

# A Curriculum for Digital Media Creation

Sixteen Lessons, from Storyboarding  
to Producing a Documentary

By Marco Antonio Torres and Ross Kallen  
Sponsored by Apple Inc.



# Introduction

Every day digital media becomes more important as a means for receiving, producing, sharing, and broadcasting information. Tools and resources that were once the exclusive property of a few are now available to many more people. Tomorrow's publishers, marketing people, and community leaders will need to know how to use digital media to persuade others and tell new and effective stories. Knowledge of the rules and grammar of movie production, broadcasting, and media presentation is a new powerful literacy.

Today's educators and students will find it particularly valuable to be skilled in the use of digital media tools such as Final Cut Studio. To help, Apple has created the Apple Authorized Training Center for Education program, designed for schools that use Apple's professional software solutions in their curriculum. In addition to using the curriculum that the program offers, students have the opportunity to receive Apple's Pro Certification in Final Cut Studio. This certification communicates to the world that these students are ready to do professional work on video editing projects.

This curriculum guide is designed as a supplemental resource to the Final Cut Studio Certification materials. The 16 lessons included here are linked to either content area standards or skill set competencies and are meant to be taught during a traditional 18-week semester. This guide also provides the resources to align a moviemaking/editing class to a Regional Occupational Program (ROP) or Perkins-funded school-to-career program.

The authors of this curriculum are Apple Distinguished Educators with extensive experience in media production (see "Author Biographies," next). These are not untested projects—they are lessons that the authors use in their classrooms to prepare students for leadership in the digital media production and broadcasting fields. Each project includes a list of tools, estimated time required, tips, evaluation suggestions, additional resources, and more. The "Real-World Connection" section in each lesson explains how the skills learned in that lesson will be valuable in the students' professional lives.

The 16 projects are the following:

- Lesson 1: Developing Movie Ideas
- Lesson 2: From Script to Storyboard
- Lesson 3: Shoot It! The Production Process
- Lesson 4: Lighting a Scene and a Person
- Lesson 5: Working with Audio
- Lesson 6: Composing Camera Frames
- Lesson 7: Documentary Movies 101—A Roll and B Roll

- Lesson 8: Fix It in Post!
- Lesson 9: Producing a Music Video
- Lesson 10: Producing a Documentary
- Lesson 11: Producing a 30-Second Super Bowl TV Ad
- Lesson 12: Creating a Cross-Curricular Project
- Lesson 13: Film • Fiction
- Lesson 14: Budgeting
- Lesson 15: Filming a Professional-Looking Product
- Lesson 16: The Show!

## Author Biographies

### **Marco Antonio Torres, Teacher, Media Coach, San Fernando High School, Los Angeles Unified School District, CA**

Marco Torres is an internationally recognized Social Studies teacher in an urban high school in Los Angeles. He is also a professional filmmaker, photographer, designer, keynote speaker, and digital media professional trainer. Torres is an Apple Distinguished Educator and serves on the George Lucas Educational Foundation Board. The California legislature has recognized him as a California Teacher of the Year. Learning creatively is his passion. In his teaching, Torres combines media technology, content area focus, community building, and student empowerment. He believes in making learning more relevant, meaningful, and applicable with the assistance of today's new teaching, learning, networking, and creative environments and resources. His specialty is documentary-style production and how to plan, manage, execute, and showcase student movie projects.

### **Ross Kallen, Teacher, Digital Media Production, Rancho Bernardo High School, Poway Unified School District, Poway, CA**

A digital media specialist for over 10 years, Ross Kallen created the Rancho Bernardo High School Digital Media Arts Program and was recently honored by the National Academy of Television Arts and Sciences with five National Student Television Excellence Awards. He has led professional training seminars in the areas of live production, post-production, and studio design at state and national technology conferences and seminars. Kallen is an Apple Distinguished Educator and has presented workshops and seminars at national and international events ranging from the National Association of Broadcasters (NAB) convention to the Digital Olympic Forum for the Beijing 2008 Olympiad. Many of his graduates have won awards at the local, regional, and international level and have been showcased on Apple's website. Kallen's media program has also been recognized in *Government Video Magazine*, and the California legislature selected him as a "High Tech Teacher" in 2000.

## Setting Up the Classroom Studios

When George Lucas made his first epic *Star Wars* movie in 1977, he had to invent or purchase equipment that was custom-made for his movies. He was then the only one who had access to those tools. After a break, Lucas revisited his space saga and made Episodes I, II, and III with a new set of tools. The digital revolution had restructured how he would make these movies. Moreover, the tools his team used

for the new movies could now be purchased over the counter, giving moviemakers everywhere access to the same tools as Industrial Light and Magic. This new democratic access to tools and resources once exclusively available to professional filmmakers and university film professors has changed how stories are produced and how we, as teachers, teach the art of digital storytelling. This section provides information about setting up your classroom studio. It includes information about software and equipment students will use in the projects as well as suggestions for additional post-production equipment that will come in handy.

Setting up a studio in your classroom is very similar to setting up a professional studio. Thanks to the flexibility of Final Cut Studio, it is not mandatory to purchase additional post-production equipment. However, workflow is key in a classroom setting, and learning how to organize, manage, and distribute movie projects does require additional items to help facilitate the process of production. This chapter offers suggestions for supportive gear based on what can work for your classroom space and budget. Three options are presented for you to choose from:

**The Ideal Setup:** When money is not much of an issue and additional space is available

**The Great Setup:** Excellent for schools that eventually will grow into a more ideal situation, but that need to work up to that point

**A Good Setup:** Not the ideal, but a good way to begin a production studio and get the classroom ready for the Apple Certification curriculum

### **Technology Hardware**

The following chart provides detailed recommendations for the Ideal Setup, the Great Setup, and the Good Setup. All of these options can evolve and expand as budgets grow and expand. If students have a camera with microphone inputs, a mic, a good sense of light (knowing how to use what is natural and available), Final Cut Pro, and a plan—they can create a great movie. The recommendations for additional items can help add production value to the movie projects.

Make sure all of the gear is labeled and inventoried. You can develop a checkout form to track all equipment being used by students. It works well to have one or two students who are responsible for checking out all equipment, with the requested gear requiring your approval as the teacher (you have the role of the executive producer—the ultimate money decider). The requested items need to be reflected in the movie being shot. In other words, if a movie is shot in the middle of the day, there is no need for an on camera light. Fill lights can be added via Lightdisks.

	The Ideal Setup	The Great Setup	The Good Setup
<b>Computer</b>	Mac Pro, MacBook Pro, or iMac with as much storage as possible	Mac Pro, MacBook Pro, or iMac with as much storage as possible	Mac Pro, MacBook Pro, or iMac with as much storage as possible
<b>Camera &amp; video support</b>	<p><b>HD Pro Camcorders</b></p> <ul style="list-style-type: none"> <li>• Panasonic AG-HVX200</li> <li>• JVC GY-HD11 DU</li> <li>• Canon XL-H1</li> <li>• Sony HVR Z1U</li> <li>• Video deck</li> </ul> <p>High-end cameras are not designed to be used as playback machines. We recommend getting a Sony DSR-11, a dedicated and durable playback machine that can fit on a desktop. Depending on the size of your program, you may want to buy one for every capturing station.</p> <p>Note: Not all computers will be used to capture video. Some will only be used to edit. Also, it's more expensive to maintain a camera if it's used as a player and recorder as well. Try and use it for one function—videotaping. The DSR-11 can do the player portion.</p> <p><b>Video Reference Monitor</b></p> <p>Another essential broadcast tool is an NTSC color reference monitor. These monitors help you see what the project will look like on TV. Colors from the monitor, titles, and graphics look different on TV than on a computer screen. A computer screen looks at images via pixels, or dots; a TV uses lines to display an image. This difference leads to different results. A video reference monitor helps you view a more accurate color representation. Sony and JVC make the best reference monitors but range in price between \$600 to \$1000. HD reference monitors are available as well, but be prepared to pay.</p>	<p><b>3 CCD High-End Camcorders</b></p> <ul style="list-style-type: none"> <li>• Panasonic AG-DVX100B</li> <li>• Canon GL-2</li> <li>• SONY DCR-VX2100</li> <li>• Video deck</li> </ul> <p>If you cannot afford a video deck, use another camera for the deck. Just use it for that purpose alone. You can find decent and compact cameras for under \$600 that can be dedicated video decks. See the discussion about the merits of a dedicated video deck in "Ideal Setup."</p> <p><b>Video Reference Monitor</b></p> <p>You can use any monitor that accepts an S-Video In connection from the camera or video deck. Ideally, you would want the S-Video connection for better picture quality; however, if you only have RCA/Composite In connections, it will work (but will look "fuzzier" or softer).</p>	<p><b>3 CCD Camcorders</b></p> <p>Make sure the cameras you order have both a mic port and a headphones jack. Most of today's consumer cameras don't have these essential ports. Also, cameras that have a shoe mount make it easier to mount an additional mic, light, and so on.</p> <p><b>Video Reference Monitor</b></p> <p>We have found portable DVD players that have RCA/Composite In connections. Connect the camera or the video deck directly into it and you have a portable video reference monitor. You may want to get a DVD player that has a 16:9 and 4:3 aspect ratio switch. This may come in handy depending on how you shoot: wide anamorphic or 16:9 or the more TV standard of 4:3 (more square looking).</p>

	The Ideal Setup	The Great Setup	The Good Setup
<b>Sound</b>	<p>Shotgun/boom stereo mic and a wireless UHF lavalier microphone system</p> <p>There are several mics here to choose from. Reputable companies for these are Sennheiser, Audio Technica, and Azden (with a price range of \$400 to \$1000). When buying a camera, make sure you have a microphone port and a headphone port as well. Buy good headphones with good bass. We recommend any headphones over \$40. If you're interviewing and working the camera, we recommend ear buds, which are less obvious than the bulky earmuffs. Sure, Ultimate Ear, and V-Moda all make decent ear bud headphones.</p> <p>You may want to purchase a boom pole with a shock mount to connect the pole to the camera. The shock mount suspends the microphone to avoid the recording of microphone movement. Poles can be purchased for around \$100 to \$300 (better, carbon fiber ones are more expensive). Shock mounts usually have to be purchased separately for \$50 to \$150. Find one that fits your microphone properly.</p> <p>Another helpful item is a windscreen for the sensitive microphones. They eliminate the annoying blowing sound that appears in most family outdoor excursion videos.</p>	<p>Shotgun/boom stereo microphone and a wireless UHF lavalier microphone system</p> <p>There are several mics here to choose from. Reputable companies for these are Sennheiser, Audio Technica, and Azden. (Range: \$400 to \$1000)</p>	<p>Shotgun/boom stereo microphone and a wireless UHF lavalier microphone system</p> <p>Entry-level mics are available. The sound may not be as "warm" and clear, but it is still way better than what comes with the camera. Plus, learning what mics to use is a key lesson in itself.</p>
<b>Speakers</b>	<p>M-Audio Studiophiles BX8</p> <p>M-Audio has education pricing. There are many options here, but M-Audio has been very reliable and its education department can facilitate the dialogue between what you want to do and what is best for your budget.</p>	<p>M-Audio Studiophiles BX5</p> <p>M-Audio has education pricing. There are many options here, but M-Audio has been very reliable and its education department can facilitate the dialogue between what you want to do and what is best for your budget.</p>	<p>An affordable pair of speakers from your local electronics store</p>

	The Ideal Setup	The Great Setup	The Good Setup
<b>Tripod &amp; head</b>	<p>Carbon fiber tripod legs and a fluid tripod head</p> <p>The carbon fiber is a light material. These tripods will last a long time and are not heavy. We recommend Bogen, Manfrotto, and Gitzo. The fluid tripod heads are very important. We recommend Bogen. Like the name says, they move fluidly and are ideal for shooting scenes where the action moves and the cameraperson has to follow. The heads are basically priced according to how much weight they can hold. For your purposes, you can use the heads that range in price from \$200 to \$400.</p> <p>Optional: Some tripod/fluid head combos come with remote zoom and focus buttons. This is your call.</p> <p>Stability is key.</p>	<p>Tripod legs and a fluid tripod head</p> <p>For this option, we recommend the same things as with the Ideal Setup; however, the carbon fiber is optional. You can find less expensive aluminum tripods. We still recommend the same fluid head. Bogen makes a really good one for the recommended cameras.</p> <p>Stability is key.</p>	<p>Tripod legs and a fluid tripod head</p> <p>A tripod is essential. We recommend the same options here as for the Great Setup. There are less expensive tripods, but in a classroom, the wear and tear of daily use takes its toll on a tripod. Also, remember what can happen to the camera if the legs give out.</p>
<b>Lights/ Light Kit</b>	<p><b>Studio Lights</b></p> <p>The Photoflex Starlite Medium DLX Location Kit 2 includes two complete light setups with a multi-kit case. This company has great pricing for schools and replacement parts are available.</p> <p><b>Mobile Lights</b></p> <p>LED Lights by LitePanels are no-heat producing lights that light beautifully for near-broadcast quality. They are compact, flat, and durable. They cost about \$1000 with the color filters, a hot shoe for an on-camera solution, a battery, and a charger.</p> <p><b>Frezzi MF-4X</b></p> <p>This lighthouse is a workhorse. It's bright enough to fill in the darker areas during interviews. This is an industry standard.</p> <p><b>Lightdisks</b></p> <p>A 4 in 1 lightdisk set from Photoflex can also help diffuse or enhance any filming situation.</p> <p><b>Accessories</b></p> <p>If you purchase a Sony camera, we recommend a Coco battery converter by Bebob, which allows you to use your camera batteries to power the on-camera light. This makes the mobile kit more compact.</p>	<p><b>Studio Lights</b></p> <p>The Photoflex Starlite Medium DLX Location Kit 2 includes two complete light setups with a multi-kit case. This company has great pricing for schools and replacement parts are available.</p> <p><b>Mobile Lights</b></p> <p>LED Lights by LitePanels are no-heat producing lights that light beautifully for near-broadcast quality. They are compact, flat, and durable. They cost about \$1000 with the color filters, a hot shoe for an on-camera solution, a battery, and a charger.</p> <p><b>The UL2-20 Ultralight-2</b></p> <p>This inexpensive, compact camera-mounted light is one of the most widely used lights for from-the-field news reporting. The UL2-20 can easily mount to all professional cameras/camcorders.</p> <p><b>Lightdisks</b></p> <p>A 4 in 1 lightdisk set from Photoflex can also help diffuse or enhance any filming situation.</p>	<p><b>Studio Lights</b></p> <p>The Photoflex Starlite Medium Location Kit 1 comes with a Starlite QL light head, Starlite Connector, two 1000 watt lamps, a medium SilverDome soft box, and a light stand. This company has great pricing for schools and replacement parts are available.</p> <p><b>Mobile Lights</b></p> <p>Sony's HVL-20DW2 double-decker camcorder light shines either 10 or 20 watts of light on the scene to help you capture footage in nearly any condition.</p> <p><b>Lightdisks</b></p> <p>A 4 in 1 lightdisk set from Photoflex can also help diffuse or enhance any filming situation.</p>

	The Ideal Setup	The Great Setup	The Good Setup
<b>Tapes</b>	<p>Purchase the highest-grade tapes and do not reuse them. You should create a naming structure and do not veer from it. For example, write the name of the project on the tape (usually in an abbreviated way, such as “CHA” for China, followed by a number, such as “CHA1”). This will help you locate files later.</p> <p>Refer to the documentation that came with your camera for tape recommendations.</p>	<p>Purchase tapes from the same company as your camera. For example, buy Panasonic tapes for your Panasonic camera. Some tapes are dry and others are wet. Mixing the media may result in dirty playheads later. Do not reuse tapes. You should create a naming structure and do not veer from it. For example, write the name of the project on the tape (usually in an abbreviated way, such as “CHA” for China, followed by a number, such as “CHA1”). This will help you locate files from later.</p> <p>Refer to the documentation that came with your camera for tape recommendations.</p>	<p>The recommendation for tapes is the same as with The Great Setup.</p>

## Software

Final Cut Studio is a full and comprehensive production tool that is an end-to-end solution for most filmmakers. The following are some of the functions offered by this software collection:

- Final Cut Pro: Logging and capturing
- Final Cut Pro: Editing clips
- Final Cut Pro: Multiclip editing
- Motion: Compositing and animating graphics
- Color: Color correction, grading, and finishing
- Soundtrack Pro: Correcting, enhancing, and adding audio components
- Compressor: Compressing the final projects for web or DVD
- DVD Studio Pro: Creating interactive DVDs

Other software titles for you to consider are:

- Apple Aperture: Photography integration and correction
- Apple Shake: Advanced motion graphic compositing and integration
- Adobe Creative Suite: For image manipulation and integration

See “Tools Used in the Lessons,” next, for other applications students use in the activities in this guide.



