.
- ◆ Serves as a spotlight, not a floodlight.
- ◆ From an overhead perspective, a person should be able to draw a straight line from the lens of the camera, through the subject, directly to the back light.

- Background Light

- ◆ Background lights are used to illuminate the background area and add depth and separation between scene elements.

- ◆ Any type of light can be used as a background light as long as it provides fairly even illumination across the background, does not hit the central subject matter, and is at the appropriate intensity.

Window Light

- ◆ Big windows may provide nearly all the light a particular scene needs if they are to the side of the subjects.
- ◆ If direct sunlight streams through the window, use it as a key light.
- ◆ For a fill light, bounce the sunlight back from off-camera using reflectors on the opposite side.

Camera's Backlight

- ◆ If the background light is minimal, use the camera's backlight feature.
- ◆ The backlight feature allows the camera to compensate for overly bright light, but it does not add in background light.

Setting a Color Configuration

 White balance is the process by which the camcorder figures out what white looks like in a particular lighting situation and adjusts the color balance accordingly.

 Most camcorders feature automatic white balance, but many camcorders allow users to manually set the white balance.

 How to manually set the white balance.

- ◆ Just before shooting, zoom into something pure white, like a clean sheet of paper, so that it fills the entire screen.
- ◆ Hit the white balance button. That sets the white balance and the camera is ready to shoot under those lighting conditions.
- ◆ After shooting in a location using manual white balance, make sure to either turn the automatic white balance back on, or adjust the white balance again when at the new location.
- ◆ Turning off the camcorder and turning it back on will reset the white balance.

VIII. Shooting Video to Edit

Preparing a Videotape for Recording

- The best shooting can be degraded by lack of care of the videotape.
- Before recording or storing tapes, rewind them from end to end, in one complete, uninterrupted procedure to make sure the tape is wound evenly and uniformly.
- Never record from the very beginning of a videotape.
- When the camcorder begins recording, the actual tape is pulled outside its cassette case, wrapped around, and moves over a high-speed, rotating circular drums.
- If the record stop control is hit, then the tape stops moving and is pulled back into its cassette case.
- Before pressing the record button, confirm that the videotape is cued to the proper position on the tape and that nothing of importance will be erased during the recording.
- Ideally, the recording will begin approximately 10 seconds past the beginning of the tape of the end of the last recorded program.

Establishing Shots

- The first frames shot should tell the audience where they are.
- Wide-angle shots of a sign, natural monument, historical reference, or any indication that show where the video is taking place.

Other Tips

- During the actual shoot, it is better to keep the tape rolling whenever possible.
- When shooting video, get plenty of A-roll (the main event) and B-roll footage (other shots).
- Learn to use the camcorder's manual controls. The auto focus on the camera can be fooled and search in and out. By using the manual focus, clearer pictures can be achieved.

- ⊕ Record ten seconds of tape before the action starts and ten seconds after the action ends so there is room for fades or dissolves, before or after the clip.
- ⊕ DO NOT Pan back and forth.
 - ◆ Pan in only one direction for each scene and avoid over-panning.
- ⊕ Follow the Action.
 - ◆ The subject is moving yet stays within the frame because the camera is MOVING with the subject.
- ⊕ Use ‘Insert Shots’ and ‘Cutaways’ to add effects.
 - ◆ The use of an insert shot is simply a way of directing attention to a significant element within the scene.
- ⊕ DO NOT Center the subject.
 - ◆ Think of the TV screen as a tic-tac-toe board and place important objects on the intersection points, not in the middle.



Rule of Thirds



Composition Guidelines

- ⊕ Content takes precedence over form.
- ⊕ A video should have a feeling of unity.
- ⊕ Each scene be composed around a single center of interest.
- ⊕ Observe proper subject placement.
- ⊕ Balance the mass in the scene. Regardless of their actual physical weight, large objects in a scene seem heavier than small ones.
- ⊕ Maintain tonal balance. The tone (brightness and darkness) of objects in a scene influences visual weight.
- ⊕ Make pleasing use of lines. The boundaries of objects in a shot normally consist of straight, curved, vertical, horizontal, or diagonal lines. Our eyes

tend to travel along these lines as they move from one part of the frame to another.

- ✿ Use colors and tones to convey meaning. The predominance of bright or dark areas carries strong psychological meaning in itself, regardless of what else is happening in the frame.
- ✿ Movement within the frames evokes meaning. Motion is generally from less significant to the more significant.



Field of View Shots

- ✿ Field of view camera shots are defined by how much of the scene is seen within the frame of the viewfinder.
- ✿ Changing the field of view can be controlled two different ways:
 - ◆ Change the distance between the camera and the subject by physically moving the camera closer or farther away.
 - ◆ Change the focal length of the lens, which controls the angle of view. A zoom lens is a combination wide angle, normal, and telephoto lens.