## Tools Used in the Lessons

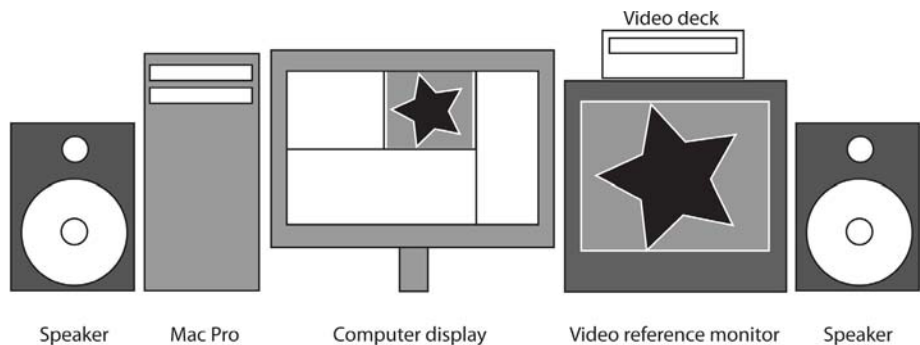
In addition to Final Cut Studio, you'll want to have on hand some additional software titles. Some are required to complete all of the activities in a project; others are optional. These applications include the following:

- Graphic organizer software, such as Inspiration or NovaMind (see Lesson 1 for discussion)
- iMovie
- Storyboarding software (see Lesson 2 for recommendations)
- Scripting software
- Keynote

Students will use the classroom production equipment, such as microphones and cameras, to create the films in many of the projects. In addition, you will want to have a projector available so the whole class can view the completed projects. An iPod with a voice recorder like a Belkin TuneTalk recorder or a solid-state portable recorder like an M-Audio MicroTrack is optional for Lesson 5.

## Setting Up Your Equipment

Here is a typical and ideal setup for the classroom computers and connected equipment:



Throughout the year, both you and your students will find helpful to stay connected with other digital filmmakers. In many cities, technical groups exist for sharing ideas in person. Los Angeles, for example, has the Final Cut Pro User Group (LAFCPUG), which meets monthly and offers a wealth of information. Many groups like the LAFCPUG are available online. Search in the Technorati website at <http://technorati.com> for blogs dedicated to this area of production.

## Additional Resources

The lessons suggest resources specific to that lesson. You and your students can also take advantage of the many blogs, podcasts, and other online resources that are available to learn more about the production process. One we like in particular is *Ripplecast*, a podcast by Steve Martin and Brian Gary (available from the iTunes Store) where you can learn specifics via video, our favorite way of learning. Ken Stone's Final Cut Pro site ([www.kenstone.net](http://www.kenstone.net)) provides a good collection of resources for producers, editors, and other filmmakers interested in tips from the masters.

Many books focus on the post-production side of the process. Also, some great reference books exist for documentary moviemaking classes. We recommend two of them, both of which look at the whole picture of documentary moviemaking:

- *Directing the Documentary*, Fourth Edition (Paperback) by Michael Rabiger
- *Documentary Storytelling for Video and Filmmakers* by Sheila Curran Bernard

## LESSON 1

# Developing Movie Ideas

Coming up with ideas and mapping them are the most important components of moviemaking. In this lesson, students brainstorm movie ideas using a visual thinking software tool such as Inspiration. Each student comes up with three movie ideas. Students then work in groups to choose three of those movies. They develop a detailed plan for each that includes timelines, roles and responsibilities, and production needs. Students peer review each other's plans. To help students understand the importance of having a plan, they then make a one-minute movie about an object. This also gives them practice in visual storytelling.

## Preparation

Download and install software for the students to map out their ideas. By using this type of application, students can organize their ideas visually and share them with others for additional input. We like the no-frills Inspiration for this purpose. It is both a linear and a nonlinear thinking tool that can also work very quickly. If you don't already have Inspiration in your classroom, you can download a free 30-day trial version from the company website. The website also offers a quick tour and many great examples of Inspiration documents. (See "Resources.") NovaMind is also an effective and good program for mapping out ideas.

## Project Steps

### Activity 1: Growing Movie Ideas

1. To introduce the lesson, explain to the class that they will learn how to come up with new ideas for movies and nurture them into projects. Point out that there are no bad ideas during this part of the process. This is where a movie is born. First, they will brainstorm ideas as a group and then develop their own ideas. They will also learn how to peer assess along the way to provide feedback to their classmates. Emphasize that all movies require a focus and a plan. Knowing where a project is heading and who is doing what also helps during the editing process. Tell students that it's okay to vary from one's original plan, but having a structure and a path can help direct the project, people, stories, and the technical preparations like the lights, camera, and sound.
2. When coming up with ideas, students need to consider some essential questions. You can present these questions to the class as they begin to think of movie ideas, structures, and strategies for completion.
  - What are some cool ideas people will want to know more about?
  - Who is the target audience?
  - How long does the project need to be? **Note:** By doing small projects of less than 10 minutes long, students can produce more in a short period of time. Also, it's better to create movies that make people think and have more questions than answers about the subject being discussed.
  - What are your initial goals?
  - Is it clichéd? Have others done it? Is it anything new?

- How do you plan to shoot it?
  - Who would be great to interview?
  - Where would it be ideal to shoot?
  - Do you need to get any permissions before or during the shoot?
  - What equipment do you think you will need?
  - What are your other needs: music, other media assets (pictures, additional footage, graphics)?
3. Demonstrate the use of Inspiration or other visual organizing software to the students.
  4. Practice making maps for movies with the class. Pick a subject, any subject, and grow it with Inspiration. Pick an easy movie idea and use the list of questions in Step 2.
  5. After practicing as a group, ask each student to come up with three movie ideas and discuss them in a small group of five to six students. Each group should then decide on the three best ideas to develop further. The brainstorming part of the process is where we, as teachers, act as coaches. Students often get stuck and think they can't come up with anything. Too often they over-think their ideas. Remind students that the first rule in brainstorming is that there are no bad ideas at the beginning. They should get a bunch of ideas on paper even if they are just keywords. Hopefully, this will get the ideas going.
  6. After the groups have agreed on three ideas, they should map out each idea, addressing each one's "what," "why," and "how to." When students are finished, they should have a list of schedules, production needs, and team responsibilities for each movie.
  7. Have students peer review each other's ideas before submitting them to you for approval. Let students know that they will turn the ideas they developed into a production in a later lesson.

## **Activity 2: A Day in the Life of "X"**

1. Explain to students that they will now plan, shoot, and edit a one-minute movie with 25 shots about any object, such as a water bottle, a rock, or a late pass, but not a person. The goal of this activity is for the audience to empathize with the main character, "x," and to think visually. The assignment parameters are: final piece = 1 minute, exactly 25 shots used, cannot show people (extreme close-ups are OK), no audio (they can add music later), with varying angles and points of view. In our experience, this activity creates a great buzz around the first project and gets the students thinking outside the box.
2. Have students develop their ideas for their "A Day in the Life of X" movie and plan their shot list. Give them 90 minutes to shoot their footage, using entry-level camcorders.
3. Give students two to three hours to import their footage and edit their movie in iMovie. Go over the basics of iMovie with them before they import the footage and start editing, including how to crop and split clips. Next, students should add any music and other audio, titles, and so on to complete their movies.
4. Using a projector, have students share their productions with the rest of the class and complete evaluations of each other's movies.

## Project Duration

3 to 4 days

## Competencies, Standards Descriptions

Students will learn how to generate ideas, brainstorm ideas, and create a map of how the project will progress. This is a fundamental part of the moviemaking process because it acts as the project's business plan. Student will learn to create a planning structure, make and adhere to timelines, define responsibilities, and establish a set of checks and balances between the people and the project's goals.

In the moviemaking part of the lesson, students will learn to use an entry-level camcorder, use multiple angles and composition techniques, and gain a basic understanding of how to do story editing in iMovie.

## Tools and Resources

### Tools

- Graphic organizer software, such as Inspiration or NovaMind
- iMovie
- Entry-level camcorder
- Tripod (optional)
- Projector
- Student Guide: *Javier: Boy Pilot*—An Example of a Movie Plan

### Resources

- Information about iMovie  
[www.apple.com/imovie](http://www.apple.com/imovie)  
[www.apple.com/education/imovie](http://www.apple.com/education/imovie)
- Inspiration Software, Inc.  
[www.inspiration.com](http://www.inspiration.com)
- NovaMind  
[www.nova-mind.com](http://www.nova-mind.com)
- Moleskine notebook information  
[www.moleskine.com](http://www.moleskine.com)

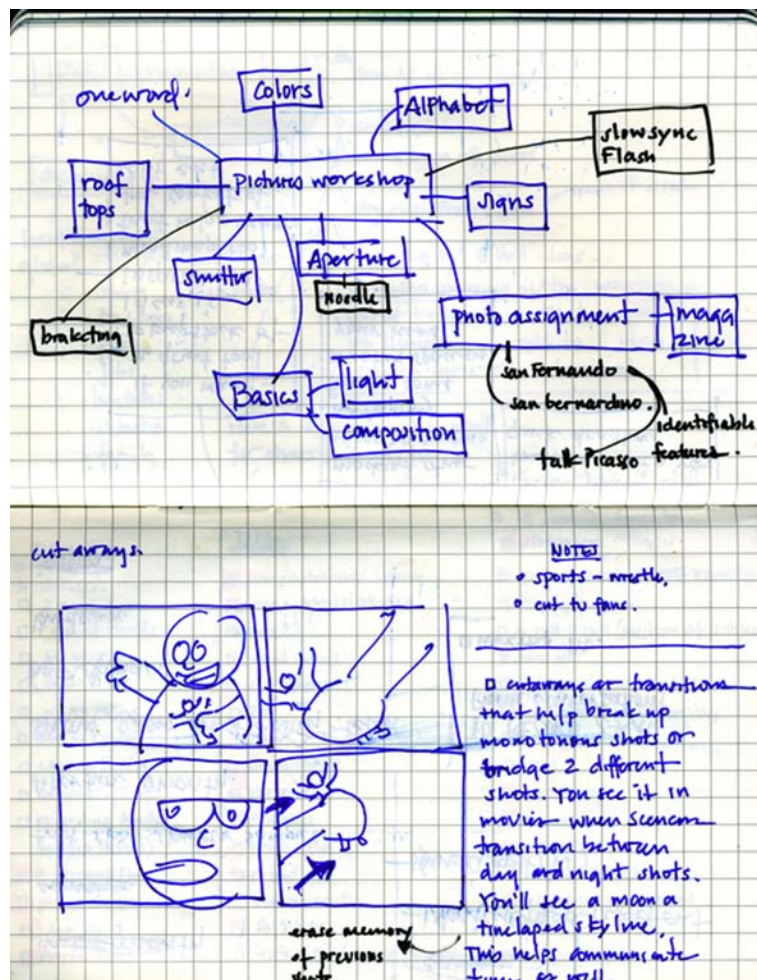
## Evaluation Ideas

Students each generate three new movie project ideas. Each student group then develops three of these ideas into a plan that includes a detailed description of the movie's production needs, schedule, and responsibilities. Three students review and approve these plans before you finally approve them.

In the second activity, students produce a one-minute video. Students are given a prompt to complete their shooting in ninety minutes and then capture their footage into iMovie and make a basic edit of their story in two to three hours. Students showcase their work in class and their work is reviewed by peers for constructive feedback (positive and negative).

## Tips

- From an academic perspective, mapping a movie is a great way to showcase how students think, organize thoughts, and plan. It's a paper trail to nonbelievers of our profession and passion. Projects should always start with students working in a group to define the scope of the projects and the specifics of the production. Working in teams from the beginning helps with communication between students and helps the projects stay focused and moving forward. Make this the norm for how students begin projects as well as produce, edit, and assess them.
- The moviemaking exercise in this lesson is about the students jumping in and getting creative. It is intentionally restrictive in nature by limiting shots and angles. It is important to let the students tell their story. This motivates students to work later to edit their stories and learn to use editing tools.
- You can point out to students that movie ideas may come to them when they least expect it, so they might want to always carry an idea book with them. This is just a notepad they can toss in a pocket, a daypack, or a purse. We recommend the Moleskine pocketbooks. They are more expensive than many others, but they have a hard cover so they can take a beating and a pocket for saving additional drawings. Here is an example of a hand-drawn map of a movie that later was put into an Inspiration document:



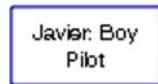
## Real-World Connection

Good planning is key to everything. We love this quote from the architect Frank Lloyd Wright: “You can either take an eraser to the blueprint or take a pickaxe to the foundation.” Try traveling without a map or direction. As students make their short movies, they’ll see the importance of having a detailed a plan when shooting a film. One of the biggest problems with student movie products is not paying sufficient attention to details, usually due to poor planning with actors, key interviews, or lack of familiarity with the equipment. The planning process not only helps your class be better students, it can help them later in life. In the business world, what they have developed in this lesson are the fundamental components of a business plan. This will help them in all professions.

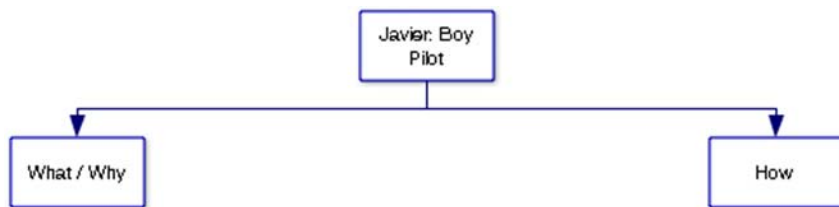
## STUDENT GUIDE

# *Javier: Boy Pilot*—An Example of a Movie Plan

You may find it helpful to use Inspiration software to plan your movies. You can get started in Inspiration with just the name of the project or the working title. The example here shows a plan for a movie to be called “Javier: Boy Pilot.”



Next, you create two boxes for the main parts of moviemaking: the product (the What and Why) and the process (the How).

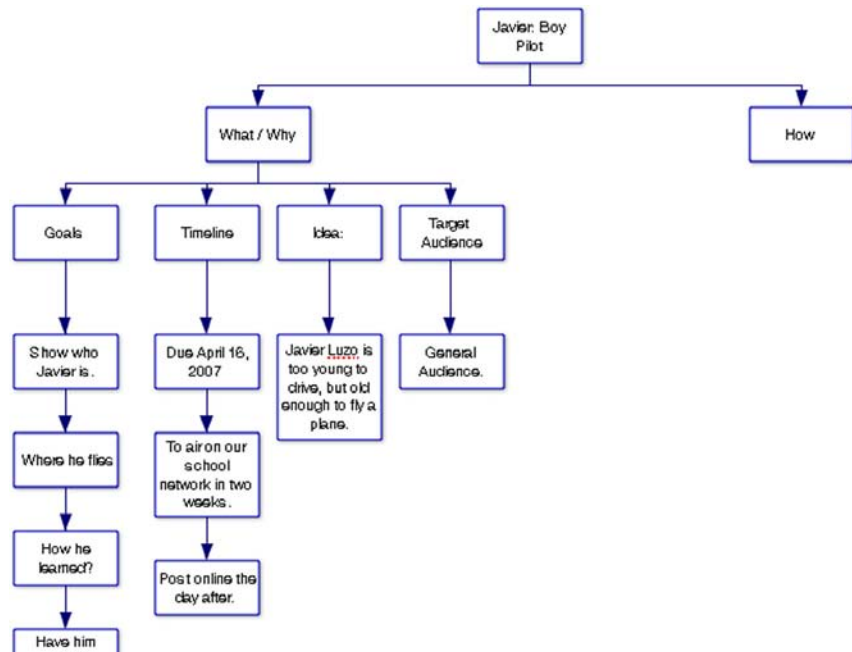


Under What/Why, you add the essential product-related question and information:

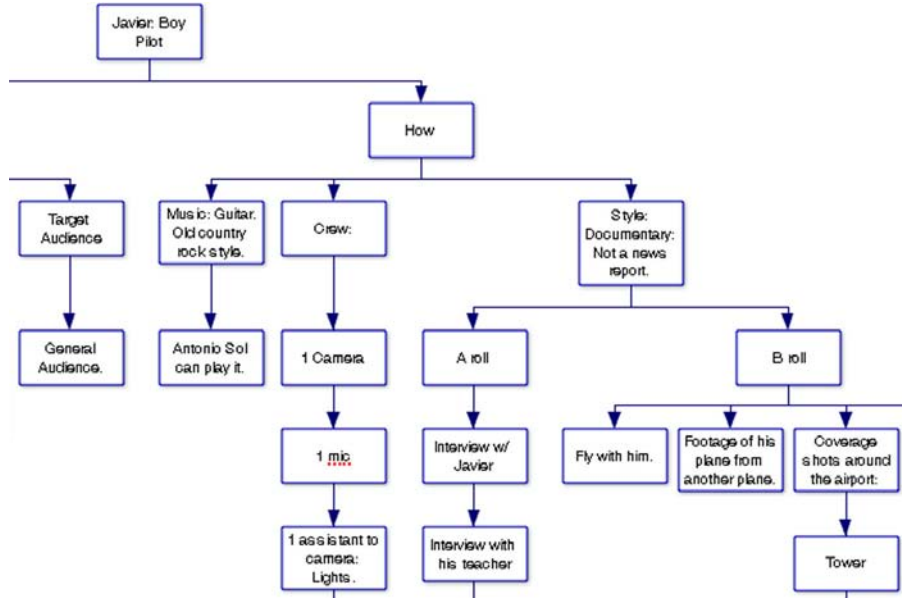
- What are your goals as a moviemaker?
- What is the project timeline?
- Who will monitor the timeline and make sure it's being followed?
- What is the main idea?
- Who is the target audience?

These are the fundamental What and Why questions.





After mapping the product, you address the process—the how-to’s of the project, as shown in the example from *Javier: Boy Pilot*.



With Inspiration, you can see your idea map as a standard text outline with the click of a button. Being able to quickly look at your plan in this way helps the project’s flow and direction. Like a thesis statement, it helps to keep the team focused on the project’s goals and deadlines. It also allows for communication among the team members because each person on the team will know what the others are doing. As the movie project advances and evolves, the person responsible for the project plan can keep and print updated copies for everyone, including your teacher.

Here is the outline of the same movie project shown in Inspiration outline form:

### **Movie Javier: Boy Pilot**

- I. What / Why
  - A. Idea—The Catch, The Angle we're focusing on:
    - 1. Javier Luzo is too young to drive, but old enough to fly a plane.
  - B. Goals
    - 1. Show who Javier is.
    - 2. Where he flies
    - 3. How he learned?
    - 4. Have him explain the plane to us.
  - C. Target Audience
    - 1. General Audience.
  - D. Timeline
    - 1. Due April 16, 2007
      - a. to air on our school network in two weeks.
      - b. Post online the day after.
- II. How
  - A. Style: Documentary: Not a news report.
    - 1. A roll
      - a. Interview with Javier
      - b. Interview with his teacher
      - c. Interview with another pilot at Whiteman Airport, Pacoima.
    - 2. B roll
      - a. Fly with him.
      - b. Footage of his plane from another plane.
      - c. Coverage shots around the airport:
        - (1) Tower
        - (2) runway
        - (3) planes landing and taking off
        - (4) taxiing.
      - d. AT home, school.
  - B. Crew:
    - 1. 1 Camera
    - 2. 1 mic
    - 3. 1 assistant to camera: Lights.
    - 4. Producer/Interviewee.
    - 5. 1 Editor
  - C. Music: Guitar. Old country rock style.
    - 1. Antonio Sol can play it.

## LESSON 2

# From Script to Storyboard

Another facet of the planning process is the storyboard, the map that provides instructions to the actors, cameraperson, editor, and support team. The usual storyboard resembles a set of comic book drawings. Like comic books, storyboards communicate as much information as possible with a combination of artwork and text. Most movies are still created this way so storyboarding is a great skill to have. In this lesson, students first create storyboards from existing scripts for plays or movies. They then develop storyboards from original ideas for a commercial that they film in Lesson 3.

## Preparation

Gather some scripts for students to use to create storyboards. You could use collections of one-act plays, plays that students may have already read in English class, such as those by Shakespeare, or scripts from movies that have been made. Students will need just one or two scenes to storyboard.

## Project Steps

### Activity 1: Creating a Storyboard from an Existing Script

1. To introduce the lesson, show the class a Pixar film on DVD. Pixar does a great job at showing how they transition from one step of the moviemaking process to the next. Make sure to show students the additional footage on the Pixar DVD in which the artists discuss the storyboarding process. Students can see the movie being born here. The storyboard artist goes through the scenes animating every shot to the team. It's magical.
2. Explain to students that the storyboard is the most important piece of information for the movie editor as well as the rest of the production crew. Storyboards are produced in different ways. The traditional storyboard is a document with boxes with action drawings that look like those in comic books. In a narrative movie, the drawings communicate the camera and action instructions to the crew. This helps the director instruct the actors on what they need to do. The drawings also show the cameraperson and lighting team how to light and frame a shot. Point out that with documentaries, the storyboard serves a different purpose. Unlike narrative movies, acting in documentaries is minimal so there is little need to draw all of the actions that will take place. A simple list of what should be shot and what questions need to be asked may be sufficient. Show the class some examples of storyboards, scripts, and shot lists.
3. Have students work in groups of two to four to create a storyboard based on an existing script. The storyboard should include where the camera needs to be and instructions for the actors. Students should draw the storyboards by hand, but point out that storyboarding software is available. (See "Resources.") If students

are working with a documentary script, have them create more of a shot list, a list of who will be interviewed, the questions that will be asked, and camera instructions.

4. Have students share their completed storyboards or shot lists with the class.

### **Activity 2: Developing a Storyboard for a Commercial**

When students finish the first activity, they often wish they had had more time to plan. This second activity helps students understand the importance of the storyboard. In this activity, the students come up with a great idea for a commercial, plan it, and present it (pitch it) to the class. The best idea is storyboarded. In Lesson 3, students film it as a class project.

1. Divide students into small groups and have each group come up with about 15 keywords to get them started with developing movie ideas for a class commercial. From there, they should come up with a short outline or treatment of three ideas. This process usually takes about one hour.
2. The next class period, have students pitch all of their ideas to the class. Write the ideas on the board while students present them. Assure the class that there are always a lot of great ideas that don't get selected and that these ideas might be used for great projects later in the course.
3. Once all of the ideas are discussed, have the class vote to narrow the choice down to the top three ideas.
4. Divide students into three groups and have each group storyboard one of the ideas that was chosen (stick figures are fine). Encourage students to utilize different shots to help illustrate the key points. Make sure they understand the different types of shots: wide, medium, close up, and extreme close up. (See Lesson 5 for more information.) Also, point out to students that a 30-second commercial should have at least 15 storyboard frames. You can also introduce the ideas of pacing and editing by using the beats from music included in a piece. Rhythm is key in editing. Sometimes the beat of the music can help the editor indicate where to make the edit or transition.
5. Once the groups finish the storyboards, have the students pitch the ideas again. Advise them that if they like their idea, they need to sell it to everyone else. Some groups may want to act out the pitch, while others draw on the board. Either way, it is up to them to get the message across. Once the storyboard pitches are finished, have the class select one as the basis for a commercial.
6. Next, have the class work together to recreate the story on the whiteboard to produce a more detailed storyboard for the commercial. The more artistic students could be asked to create the drawings on the whiteboard.

In the next lesson, students develop the schedule and shoot their production.

## **Project Duration**

5 to 7 days

## Competencies, Standards Descriptions

Students will demonstrate the ability to create a storyboard. Students will work collaboratively to develop a treatment and present it to an audience.

## Tools and Resources

### Tools

- Drawing materials
- Inspiration software (optional)
- Student Guide: Storyboards, Screenplays, and Shot Lists
- DVD of a Pixar movie
- Projector

### Resources

#### Books

- *The Art of the Storyboard: Storyboarding for Film, TV, and Animation* by John Hart
- *Film Directing Shot by Shot: Visualizing from Concept to Screen* by Steven D. Katz

#### Websites

Students can use several different software programs for storyboarding. You can find out about some of these programs at the following websites:

##### High end

- Toonboomstudio Storyboard by Toonboom  
[www.toonboomstudio.com/products/storyboard](http://www.toonboomstudio.com/products/storyboard)
- StoryBoard Artist by PowerProduction Software  
[www.storyboardartist.com](http://www.storyboardartist.com)

##### Entry level

- StoryBoardPro by Atomic Learning  
[www.atomiclearning.com/storyboardpro](http://www.atomiclearning.com/storyboardpro)
- Comic Life by plasq  
<http://plasq.com>

## Evaluation Ideas

For Activity 1:

- Students create a storyboard for an already existing script. Actor direction and camera instructions need to be included.
- Alternatively, students create a storyboard/shot list for a documentary-style movie project. A list of who will be interviewed as well as what they will be asked is included in the notes. Camera instructions need to be included as well.

For Activity 2:

- Students share and rate storyboards of other groups.
- Students pitch their ideas to the class.
- The class vote to narrow down the top three ideas.
- The class develop three storyboards (by groups).
- The class choose one storyboard to be developed on the board.

## Tips

- We recommend that students use a good old-fashioned Moleskine notebook for their storyboarding. Some even come with storyboard template drawn right in.
- You will find students who will love the storyboarding process. This step provides them a great opportunity to meet and discuss the visualization of the story with the writer, director, and cameraperson. Find the “doodlers” in your class. They will do just fine. Stick figures and lines communicate a lot.
- For the second activity, help the students with their ideas. Give them guidelines of what topics are appropriate for the target audience, in this case, the school, district, and students’ families.

## Conclusion: Real-World Connection

Pre-visualization is not only a great skill to have as a moviemaker, it is a great skill as a leader. Storyboards, shot lists, and screenplays are three parts of the planning process that help communicate to the production and post-production team the goals for the project. Although they are not always essential for every project, aspects of the three always appear in a well-developed movie project.