✿ Types of Shots

- ◆ The long shot (LS) frames a wide field of view of the subject and its surroundings. It usually requires a greater distance between the camera and the subject. Long shots are also referred to as wide shots or establishing shots, which establish the subject's location for the viewers by revealing its surrounding.
- ◆ A medium shot (MS) frames more of the subject while still revealing some of the background. If the subject were a person, a medium shot would show the person from about the waist up. A medium close-up communicates gestures, broad expressions, and actions framed within close limits.
- ◆ A close-up shot (CU) focuses the viewer's attention on specific details. A close-up of a person would frame the subject from the top of the head to the top of the shoulders. Human emotions are best revealed in close-ups.

- ◆ An extreme close-up shot (XCU) frames only a portion of the subject. It is a very dramatic shot that can generate great visual excitement. Like the long shot, extreme close-ups, should be used sparingly, and only when it is critical to the meaning of the shot. For best results, the camera should be physically moved as opposed to using the zoom features.

IX. Selecting Video Compression

- 📺 Uncompressed, a single minute of video totals about 1GB while a three-minute song would occupy about 27 MB of file storage space.
- 📺 Compression works by eliminating unnecessary color information in a file, thus reducing the file size. A reduction of color also means diminished quality, depending on which compression scheme is chosen.
- 📺 Most video codecs consist of a *lossy* compression scheme in which digital information is lost during the compression process.
- 📺 Types of Compression
 - 🔍 Interframe compression compares consecutive frames of video, looking for frames where most of the pixels are not moving. If a video clip of an animal running across the screen, most of the frame would remain unchanged, while only the part where the animal is actually in the frame would change. With interframe compression, the video “recycles” the parts of the frames that are static background, and only refresh the parts of the frames where the animal actually moves across the screen.
 - 🔍 *Intraframe* compression works on the premise that when the software knows that a pixel is going to be one color, can assume that the pixels surrounding the pixel with known color is likely to be the same color. The software only has to keep absolute tabs on a certain number of pixels, while letting the law of averages guess what color other pixels should be. Intraframe works well with solid colors, but has a hard time guessing when complex patterns are involved.

✿ Compression Formats for Distribution

- ◆ For distributing video over a Web site or via e-mail, the most popular compression formats for Mac QuickTime files are Cinepak, Sorenson, and Sorenson3.
- ◆ QuickTime Version 6 and newer also includes MPEG-4 Video compression, which provides an excellent balance of quality versus size for files being downloaded via the Web.
- ◆ Indeo video compression was created by Intel and has been shipped with Windows since 1994 and with Apple's QuickTime since 1998; making it another of the widely available codecs.
- ◆ Indeo produces movies that are small enough for the Web, and look good on playback.
- ◆ MPEG (pronounced M-peg), which stands for Moving Picture Experts Group, is the nickname given to a family of International Standards used for coding audio-visual information in a digital compressed format.
- ◆ The MPG format frequently offers better compression along with better image and sound quality than the AVI format.
- ◆ MPG export is not supported as widely as AVI export, but most video editors can convert AVI files into MPG files.
- ◆ The MPEG family of standards includes MPEG-1, MPEG-2, and MPEG-4.
- ◆ MPEG-1 is the best MPEG Media Type for use on the Web and for use in videos that will be distributed via e-mail since files are generally easier on system resources and smaller in file size.
- ◆ NTSC VCD and PAL VCD are both variations on the MPEG 1 format that are used to create Video Compact Disks that can be played back on televisions by using a compatible DVD player.
- ◆ An issue that must be considered when selecting an MPEG Media Type is the CPU speed of the system that will play the video.

- ◆ SVCD (Super Video CD) compression is used for DVD's and CD's. SVCD is actually MPEG-2 video but recorded at a lower bit rate and resolution than full broadcast resolution DVD.
- ◆ MPEG-2 files are used on DVDs, satellite television, digital cable TV, and HDTV. MPEG-2 yields highly compressed files of extremely high quality. A two hour movie will use up about 4 GB of hard drive space.
- ◆ (The NTSC standard is used in North America, while the PAL Standard is used in Europe.)
- ◆ DV-PAL and DV-NTSC compression are used in very high-quality movies primarily for transferring video clips from camcorder to computer in the 16:9 widescreen format.
- ◆ H.263 video coding is often used in exporting e-mail and Web prefab settings. It targeted toward smaller file size rather than superior quality.
- ◆ DivX is a compression technology that facilitates large video transfer on high-speed modems.
- ◆ Uses a model very similar to MPEG 4, to deliver "Theatre screen" DVD movies in an amazingly small file size.
- ◆ When preparing video for the web, the video producers can use different frame rates to save bandwidth. They are not limit to 29.97 frames per second, which is necessary for television.
- ◆ On the web, developers can use compression tools and later go back to the original film as intended.
- ◆ It is strongly advised to keep both horizontal and vertical dimensions a multiple of four.

Common Settings for Compression Software

- ◆ Quality Slider: Most compression formats provide a slider controlling general video quality, measured in percentage. Higher numbers result in larger file size and better quality. Default quality for most video compression is fifty percent.

- ◆ Data Type: Specifies video color bit depth, which determines the number of colors used. Normal video is 24-bit or 16 million colors. Reducing bit depth to 8-bit or 256 colors, decrease file size.
- ◆ Data Rate: Data rate is the amount of video information that is processed during each second of playback. Some compression schemes let the user specify an ideal data rate for a particular movie. CD-ROM drives often boast data rate transfers in the 6 MB per second range.

✚ Understanding Keyframes and Compression

- ◆ Keyframes contain all of the information required to display the frame.
- ◆ All videos contain at least one key frame, which is the first frame of the file.
- ◆ After the first key frame, the software will automatically select other keyframes every time there is a sizeable change in content of the image.
- ◆ The compression scheme calculates and displays all colors in the Keyframe.
- ◆ In non-Keyframe frames, only the colors that have changed dramatically since the previous Keyframe are calculated.
- ◆ The remaining keyframes serve to improve the quality of the video, but they also increase file size.
- ◆ Shooting compression-friendly video is more difficult than shooting video that will be transferred directly to a VCR.
- ◆ The slogan to follow is “Mr. Rogers good, MTV bad”. Detail and motion should be avoided.
- ◆ While shooting on-location the cameraperson must remain aware of what is happening in the background.

X. Compressing and Adding Audio into Video Clips

Audio Basics

- Sound is a vibration that travels in waves through almost any medium
- Sound has two basic characteristics that must be controlled
 - ◆ Volume, measured in decibels
 - ◆ frequency, which is the specific pitch of the sound.
- The digital video camera records sound at the same time it records the pictures on the same tape and then plays them back synchronized.
- Most of the complexity of editing comes from managing the two tracts – pictures and sound.
- Video needs to follow the audio. When the audio is better, viewers believe that the picture is better.
- Categories of sound:
 - ◆ Dialog - Voice-overs and narrations,
 - ◆ Music - establishes the mood and style, and
 - ◆ Sound effects.

Preparing for Sound Transmission

- Changing from mono to stereo essentially doubles the amount of space needed to store the file's audio.
- For improved voice quality, instead of switching to stereo, it might be wiser to raise the frequency to 16,000 Hz.
- If the video being uploaded contains music, it is best to maintain the audio quality at 44 MHz, 12- or 16-bit stereo.
- If the video has spoken words in which clarity is an issue, the producer can drop the quality to 22 MHz, but no further.
- If the video has crowd voices and incidental “Great to be here!” exclamations from the background, the video can be safely compressed down to 16 MHz.
- Audio compressed at 11 MHz sounds muddy and is not worth keeping.
- Dolby Surround Sound 5.1 (pronounced “5 dot 1” or “5 point 1”) is a codec from Dolby Laboratories called Dolby AC-3 or just AC-3, and is

used on many commercial DVD titles and is seen on commercial DVD boxes as Dolby Digital. A 5.1 surround sound system contains six discrete channels. Five of the channels are full bandwidth, 20Hz to 20 kHz, and the sixth channel-the “.1”-is for the basement lows, from 5 to 125 Hz. The 5.1 channels are referred to as left, right, center left surround, right surround, and LFE (low frequency effect). Equipment and listening conditions greatly affect how different frequencies will be perceived.

- ✿ To compensate for some of these problems, users can adjust bass and treble controls of playback equipment.
- ✿ Sophisticated audio equipment include a graphic equalizer, allows specific bands of frequencies to be adjusted for loudness individually.
- ✿ Although it may be tempting, the novice user should avoid attempting to improve location soundtracks by means of equalization.
- ✿ Adjusting the highs, mid-range, and bass from shot to shot may sound fine in the headphones, but when shots are cut during the editing process, changes in voice and backgrounds often become annoyingly apparent.

Audio Compression

- ✿ Audio compression reduces the difference between the quietest and loudest parts of a song or other audio.
- ✿ PCM audio stands for pulse code modulation, and refers to uncompressed digital audio.
- ✿ PCM audio consists of one channel mono or two channels of stereo sound.
- ✿ The audio compression ratio determines the relationship between input and output.
- ✿ If the ratio is set at 6:1 for every 6dB of input above the threshold the user will only get 1dB of output, a steep compressor setting.
- ✿ If the compressor’s ratio gets steep enough, it functions as a *limiter*.