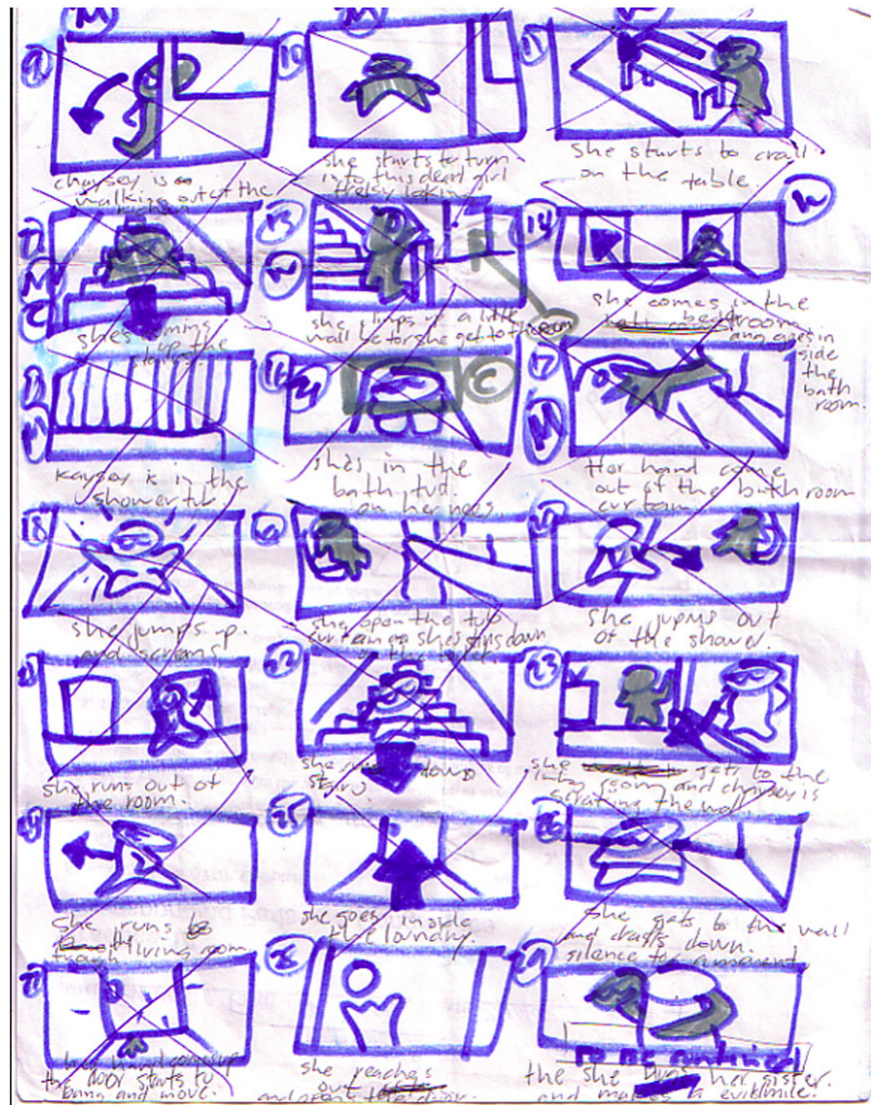
## STUDENT GUIDE

# Storyboards, Screenplays, and Shot Lists

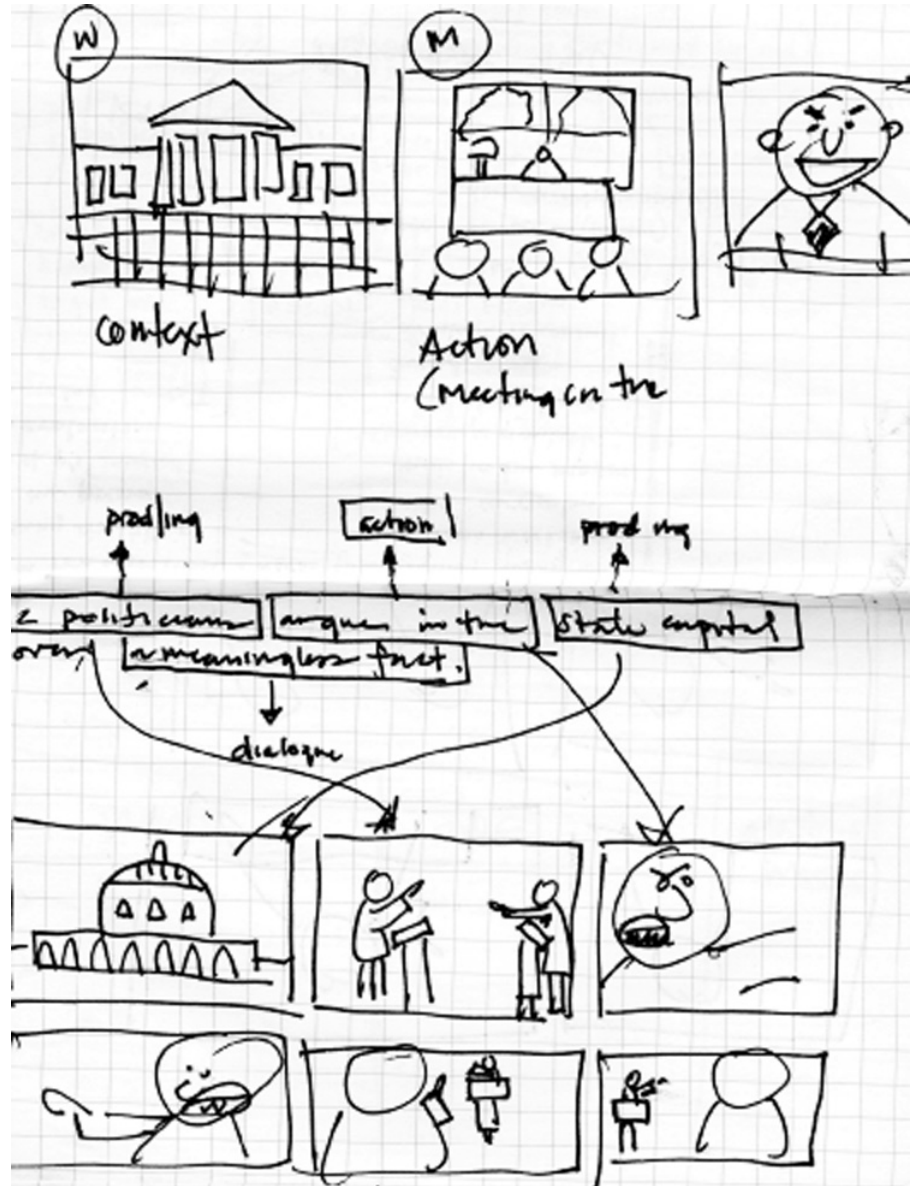
Knowing how to create storyboards, screenplays, and shot lists will help you plan your movie projects.

## Storyboards

Here are several examples of portions of storyboards for movie projects:

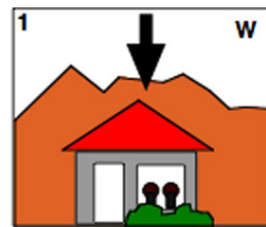


Hand-drawn sample

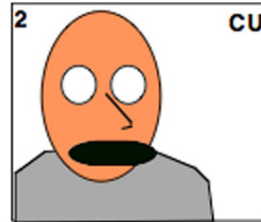


Hand-drawn sample

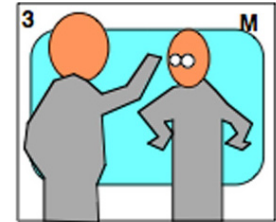




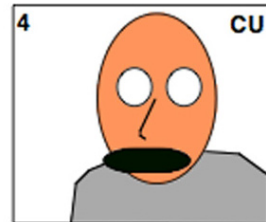
pan down\_  
 audio\_hear muffled screaming



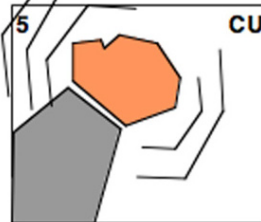
on the dad\_very upset w/ son  
 audio\_hear screaming clear  
 (see script)



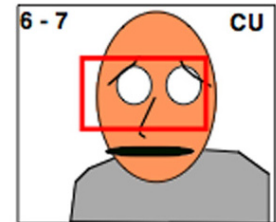
See the back of the father  
 talking to the son.  
 audio\_(see script)



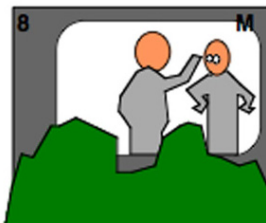
Son tries to say something  
 but cant- father is not pausing  
 between words.  
 audio\_hear father



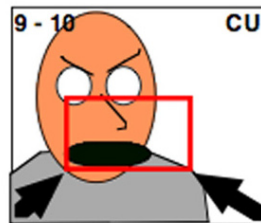
Father waving fist in the air  
 audio\_hear father yelling



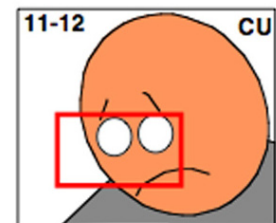
Son begins to break down.  
 Lip is shanking, eyes  
 watering.  
 audio\_hear father yelling



Father waving fist in the air  
 audio\_muffled screaming (use  
 filter to muffle sound).



Father still yelling.  
 audio\_father yelling, begin to  
 hear son's wimper,

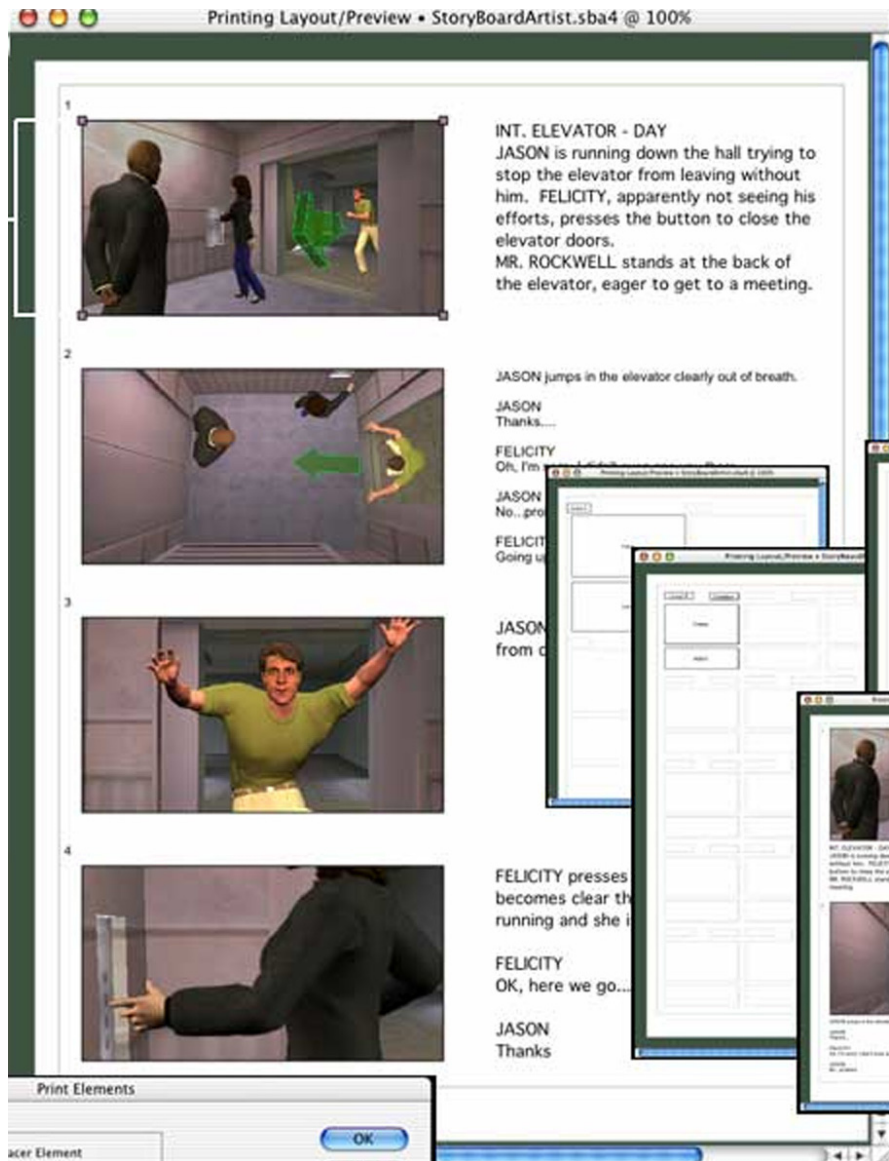


Father says punchline  
 audio\_father says punchline

**Shot list:**  
 Outdoor shots: 1 and 8  
 w/ Son: 3, 4, 6, 7, 11-12  
 w/ Dad: 2, 5, 9, 10

**Audio\_** use muffling filter for 1 and 8

Sample drawn with AppleWorks



Sample drawn with StoryBoard Artist

## Icons for Storyboards

The following diagram shows icons you can use in your storyboards:



## The Screenplay

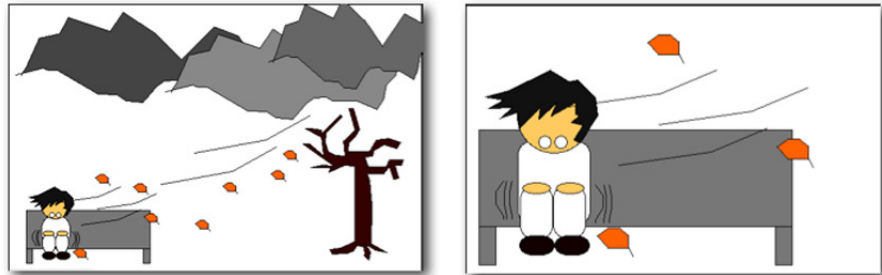
A screenplay can be an original work or a rewrite of a short story or a novel. It differs from a script in that the screenplay includes more detailed descriptions of the action and visuals. If a screenplay is not an original work, the process of rewriting is called the *adaptation* of the story or novel. The screenplay is the step between the original story and the storyboard. (See the example below.)

The screenplay may be written by more than one person. It can often take a team to coordinate and write. In the screenplay, the subtext, interpretations, and subtleties are defined and visualized for the screen. With adaptations, this is the time many fans of the original text may be disappointed with what they see as opposed to what they imagined while reading the same story. The screenplay is an interpretation and a decision to move the imagination of the narrative onto a more literal story that can be produced.

[EXAMPLE]

- **SCRIPT:** OUTSIDE. COLD. WINDY. The boy sits alone and is feeling down.
- **SCREENPLAY:** WIDE SHOT> boy sitting on bench. Tree to his left. Leaves blowing off. **SOUND**> Hear the wind. Violins playing an A minor chord vibrato. The boy is sitting on the edge of the bench. **COLOR PALETTE**> Blue and Grays. **CUT TO A MID SHOT**> Sad Body Language. **SOUND**> Cont from shot one. **CUT TO CLOSEUP**> of face and then hands. A leaf barely hanging on a branch (reflective of him).
- **STORYBOARD:** The storyboard helps visualize what the screenplay direction is communicating. Again, it's a literal interpretation of the short original script.

**The boy felt alone that afternoon. Really alone.**



## The Shot List

The shot list is a checklist of shots that are needed to complete the filming of a project. It acts as a guide for the director of photography (the DP) as to what needs to be shot and when. A shot list groups, combines, and organizes what needs to be shot when as opposed to the order that the shots will appear in the movie as shown in a storyboard. This makes a movie more efficient. For example, a shot list might combine all of the night shots to be filmed at the same time. Or, if an actor has a limited schedule, the director would instruct the director of photography to create a shot list with all of the scenes that include that actor. The editor then consults the storyboard to reconnect the footage for the movie in the order that was intended.

## Practice

You can see how this works by creating a shot list from a storyboard and shooting it in a different order. Make sure the beginning of every shot is introduced with a slate (clapper) that includes the scene, shot, and take information. If you don't have a slate, you can use paper or a dry erase board.

## LESSON 3

# Shoot It! The Production Process

This lesson focuses on shooting a commercial using the storyboard developed in the second activity in Lesson 2. A key way this production workflow differs from a professional production is that every student will have an opportunity to work in every position. Along the way, the students start mentoring each other on how each position works and the relevant equipment. This lesson is a great way to help teach the students about how crews work together as well as about shot composition, directing, and performance.

## Project Steps

1. Explain to students that now that the storyboard (from Lesson 2, Activity 2) is finalized, they need to schedule the production. It is important to identify the cast members, props and wardrobe, and the locations. This information dictates the order in which students shoot their footage.