XI. Adding Still Images to Video

-  Still digital photos can be incorporated into a video clip during the editing process.

- 🖼️ An uncompressed bitmap or TIFF image can take up ten or twenty megabytes while compressing that same file into JPEG format make only take 275 kilobytes.
- 🖼️ The most common compressed graphics file formats used in videos are .jpg and .gif.
- 🖼️ To be easily used in a video a still image should have a 4x3 ratio.

XII. Adding Transitions

- 🖼️ Every video editing package provides several options for transitioning from one clip to another.
- 🖼️ Each transition communicates a mood in its own way.
 - 🔗 A fade-in to black communicates an end.
 - 🔗 A cross dissolve, in which the first clip begins the fade-out, while the next clip appears to fade in, is a smooth transition that signifies continuity.
- 🖼️ Video edits usually flow from track A to track B. These video transitions are sometimes referred to as “A/B rolls” in that the contents of track A will roll into track B.
- 🖼️ Each video clip relates to the shot before it and after it. When this order does not happen, it is called a jump cut. Jump cuts happen because of poor editing or lack of consistency while shooting or editing.
- 🖼️ To achieve a smooth flowing video, care must be given to the impact and duration of each transition between each video clip.
 - 🔗 A simple cut from one clip to the next is a neutral transition that does not communicate anything to the audience.
 - 🔗 Rapid cutting can cause problems. At each cut, the change in the video content requires a keyframe to account for the big change in the content.
 - 🔗 A cross-fade is one of the most difficult kinds of content to compress. Each frame winds up a keyframe.
 - 🔗 It is more efficient to use hard cuts.

XII. Adding Special Effects

- ☞ Most nonlinear editing systems contain a generous special effects menu which include slow motion, fast motion, strobe, and reverse image.
- ☞ The overuse of special effects can distract the viewer or slow the computer.
- ☞ To add an effect to a video clip, the computer must do many mathematical calculations for every pixel in every affected frame.
- ☞ Video filters are special effects that can dramatically change the video's appearance.
- ☞ Masks and overlays blend one video with another video or image, allowing only a portion of the original to show through.
- ☞ Chroma Key technology controls the opacity of a video track and allows the user to layer video tracks on top of each other and see through the top video track into other video tracks below.
 - ✦ Creating a green screen composite image starts with a subject being videotaped in front of an evenly lit, bright, pure green (or blue) background. The compositing process done by the video editing software, replacing all the green (or blue) in the picture with another image, known as the background plate.
 - ✦ Green screen backgrounds can be made from still photos or movies, or live videos.

XIII. Adding Text and Rolling Credits

- ☞ Titles should be white text on a dark (or black) background.
- ☞ Titles are clearer if they are done in a sans-serif font.
- ☞ Title font should be large enough to be read by anyone.
- ☞ Use semi bold and boldface type weights.
- ☞ Make sure the titles remain on the screen long enough to be read.
- ☞ Keep the opening titles simple.
- ☞ If detailed text is needed, put it at the end, preferably over black keeping the audio running underneath.
- ☞ Fade the titles in and out.

- ☐ Select font colors with care. Red or other bright, saturated colors tend to bleed over the type and create a fuzzy look.
- ☐ Dark gray fonts will get lost on a black background.
- ☐ Titles should be distinguishable from the background and not compete with the background.
- ☐ If the background is busy, keep the titles a solid color. If the background moves, keep the type out of the line of movement.

XIV. Finalizing and Rendering Video

- ☐ Saving a video project does not render the movie or create a file that can play on a VCR. It merely saves the file in the native format of the video editing software so it can be worked on later.
 - ☐ Rendering puts the video in a distribution format.
 - ☐ Before starting to render, make sure there is enough disk space to create the finished movie.
 - ☐ The rendering process takes up a lot of computer power and time so more RAM and a faster processor will make a big difference.
 - ☐ Once everything is rendered, the video is ready to output.
 - ☐ Video creators can output their movie in multiple formats. An understanding of the different distribution formats will help the creator determine the best settings use for each output format.
 - ☐ For archival purposes, outputting back to a digital video tape is still the best quality option available.
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Resources

“Creating Computer Video in Your Classroom” an Online Professional Development Class <http://www.uwstout.edu/soe/profdev/video/>

Samples of Educational Videos by Teachers

<http://www.uwstout.edu/soe/profdev/videoshowcase.shtml>

Creating Digital Video in Your School (working title) by Ann Bell. To be released by Linworth, Inc. 2005.