**Note to Teacher:** When creating the schedule, remember that the shooting may go slowly at the beginning because of the students' lack of experience. We have found that once we get four or five shots filmed, the students have a better understanding of what to expect and start jumping in where needed. When scheduling, we group shots together based on location, cast availability (if they're not from our class), equipment availability, and so on.

2. Once the schedule is complete, set up a crew matrix in which every student signs up for each position. They will switch roles with each scene. (They can use the Crew Assignment Matrix PDF included with the course.) The positions are: director, director of photography, gaffer (lighting technician), grip, audio engineer, and production assistant. Having a student facilitate the crew assignments is one way students can take on more responsibility for the production. A main goal is to get the students working together as soon as possible. Post on the board a workflow and the crew's responsibilities. Each student should be in a group and have one of the roles described. For example, the gaffer is responsible for all of the lighting equipment while the camera department is responsible for the camera, tripod, video assist, and other necessary items. This helps students see how films are shot with a crew. If a student finishes his or her assigned responsibility, the student can help someone else or have others assess what the student worked on.
3. When the crew list and the schedule are complete, have the students start shooting. As they rotate their roles through each shot, have the students teach each other what they have learned in the prior shot. This process usually takes a good two weeks to shoot. Students can use the Shot List to keep track of their shots.

## Project Duration

1 week

## Competencies, Standards Descriptions

Students will learn to work in the following production crew positions:

- Director
- Director of photography
- Gaffer (lighting technician)
- Grip
- Audio engineer
- Production assistant

Students will work as part of a collaborative team to accomplish tasks. Students will learn to schedule a production.

## Tools and Resources

### Tools

- Crew Assignment Matrix
- Shot List—Shooting Day Schedule

## Evaluation Ideas

Students will demonstrate ability in each of the crew positions. Students will work collaboratively and teach each other the crew positions that they have already experienced.

## Tips

- Plan on a slow start. Encourage students to jump in and help crew members.
- The video assist monitor is a great way to teach everyone composition techniques. Eventually, the students have fun watching their friends act. There will also be many funny outtakes that the students can work into a blooper reel.

## Conclusion: Real-World Connection

This lesson replicates a real-world experience as much as possible. Every step is taken to follow the workflow of a real production, even down to the slate and the director calling “action.”







## LESSON 4

# Lighting a Scene and a Person

*Photography* in Latin means “the writing of light.” Without light, one cannot write with it, so no photography can exist. Making sure the students are shooting in good light should be the first step in the process of shooting a movie. In this lesson, students learn about different lights and their purposes. They learn how to find good natural light, become familiar with the ideal situations and times of day to shoot, and find out tips for better lighting. The lesson also covers studio lighting, camera lighting options, and functions.

## Project Steps

1. Go over the basics of lighting with the class, including the use of natural light, three-point lighting setups, how lighting affects the mood of the scene, and the use of color gels, diffusers, and other filters. Have students read the Student Guide: Working with Light and explore lighting using the suggestions in that document.
2. Show the class some interviews and have them guess the locations of all of the lights. For each interview, have students create a diagram and mark on the paper where they think the lights are placed. After students have performed this exercise a couple of times with interviews, ask them to do it with TV shows and movies.
3. Have students practice lighting objects on a desk with three different light sources. They should take pictures of the objects and compare how the different lighting options affect the mood and feel of the scene.
4. Have students make a lighting plan and then shoot an interview and light it naturally using window or outdoor lighting. They should also diffuse light and reflect natural light on the subject and experiment with color gels, diffusers, and other filters.
5. Using online examples from [www.flickschool.com](http://www.flickschool.com), go over some cases when mobile lighting (light from the camera) is required or preferred. Then explain how mobile lighting is ideal in documentaries and situations when you don't have control of an environment; for example, in a walking or action scene. Have students shoot an action scene using mobile lighting.

## Project Duration

3 days

## Competencies, Standards Descriptions

Students will learn the function of light in a shoot. They will learn how to use the different lights to create different moods and feels for the director. They will learn how to be creative and find alternative ways to light scenes. They will learn how to pre-visualize a lighting situation and diagram light placements.

## Tools and Resources

### Tools

- Lighting equipment, including key lights, fill lights, reflector kits, mobile lights, color gels, diffusers, and other filters
- Student Guide: Working with Light

### Resources

#### Internet

- Resource for lighting examples  
[www.flickschool.com](http://www.flickschool.com)

#### Books

- *Lighting for Film and Digital Cinematography* by Dave Viera. This is a great book but pricey. You might look for a used copy.
- *Painting With Light* by John Alton. This is a sacred book for DPs who all probably have a copy in their libraries.

## Evaluation Ideas

- Students light an interview naturally using window or outdoor lighting. They also diffuse light and reflect natural light on the subject.
- Students set up a typical three-point lighting situation. They also vary the different light sources for effect and impact.

## Conclusion: Real-World Connection

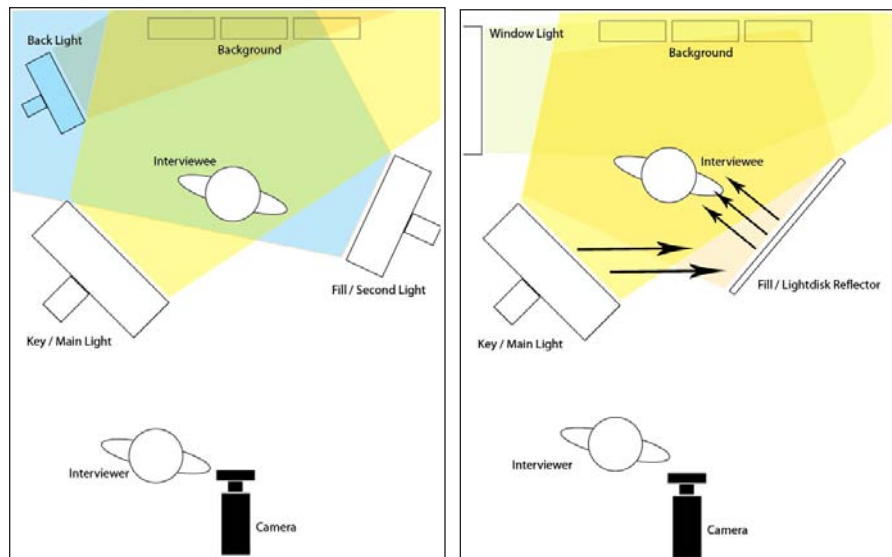
Lighting is the most important component to master when doing the actual filming. Light controls emotion, the mood, the feel of the movie. Mastering it makes students very marketable as a DP, assistant to the DP, key grip, or any of the other lighting crew members. Knowing how to light adds tremendous value for all moviemakers. Most DPs, great directors, gaffers, and key grips are fantastic photographers.

## STUDENT GUIDE

# Working with Light

In Latin, the word *photography* means “the writing of light.” You need light to be able to write with it; without light, photography cannot exist. An important part of the moviemaking process is making sure that you are shooting in good light. This handout explains the effective use of both lighting equipment and natural light.

The following diagrams show two different lighting setups:



The first diagram shows how you would typically set up a three-point light system. The first and key light is the main light, which ensures that the person being interviewed is clear and bright. You can adjust the amount and distance of this light to create different moods.

The second light is a dimmer light. If this light doesn't have a dim control, you can pull it farther away from the interviewee. Shadows may be unflattering for some people. The purpose of the second or fill light is to fill in the dark areas of only the person being interviewed. If you do not have a secondary light kit, you can use a reflector to bounce the light from the key light. Reflector kits usually include a white surface to diffuse light and keep it the same color, a gold surface for warmer looking light, and a silver surface for a brighter, cooler light. You can experiment with what reflector works best for a given subject.

Color gels, diffusers, and other filters can also alter the look of an interview. The interview in the following photo was shot at night with a bright main key light and a backlight with a red color gel that was used to pick up some of the detail from the old tree behind the interviewee.



In the next example, the movie crew had to make do with what was available—diffused and reflected sunlight. This is a creative way to get nice, even, warm light. Instead of going out into the sun and having a harsh top-down light that cast ugly shadows and made the interviewees squint, the moviemakers found that a well-lit corridor did the trick. Each interviewee was placed at an angle facing the brighter side of the corridor. The color of the walls acted as a reflective surface and filled in other areas of the interviewee's face.



The next photo shows where light was coming from. Many schools have breezeways or outside hallways that are great places to conduct interviews. These locations diffuse and reflect most strong lights so that subjects are not lit with a harsh light. Not being outside in the sunlight makes it easier on everyone.



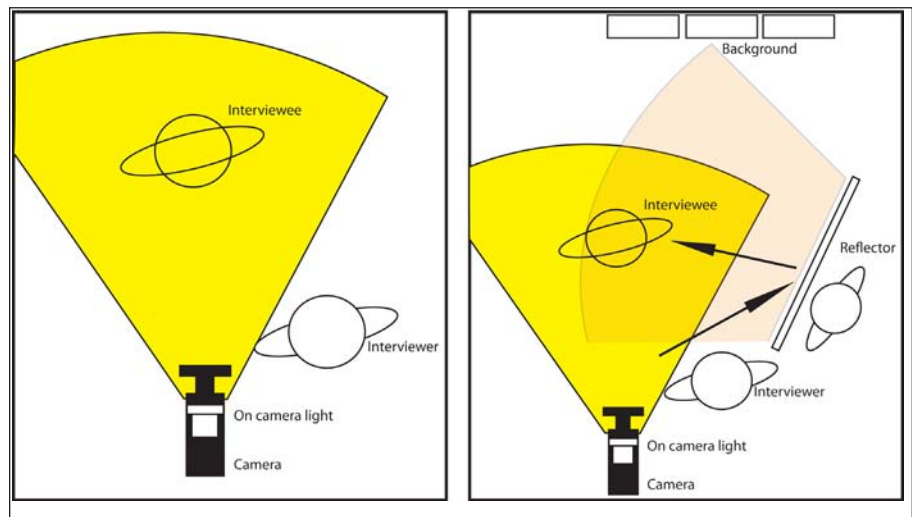
## Practice

Now it's your turn. Use the examples in the photos to draw top-down diagrams of where the light is coming from.

## Using Mobile Lights

If you're using a mobile solution for lights, you can either use it directly on the person or bounce it off a reflector for more subtle lighting. You can diffuse the light with either a standard diffuser or make your own with diffuser paper that can be purchased by the sheet size at any camera shop. You may need an assistant to help you control the light from the mobile option.

The following diagrams show setups with and without a reflector to bounce the light from the camera:



As shown in the second diagram, you can remove the mobile light from a camera and the lighting assistant (gaffer) can bounce the light off the reflector for more subtle light on the subject.

## Practice

Try this with all of the surfaces in a reflector kit—the warmer gold surface, the cooler and brighter silver surface, and the white surface. Shoot 10 seconds with each surface and evaluate as a team which one works best.

## LESSON 5

# Working with Audio

Audio can make or break a movie project. If you don't believe this, watch a horror film without audio. It's actually funny. As moviemakers, we sometimes sacrifice the picture quality over audio because the human ear is more discriminating than the eye. The ear can hear the difference more quickly than the eye can see. In this project, students learn about different microphones and their purposes and how to handle and use them for different types of shots. Students will also learn how to use sound and audio during the post-production process. The project covers topics like room tone, audio levels, syncing, and appropriate use of music. Students are also shown how to use Soundtrack Pro, Final Cut Studio's advanced audio tool, to fix and make adjustments to recorded sound.

## Project Steps

1. Demonstrate the use of different types of microphones, explaining what purposes each is designed for.
2. Hand out the Student Guide: Microphones, and ask students to work in small groups to practice with the different microphones.
3. Provide students with an overview of post-production audio and demonstrate the use of Soundtrack Pro.
4. Hand out the Student Guide: Post-Production and Audio and have students explore audio using the practice suggestions provided in that guide.

## Project Duration

2 to 3 days

## Competencies, Standards Descriptions

Students will learn the function of recording sound. They will learn about the different types of sound recording microphones. They will also gain an understanding of how sound works and how it is recorded. Also, students will learn about audio levels, mixing, effects, the use of music in movie productions, and the laws about using other people's music.

## Tools and Resources

### Tools

- iPod with voice recorder or a solid-state portable recorder (See "Resources.")
- Student Guide: Microphones
- Student Guide: Post-Production and Audio

## Resources

You will find that professionals are often the best source for answering your questions about the use of audio in filmmaking. Find them. Be their friends. Bring them into your network.

### Books

Many books provide information about recording audio. Many are very technical; however, these are some books we have used to help explain the audio part of moviemaking:

- *The Filmmaker's Handbook: A Comprehensive Guide for the Digital Age* by Steven Ascher (Author), Edward Pincus
- *Making Media: Foundations of Sound and Image Production* by Jan Roberts-Breslin

### Websites

- Belkin website (information about TuneTalk)  
[www.belkin.com](http://www.belkin.com)
- M-Audio MicroTrack  
[www.m-audio.com](http://www.m-audio.com)
- Copyright information designed for school administrators  
[www.techlearning.com/copyrightguide/index.php](http://www.techlearning.com/copyrightguide/index.php)
- Creative Commons  
<http://creativecommons.org>

You can learn more about different aspects of audio in moviemaking by searching for blogs and forums on the subject.

## Evaluation Ideas

Students demonstrate their knowledge of the functions of the different microphone systems. Also, they test different mic systems for varied recording situations (interview vs. narrative). They make their own audio recordings and normalize and equalize them for best quality. Finally, they demonstrate how to sync external audio to the recorded video in Final Cut Pro.

## Conclusion: Real-World Connection

This is how audio is recorded professionally. Having this knowledge and added skill set will make students that much more valuable to a set. Movie producers take sound very seriously and invest in the people who understand it. In particular, documentary filmmaking is based on what is said; therefore, sound is king for these movies.



## STUDENT GUIDE

# Microphones

Different types of movie projects call for different types of microphones. This guide describes the types of microphones you will encounter and when you might want to use them.

## Lavaliere Microphones

The *lavaliere microphone*, which is small and unobtrusive, is the most common type of microphone used in documentaries. The microphone clips onto a lapel or collar, which means that the person being interviewed doesn't have to think about the mic. This allows for a more open and trusting relationship between the subject and the interviewer.



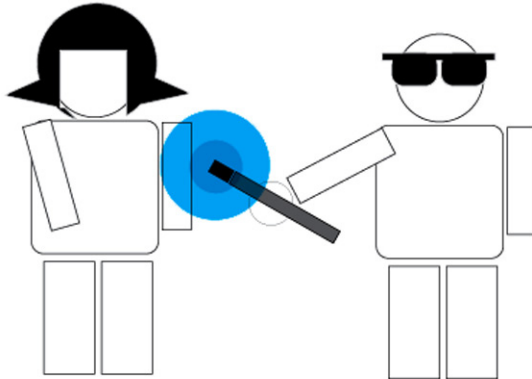
A lavaliere is not a good choice for a narrative-based project in which microphones are usually supposed to stay out of sight. If a microphone is seen, it can ruin the situation and the movie. Also, if you used lavaliere, you would have to mic everyone acting in each scene or shot. Shotgun/boom microphones are a better choice for a narrative-based project. (See “Cardioid and Hypercardioid Microphones,” later in this guide.)

The following diagram shows how a lavalier microphone system connects from the person being recorded to the camera.



## Omni-Directional Handheld Microphones

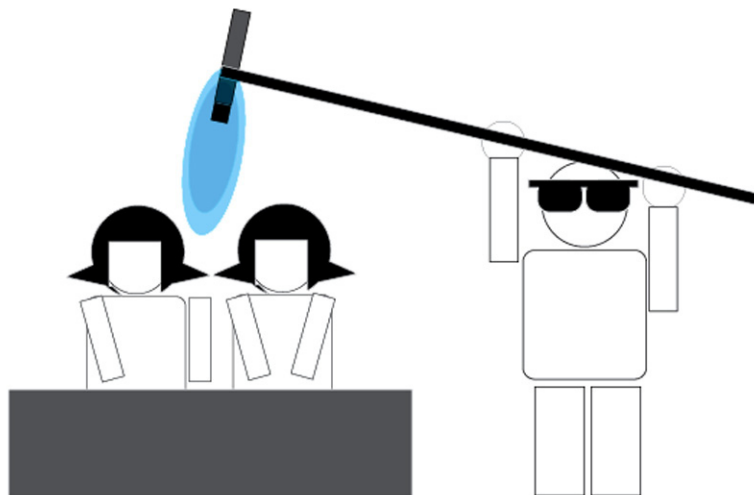
*Omni-directional handheld microphones* are just that. They record in all directions equally. These are used when ambient sound is required for the recording. These microphones are not ideal for moviemaking because they do not isolate the recording to the person or subject at which the microphone is pointed. However, they are sometimes used for news reporting type of interviewing.



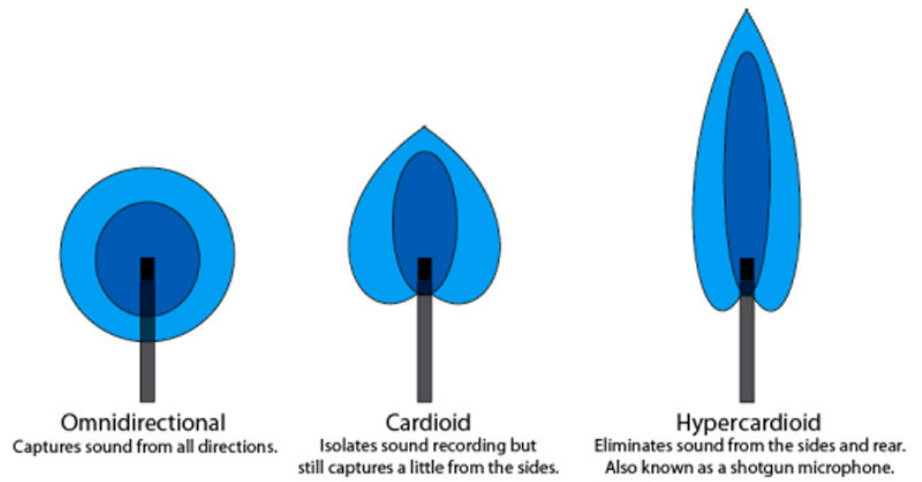
## Cardioid and Hypercardioid Microphones

*Cardioid microphones* can pick up what they are aimed at and reject much of the sound to the side and rear. *Hypercardioid microphones* can pick up what they are aimed at and reject most of the sound to the side and rear. These are the most common microphones found on any set and at any studio. They are ideal for your studio setup. You will find them useful when you want to record narration, musicians, and Foley effects. On narrative projects, using cardioid and hypercardioid microphones means that the microphone can move around with the action or actors. Your classroom studio may have a boom pole with a shock mount to connect the pole to the camera. The shock mount suspends the microphone to avoid the recording of microphone movement.

When you shoot outdoors, you may want to use a windscreen for the microphone, if one is available. You may have seen a windscreen before—it looks like a furry animal has wrapped itself around your microphone. The windscreen creates a barrier between the wind and the microphone. It eliminates the annoying blowing sound that is heard in many family-made travel videos.



The *on-camera microphone* can also be used for your movies but is usually not the best choice. Because the microphone is on the camera, it picks up the sound of the mechanisms of the camera itself. Also, because of its proximity to the cameraperson, it tends to pick up sounds she or he makes. On higher-end cameras, these microphones are good if the room has good acoustics—low ceilings and little to no echo. Otherwise, you might want to limit its use to picking up the ambient sounds of what you're shooting.



## STUDENT GUIDE

# Post-Production and Audio

The post-production part of the moviemaking process includes editing your recorded audio as well as adding music or other audio for the movie soundtrack. This guide first explains two tasks of post-production audio: normalizing the audio levels and correcting the audio frequency. It then provides suggestions for adding music to your productions. It also briefly discusses room tone and linking audio to your images.

## Normalizing the Audio Levels

Once a movie is shot and edited, the project goes to the post-production audio team, which is responsible for leveling the movie's audio. Leveling is needed because some people are louder than others and also because every recording location has its own special sounds and levels. Normalizing is the process of fine-tuning the audio levels.

Just listening to the recorded sound is not enough to adjust levels. You can balance levels by using the audio meters in Final Cut Pro, Soundtrack Pro, or Logic Pro.

These meters show levels climbing from dark green to yellow to orange and finally to red. They communicate the calculated audio level in decibels (dB). A good rule of thumb is to make sure all interviews are within the dB range of  $-12$  to  $-6$ . For music or ambient tracks, make sure levels are lowered to below  $-12$ .



These screen shots show audio before and after normalization. Tracks A3 and A4 are past 0 dB and need to be pulled down to stay within the normalized range of  $-12$  and  $-6$ . Note that if you normalize to 0, sometimes it should not shock your movie. Be aware that balance is key. One isolated burst of sound will stand out and may be the memorable part of your movie.

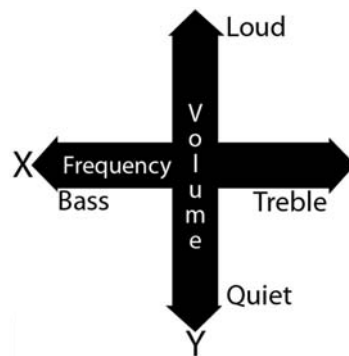
When you're working on audio in post-production, first close your eyes and listen to the levels. Then make notes of the timecode to help in locating sections that need correcting. Next, listen to the sound again while watching the levels. Both Final Cut Pro and Soundtrack Pro have levels for each track. Drag the controls to change the levels and balance the sound. Make sure your sound is now within the normalized dB levels.

## Practice

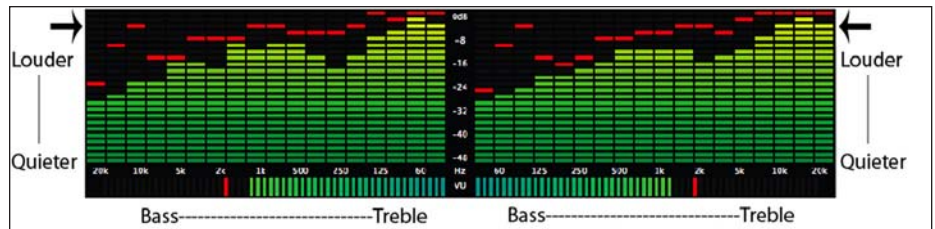
As an exercise, practice recording quick interviews at different levels and then use Final Cut Pro, Soundtrack Pro, or Logic Pro to normalize the audio.

## Adding Effects

The normalizing part of the process deals with the volume levels—the up and down of sound (the Y coordinate, mathematically speaking). However, sound is more than volume. There is also the side-to-side of music (the X coordinate, mathematically speaking). The sideways spectrum—called the *frequency*—will probably also need corrections or enhancements.



The following diagram shows the up and down of the volume as well as the left to right of sound. Notice that the dB scale goes from a low of  $-48$  to a high of  $0$  dB. The arrows point to the “audio sweet spot” or the normalized range (or zone). The diagram shows two frequency spectrums because information is read from both a left and right channel, like most sound you will work with. Final Cut Pro and other audio editing applications display two tracks: a left and a right track. With frequencies, the left part of the meter is the bass (the low notes). The right side is the treble (the high notes). The middle or the area in between is the mid section (the mids). This snapshot of a recorded voice has more treble than bass. It is well balanced because no areas stand out from the rest; however, it is a higher frequency rather than a lower frequency sound.



## Practice

As an exercise, watch your music or the sound of your recorded voice in comparison to that of others in the class. See how the different voices generate different frequency readings. See who speaks with more bass and who speaks at higher frequency rates.

Now that you have a better understanding of the frequency, the left and right of sound, you can begin to enhance or repair recorded audio. If you see and hear a track that has too much treble or unbalanced higher frequencies, you can use effects built into either Final Cut Pro or Soundtrack Pro to balance out the frequencies of the sound. This is called *equalizing* and the effect you use is an equalizer or an EQ effect.

With a simple three-band equalizer, the first setting controls the low, the next controls the mid, and the third controls the high range of the sound signal. If there's too much treble, you drag down the high level control and test the sound. If it's too "bassy," you drag down the bass or low control. You will find several different equalizers in different applications such as Logic, Live, and Reason. These are more refined and can control more detail in the sound.

### **Practice**

Use audio clips provided by your teacher or that you record to practice equalizing audio.

## **Adding Music to Your Movies**

Because this is a mammoth subject, this section provides only a brief overview of resources for adding music to your productions, including some of the legal considerations related to its use. Using other people's music may be ideal, fun, cool, and easy, but it's tough to do legally. You can either produce your own music, find music that is royalty free (available for use publicly—sometimes with minimal restrictions), or write your favorite music band's corporate label lawyer and begin the process to get a license.

### **Using Copy-Protected Music**

*Copyright* means all rights reserved. Not some or most rights, but all. This makes it clear: you do not have the rights to use music without proper legal consent. (If you won't be sharing your movie with the community or the world, you can use copyright-protected music, but what's the fun in that?) To be able to use copy-protected music, your school can purchase a music license and usage rights like the ones television networks use for copyright protected music.

### **Using Music Created with a Creative Commons License**

Another option for using recorded music from others is called a *Creative Commons license*. This new shared rights license strategy was created by a group of concerned authors, musicians, educators, and producers for people who want to share their work. You can find music created with a Creative Commons license at sites like [www.ccmixer.org](http://www.ccmixer.org). A Creative Commons License works both ways—once you have your own productions, you can consider looking at licensing your own finished work. In today's world, understanding the different ways to use, share, and distribute creative work is more important than ever.



## Creating a Soundtrack with Apple Software

If your school, like most, can't purchase expensive music licenses, or if you can't find appropriate royalty-free music, you can take advantage of Apple's tools for adding music to movie projects. From Final Cut Pro, you can send your movie to be scored (set to music) in Soundtrack Pro. Although Soundtrack Pro is a loop-based music sequencer, it may be sufficient for your movie's needs. (Loops are already-created music pieces that you can loop to expand the duration of a piece.) Sometimes sounds or a simple looped sound bed are enough to help guide the movie along as well as hide some irregularities in the sound or help with transitions from scene to scene. The capacity of Soundtrack Pro to produce a solid solution is ideal for producers who have limited time. You can use GarageBand loops with Soundtrack Pro as well.

Composing your own music with GarageBand is another option. Although you cannot send your movie directly from Final Cut Pro to GarageBand like you can with Soundtrack Pro, you can export your movie and then import it into GarageBand as a scored movie project. GarageBand places your movie and its audio track on the top track, allowing you to create the necessary composition for your movie. Like Soundtrack Pro, GarageBand has a loop library that the non-musician can use to create a soundtrack. And musicians can plug in a guitar, a keyboard, or a microphone and record their own creations, adding loops in GarageBand to create additional tracks.

**Tip:** You can use a MIDI USB keyboard to create music for your movies. It doesn't have to be a full 88-key, weighted keyboard; a simple 3-octave 36-key keyboard can do the trick. Learn some keys and a few chords, stay on rhythm, and away you go. Or, you should find it easy to find someone else at school who can play a few keys.

When producing music, think about mood, feel, and emotion. Next, move to rhythms. Do you want movie trailer, action movie fast? Or, do you want 16th century slow-moving epic movie? Or do you just want vanilla? Write down your ideas. Associate instruments to the pace. What is a fast-paced instrument? A tuba? A cowbell? Or is a string section fast? Experiment. If you find this difficult, communicate your ideas to a more musical person.

The great thing about GarageBand is that you can use its loops, buy more online with the Jam Pack collections (or download them from GarageBand fan sites like [www.icompositions.com](http://www.icompositions.com) or [www.macjams.com](http://www.macjams.com)), and combine these loops with your own musical contribution. Or you can bring in a colleague, a peer, or a member of the community who can play for you and help translate your vision to the project. Many websites are dedicated to traditional musicians and digital music producers. You can join a blog or two to see what others are doing in the world of music composition and movie scoring.

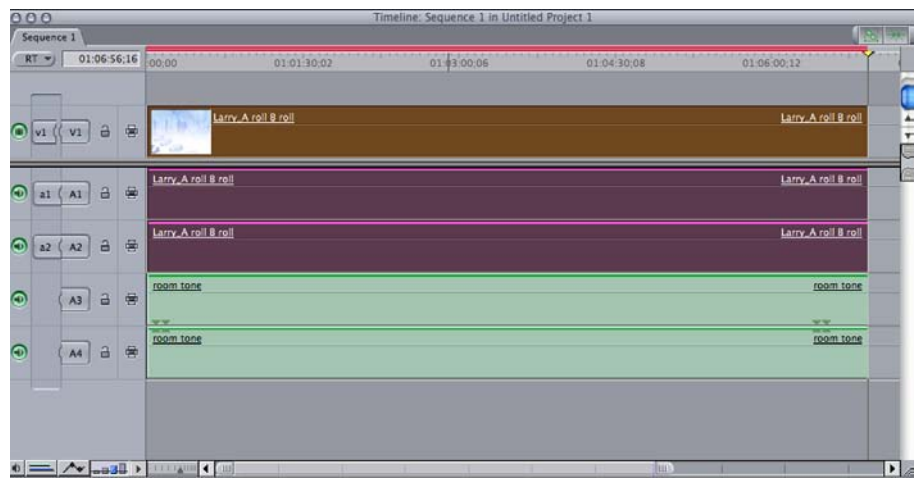
**Tip:** You don't have to create complicated music for your projects. Look at *Jaws*. With two notes, John Williams spooked us away from water everywhere. *Close Encounters of the Third Kind* used five strange notes. You can probably whistle those notes too. Simple can be good.

In addition to music, you'll want to consider the room tone in your productions.



## Room Tone

After each scene, you should capture at least a minute of room tone. This is the sound of the room. Every room, space, and location has its own signature ambient sound. When a person being recorded stops talking or you cut in other footage to support the talking head (also known as B-roll) in a documentary, you do not want the sound to go to a blank silence between talks. The recorded room tone track is placed on its own layer below interviews and B-roll. This way, the transitions between A-roll and B-roll will be smoother.



When recording room tone, make sure the crew is quiet, and mark on the slate the room tone for the specific room and the name of the person being interviewed. This information will be essential to the editor later. Remember, the more you communicate from the start, the better it will be for the next group that takes over the project.

## Linking Film to Audio Recorded Off Camera

In Hollywood, most audio is not recorded onto the camera as the principle source of audio—sometimes camera audio is only used for backups. Instead, most Hollywood audio is recorded off camera usually via a digital audio tape (DAT) system. The image on the film is then linked to audio during editing using the slate's clap sound (or its wavelength spike).

### Practice

To see how this works, you can use either an iPod with a voice recorder (preferably a 16-bit audio recorder for better quality such the TuneTalk by Belkin) or a solid-state portable recorder like an M-Audio MicroTrack. Use a slate (a clapboard) to help sync the audio and video. The director says, “roll sound,” which means start recording with the external device. A second or so after, a crew member brings in the slate, making sure the information on it is clear for the camera to read. If you want, have her or him say the scene, the shot, and take number, pause, then slap the slate loud enough to sync later in editing. You may use the camera audio to help as a guide. In Final Cut Pro, sync the two tracks to the clap sound. After that, remove or silence the camera audio. Ideally, you want the slate to cover the entire frame of the shot, which makes it easier for the editor.

## Locations for Recording Narration

A great place to record narration for a documentary is a place with no echoes or reverberation. This means a small, quiet space. In a school, sometimes this is hard, so the interior of a car or a closet would be great. If you're recording in a room, one tip is to ask the narrator to stand and "act out" what is written. If the narrator is nervous, just record a few sentences at a time. It will be easier to locate the better takes later in editing.

## LESSON 6

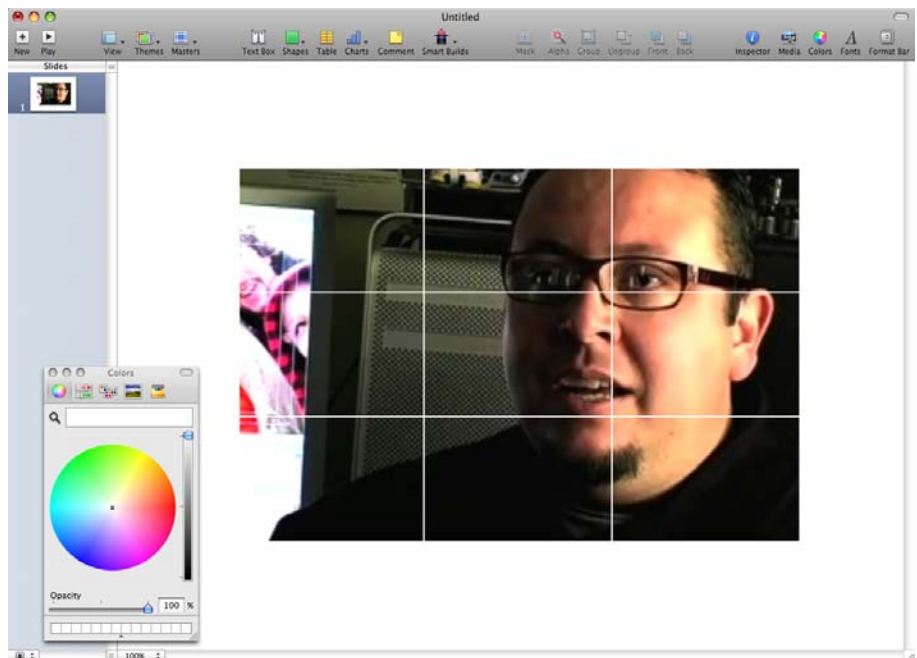
# Camera Frame Composition

How filmmakers compose their shots determines how well a movie communicates its images to the viewer. In this lesson, students learn how to create establishing shots to let viewers know where the story is taking place and how to convey action sequences and emotional or detailed scenes. Also, students compare images that follow and break the rule of thirds and see why the director made these decisions. The lesson also covers the concepts of eye lines, headroom, horizon lines, and frame balancing.

## Preparation

You will first demonstrate the rule of thirds to the class using a slide presentation created with Apple's presentation software, Keynote. To prepare this presentation, follow these steps:

1. Download a movie trailer that has a variety of types of shots using QuickTime Pro.
2. Open a new Keynote presentation and insert the movie trailer on a blank slide.
3. Create a table by clicking Table on the Keynote toolbar. The default table is a nine-box grid—the same as the rule of thirds.
4. Place the grid over the trailer so it fits the entire QuickTime movie as shown here. If you want, you can alter the grid's opacity and line thickness, but the default grid works well.



5. Play the presentation and the movie automatically begins. The movie is displayed with the rule-of-thirds grid over it.

You can now use this presentation as a teaching tool for the class.

**Note:** Keynote is needed to do this; it cannot be done in PowerPoint.

## Project Steps

1. Explain to students the importance of composition and the rule of thirds in moviemaking. Composition means the plan, placement, or arrangement of the elements of art in a work. This work can be a piece of paper, a canvas, a photograph, or a movie. Filmmakers need to consider where things and people are placed in a movie frame. Painters have been doing this for centuries. When photography was invented, the rules of composition followed. Things are no different now. How a director and DP decide where to place people and things helps convey a story. Unlike the written word for a writer, a director uses light, lines, color, angles, focus, composition, and audio to help communicate a vision or a story.
2. To illustrate the rule of thirds with a movie trailer, use an overhead projector to show the class the Keynote presentation you created (see “Preparation”). Point out how every shot of the trailer adheres to the rule. Pause the presentation during a wide shot to show this. Pause it during a mid and a close-up shot to see how the frame was composed by the director of photography. Point out that a great film can be stopped at any time and every frame will be a beautiful composition.
3. Have students review the Student Guide: The Three Main Shots: The Wide, Mid, and Close Up.
4. Have students practice shooting each other in three different poses. The first will be framing a landscape scene, the next will be framing a sit-down interview, and the last will be a two-person shot where movement is involved.
5. Have students work in small groups to create a short film or commercial in which they incorporate wide, medium, and close-up shots using the rule of thirds.

## Project Duration

1 week

## Competencies, Standards Descriptions

Students will learn the grammar of visual storytelling. As with writing, there are rules to the functions of how scenes are shot. They will learn how to use the three principal types of shots to communicate context, action, emotion, and detail. Also, they will learn how to balance their shots in a way to maximize the communication with the audience with every frame.

## Tools and Resources

### Tools

- Keynote
- QuickTime Pro

### Resources

#### Books

- *The Director in the Classroom* by Nikos Theodosakis
- *The Five C's of Cinematography: Motion Picture Filming Techniques* by Joseph V. Mascelli

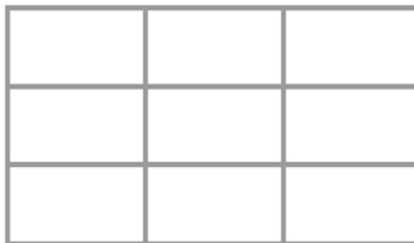
Photography books are good for this as well. The best DPs are great photographers.

## Evaluation Ideas

- Students take turns shooting each other in three different poses. The first is framing a landscape scene, next is framing a sit-down interview, and the last is a two-person shot where movement is involved.
- Students create a short film or commercial in which they must incorporate and use correctly wide, medium, and close-up shots.
- Students demonstrate how to manipulate the focus area to keep viewers focused on what the director wants you to see.

## Tip

To help students keep the rule of thirds in mind when they are shooting video, you can purchase clear plastic PDA window protectors. Draw an even nine-box grid on them and place them over the flip-out viewfinder of the camera.



## Conclusion: Real-World Connection

Grammar is grammar, the rules of how people communicate. Every form of communication has its own set of guidelines and rules. Sometimes breaking one of these rules is all right because you know which rule you're breaking and why. In the same way, if students can convey their reasons for using an alternative shot, they should do so. But it's critical that they know the rules first. These are the same rules painters, photographers, and DPs follow. This command of the structure and purpose of the image is a skill usually learned in the field. Knowing the rules earlier allows students to expand their portfolios and makes them more marketable when looking for work.

## STUDENT GUIDE

# The Three Main Shots: The Wide, Mid, and Close Up

## The Wide Shot

A *wide shot* provides the views and the story context and defines location. Just showing people where the story is taking place can enhance the story. For example, Jim is a long distance swimmer. That in itself isn't a great story, but saying he swims between Alaska and Russia changes the story dramatically.

The wide shot has a large area that is in focus—from the forefront of the frame to the back of it. Usually, a wide shot uses wide-angle lenses and the depth of field (the area of the image you see in focus) is far and wide.



## The Mid

The *mid*, also called the *action shot*, communicates the action of the scene. This shot is usually closer or tighter on the subjects to show what they are doing. In the following shot, you can see the verbs: singing, playing, strumming. This type of shot is needed when the director has to shoot what is happening from the script. Most action movies, naturally, will have this type of shot. Fight sequences use this camera angle.



## The Close Up or Detail

This angle is the most difficult to master. It requires a special touch that can be attained with practice. To help communicate the feelings of the young woman singer, you would need to get in closer or tighter and show only her face. If you edit a mid shot of her singing to a shot of her singing soulfully, you would need to capture that emotion by just focusing on her face. The close-up shot or angle communicates emotion. Because the eyes communicate emotion most, they need to be the primary focus of this shot, and the framing needs to be composed around the eyes. When a camera is composed properly, the eye line is located on the upper horizontal line of the rule-of-thirds grid like this:



Here's another example of a close up. See how it focuses on emotion.





The close-up shot is also used to show the detail of something. For example, in the picture below, you see an emphasis on the computer screen. In *Lord of the Rings*, Peter Jackson used many detail close-up shots to focus on the ring. You can watch TV shows to analyze how different types of shots are used.



## Depth of Field (Aperture)

In close ups, the depth of field (or the area in focus) is reduced dramatically. This allows the director or the director of photography to control the attention of the audience on the specific subject. With the foreground and background blurred, the audience can concentrate on the emotion and detail for the character. Bringing more information into the scene can confuse the viewer, thus ruining the purpose of the shot. Dramas use close-up shots effectively.

Deep Depth-of-Field: Larger area in focus



in focus

Shallow Depth-of-Field: Smaller area in focus

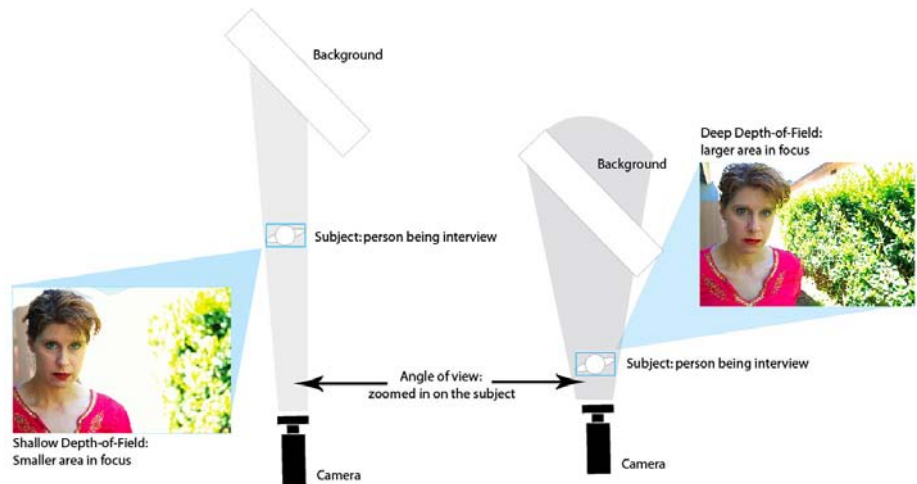


blurred

Higher end cameras have full control of depth of field by having access to the aperture (opening) of the lens. This lesson doesn't address the whole science of aperture, but will look at how you can force a deep (wide) or a shallow depth of field when conducting interviews.

## Practice

Place the subject somewhere where he or she is *not* close to a wall behind them. You will need the distance to blur the background. Using a tripod, place the camera far from the person you're interviewing and zoom in on the person's face. Compose your shot to adhere to the rule of thirds. This is a typical position for interviews. If the subject uses his or her hands a lot, you may want to recompose the shot to include the hands. The zooming in and the distance between the camera and the subject will force a narrower (or shallower) area in focus. The opposite of this assignment will give you a wide or deep area in focus.



You can see how you can manipulate the image optically by where you place the subject and the camera.

## Shutter Speed

You can easily see the effects of changes in shutter speed with the following exercise.

### Practice

To make the action look faster, shoot an action scene with a slower shutter speed. In Final Cut Pro, speed up the sequence slightly. The fast-paced, blurred motion will give the viewer a sense of heightened tension, a stressful feeling. To make good use of slow motion, shoot a scene at the fastest frame rate or shutter speed and then in Final Cut Pro, slow it down. See the difference between the scenes shot at different speeds.

## LESSON 7

# Documentary Movies 101— A Roll and B Roll

Once students have mapped out a plan, assigned roles and responsibilities, and secured locations and permissions, it's time for them to pull out the lights, cameras, and sound gear and begin a documentary movie. In this lesson, students learn about A roll and B roll and then film a short interview. Students can work on a prior project or shoot something new.

## Preparation

Locate some interviews to show students from television news broadcasts or news shows.

## Project Steps

1. Explain to students the difference between *A-roll* (the “talking head”) and *B-roll*. A-roll is referred to as “the talking head” because it is the footage of the main interview. This is where you see the person responding to the questions being asked by the interviewer. B-roll is the support footage that is used behind the sound of the A-roll. B-roll helps an interview move along more efficiently. It also helps provide context to what the person being interviewed is saying. Most importantly, it makes the documentary less boring to look at. No one likes to look at a talking head for five to ten minutes straight. Show students televised interviews, pointing out how the stories use A-roll and B-roll. Have students evaluate which types of footage are more effective than others.
2. Ask students to interview each other. They should film one question and, when editing, use the captured A-roll as the main part of the mini-documentary and then locate and add B-roll clips to help present the answer. Before students interview each other, discuss how to prepare for an interview. You can give students Student Guide: Getting Ready for an Interview for them to review.
3. Explain to students that there are no specific rules as to when and how to use A-roll and B-roll. However, you can present the following suggestions for how to make their mini-productions look more credible:
  - In Final Cut Pro, drag the A-roll and its associated audio clips to the Timeline. Make edits or cuts in between sentences or words. Try not to edit or add B-roll in the middle of a sentence or a word (at least). It works more effectively to add B-roll when there is a natural pause in the talking. Try adding B-roll in the middle of a sentence and in the middle of a word. Then try adding the B-roll at the end of a sentence or word. See how it flows more effectively.
  - Vary the times when you use B-roll. Sometimes start the interview with B-roll and then show the A-roll. After this, try beginning with A-roll and then B-roll.

4. You can either keep the audio of the B-roll and drop the audio levels way below the A-roll audio or use subtle music (no lyrics) underneath the movie. Sometimes, you can use the music to help the pacing of the mini-documentary.
5. Show the edited interview to the class.

## Project Duration

1 week

## Competencies, Standards Descriptions

The purpose of this lesson is to introduce A-roll and B-roll footage, the reasons for each, and how they are used. Students will learn how to add dimension to their stories by intercutting primary shots with alternating footage. This project will enhance students' stories visually so they will communicate more readily to viewers.

## Tools and Resources

### Tools

- Video camcorders and microphones
- Final Cut Pro
- Student Guide: Getting Ready for an Interview

### Resources

#### Books

- *Making Documentary Films and Reality Videos: A Practical Guide to Planning, Filming, and Editing Documentaries of Real Events* by Barry Hampe
- *Documentary Storytelling for Video and Filmmakers* by Sheila Curran Bernard
- *Writing, Directing, and Producing Documentary Films and Videos* Third Edition by Alan Rosenthal
- *Directing the Documentary*, Fourth Edition by Michael Rabiger

## Evaluation Suggestions

Students film a short interview on a given topic. Students then find footage that shows what the interviewee is talking about and edit it together.

## Conclusion: Real-World Connection

All documentaries are done with A-roll and B-roll as are TV news shows and short features for movies. Just three years ago, there were less than 30 documentaries in wide distribution. Now, there are more than 200 in theaters everywhere. This genre is not impossible to master. The ease of the structure allows moviemakers to create strong, personal movies that connect with an audience. Documentaries do not require acting and a lot of special effects. The simple structure of A-roll and B-roll can connect with an audience in ways many narrative projects fail to do regularly. Also, these movies cost a lot less to make. Producers, TV stations, and studios are interested in people who can tell a great story—whether it is a narrative story or a documentary about your community. Students can use this opportunity to build their portfolios.

## STUDENT GUIDE

# Getting Ready for an Interview

When you interview people for a documentary, first find a quiet place to shoot. There are many little things to consider when preparing for an interview. Here are some “to-do” items to consider as you get ready to shoot an interview:

- Make sure you have help to set up the camera location.
- Have someone work with the director of photography to get the best lighting.
- Whoever will conduct the interview should begin by chatting with the person being interviewed to make him or her comfortable. The interviewer should focus only on the subject. The rest of the team can focus on the technical preparations.
- While the interviewer is chatting with the subject, the sound person should mic the person and run sound tests.
- Make sure extra batteries are available and extra tapes are ready and marked.
- Agree on hand signals for new batteries or a new tape. This makes the process less obtrusive.
- Each interview should begin with a marked slate (clapper) that includes the name and title of the person being interviewed.
- At the end of each interview, capture a minute of quiet room tone. Mark this on the slate with the name “room tone: name of room.” You will use this later in the editing process to help with pauses and blank spaces.
- If possible, have a person behind the production crew taking notes of key answers. This can help save time.
- Make sure all permission and image release forms are signed and filed for your records.

## LESSON 8

# Fix It in Post!

This lesson introduces Final Cut Pro to the class. After the teacher demonstrates the basics of editing with the application, students use Final Cut Pro to edit the footage from the commercial they shot in Lesson 3. Although each student project will end up going in a somewhat different direction, this project gives students an opportunity to learn the underlying principles of editing with Final Cut Pro and the post-production process.

## Preparation

Make duplicates of the master tape that the students shot in Lesson 3 so that each small group can edit its own commercial.

## Project Steps

1. Before they begin editing, present students with an overview of Final Cut Pro. Using a projector, identify and describe the function of each Final Cut Pro window. Demonstrate each step of editing from log and capture through exporting a QuickTime movie.
2. Have students work in small groups to edit the commercial the class shot in Lesson 3. Each group uses the same footage but each end result will differ. Explain that the goal is to get a rough edit in the Timeline with one layer of video (and two of audio) and to not deviate too much from making a basic edit of the commercial. You can try to keep the groups working at an even pace with each other in the beginning steps of logging, capturing, and performing basic edits.

Often the students go where the story takes them, which might mean they will learn about chroma-key (green screen) or masking along the way. We have found that students are usually excited about this lesson because it gives them an opportunity to work with Final Cut Pro. They learn the necessary skills because they want their movie done. We have found that we do not get the same response when students are working on tutorials from a book or a website.

3. When the groups are finished, use a projector to share the rough cuts with the class. Have students evaluate each other's work.

## Project Duration

3 to 4 days

## Competencies, Standards Descriptions

Students will learn to work on the following tasks in Final Cut Pro:

- Logging and capturing
- Working with clips
- Trimming clips

- Working with audio
- Effects and transitions
- Titling
- Exporting movies

Students will work as part of a collaborative team to accomplish tasks. Students will learn to assemble a story from tape.

## Tools and Resources

### Tools

- *Apple Pro Training Series: Final Cut Pro 6* by Diana Weynand
- Final Cut Pro

### Resources

#### Internet

- Information about Final Cut Pro, including Apple Support discussion forums and other resources  
[www.apple.com](http://www.apple.com)
- Information about moviemaking  
[www.creativecow.com](http://www.creativecow.com)  
[www.2-pop.com](http://www.2-pop.com)

## Evaluation Ideas

Students peer review all projects. Students help each other with challenges of Final Cut Pro when possible.

## Tips

- Students will struggle with the nuances of Final Cut Pro in the beginning, but through trial and error (with your help), they will begin to understand how to work with Final Cut Pro. When you assist them, try to make sure they have their hands on the mouse instead of you clicking for them. It's also great to have them share discoveries and challenges with their peers. They then tend to collaborate more on projects and are less intimidated about learning new aspects of the program.
- This is a good time to make use of the *Apple Pro Training Series: Final Cut Pro 6* book. You can align what the aspects of the movie they are working on with particular chapters. This is also where you can check for understanding of the key concepts and make sure they will be successful when taking the certification exam. If there are any areas in the book that this project did not touch on, you can review those topics with students.

## Conclusion: Real-World Connection

It is very common in the film and television business to have groups collaborating on a project. Even in the editing process, students might work with the director or producer while editing. It is important to be able to get critical feedback and incorporate it into one's projects.

## LESSON 9

# Producing a Music Video

Rhythm and pacing are essential skills for editing. Many editors are musicians as well, a combination of skills that helps pace a movie. This project is designed to help students develop the ability to produce music videos, musical montages, or highlight reels over a music track. In this project, students produce a one-to-three minute song about a topic in math, science, social studies, or English. This can be challenging as it involves writing an original song and making music in GarageBand, Logic Pro, or Logic. Because the project requires a lot of creativity, mapping out ideas is crucial. This is an exciting assignment because it forces the team to do something most of them have never done before—write a song.

## Preparation

Gather a varied selection of music videos to show the class. You can use videos from the iTunes Store or other Internet sites.

## Project Steps

1. Show the class a selection of music videos in different styles and ask students to watch closely for the style, technique, and structure of each. In particular, students should pay attention to the lighting and how the videos were shot. Is anything clichéd about them?
2. Have students work in groups to plan a song about a topic in math, science, social studies, or English. (For example, some of our students created a song about the nutrition pyramid.) Ask them to keep it simple with a chorus, at least three verses, and a possible bridge to help the transition between the verse and the chorus. Explain that their movies should be from one to three minutes in length and include both A-roll and B-roll. You can give students the Student Guide: Planning a Music Video and Student Guide: Producing a Movie Plan to help them with their music composition and their plan. Students may want to find musicians or other people who can help out with the music composition.
3. Once each group has a plan for the song, have them develop a production plan, including a timeline, a checklist, and responsibilities.
4. Students can use loops in GarageBand to compose their song. They may want to find musicians to help with the production. They could also use Soundtrack Pro or Logic Express instead of GarageBand.
5. Have the groups complete their music videos and edit them using Final Cut Pro.
6. Use a projector to share the videos with the class.

## Project Duration

2 weeks



## Competencies, Standards Descriptions

Students will work as a team to produce a product that started out as an idea. After brainstorming, they will create a rough plan, then a more complete plan for how to produce it. Students will apply their project management skills by making sure the team is on task and timelines are being met. Students will help identify key members of the team (or people outside of the team) who can do specific parts of production that they cannot do themselves. Students will learn to problem solve. This lesson will turn the students into good, researching producers. To write a song about a math topic, a science concept, or a social studies area requires an understanding of key words in those areas.

### Tip

Keep an up-to-date database of people in the school or in the community who can help in the moviemaking process. Your community can also extend out to the web to reach people who may be able to help students with sound, music, color correction, and so on. Your network is key to the success of this and future projects.

## Tools and Resources

### Tools

- GarageBand, Soundtrack Pro, or Logic Express
- Inspiration or other graphic organizer software
- Final Cut Pro
- Musical instruments or a MIDI keyboard (optional)
- Student Guide: Planning a Music Video
- Student Guide: Producing a Movie Plan

## Evaluation Ideas

Students demonstrate brainstorming and planning skills. They generate a structure and strategy to finish their music video from start to finish. This structure includes a mind map, a shot list, possibly a screenplay, a storyboard, roles and responsibilities (also called a *call sheet*), and posted timelines. The students will produce a one-to-three minute music video that discusses an aspect from a core content area. Students must create original music. Students need to use A-roll and B-roll effectively and follow the rules of good lighting, good composition, and good sound.

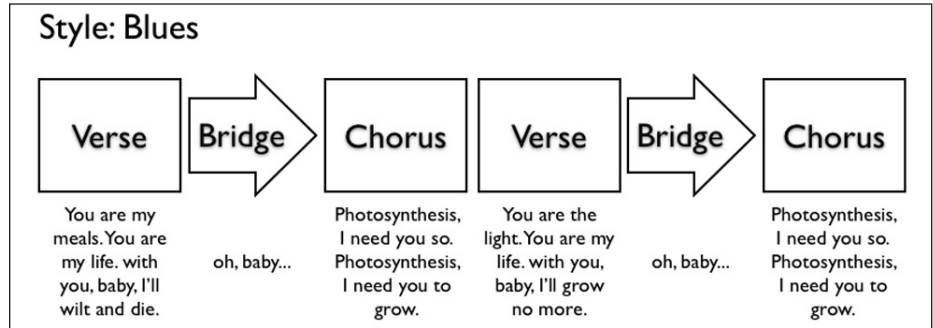
## Conclusion: Real-World Connection

Production sets rely on good communication skills between crew members and the people responsible for the different parts of the production process. The writers and planners need to be able to communicate the vision of the story and the goals of the project to the production crew. The production crew creates a strategy and structure to execute the recording of the required components. Once they are done, any changes and enhancements to the story they created are communicated to the post-production team. This teamwork and project management process is what separates successful production houses from amateur ones.

## STUDENT GUIDE

# Planning a Music Video

A typical song consists of verses and a chorus. The chorus is the hook, the catchy phrase, and the verse has the supportive stories. Sometimes a song has a bridge to transition from the verse to the chorus. A pop song structure usually looks like this:



This is a rudimentary attempt at a blues song about photosynthesis, but it's an idea that can work.

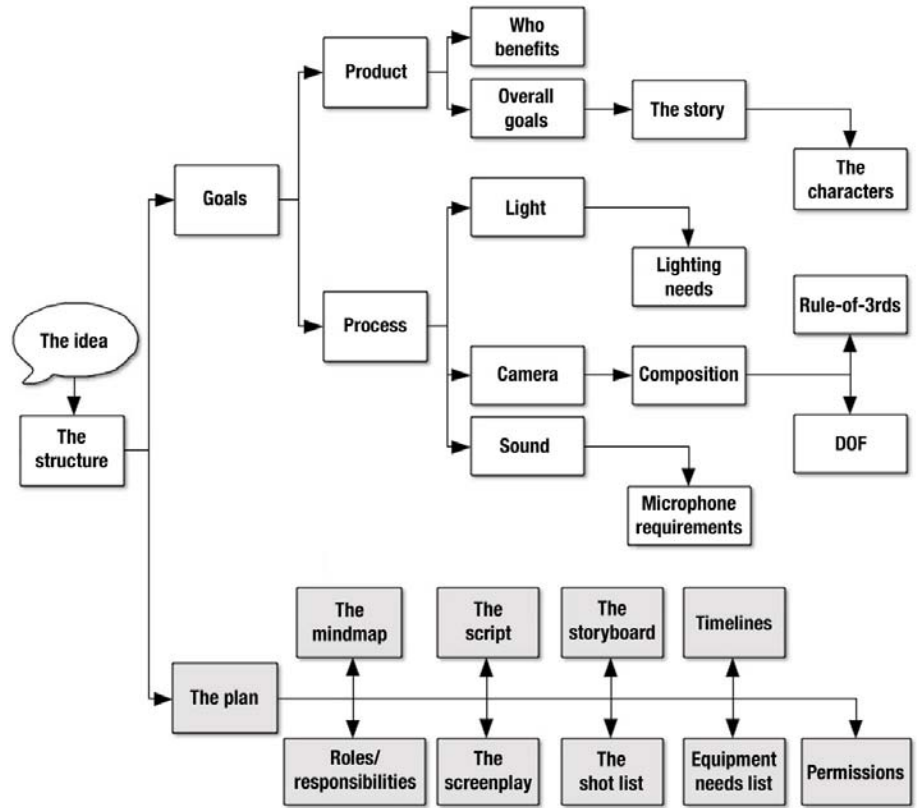
When producing a music video, the musical team completes the song and the video team creates the necessary images. Make sure to create a detailed plan of the music video.

As you work on this project, it's important to stay organized. Keep a checklist and a timeline of what needs to be done and by when. Make sure you communicate with the other team members about any changes that are made in the plan.

## STUDENT GUIDE

# Producing a Movie Plan

You can use this diagram to help you create the plan for your movie projects:



## LESSON 10

# Producing a Documentary

In this project, students produce two short documentaries, one about a student in the class and one about a family member. This is a good lesson on editing with a time constraint. Having short deadlines forces students to be more creative, selective, more critical. Some students may find it difficult to choose what gets omitted from the footage if their interviews go on longer than planned.

## Project Steps

### Activity 1: Making a Movie About a Student

1. Explain to students that they will work in groups (of at least three) to make a mini-documentary about a student in the class. Each movie project should use A-roll interview footage as well as B-roll context footage. Explain that these two-to-five minute projects should focus on who the student subject is, what the student does at the school, and why the moviemakers think that's important. Before they get started, have a class discussion of the types of questions that are most effective in interviews. For example, point out that when asking questions, it's best to stay away from questions that result in yes and no answers. Instead of asking questions like, "Do you like swimming in the Bering Sea?," they can ask, "Why do you like swimming in the Bering Sea?" Also, if students have a good rapport with the subject, the interviewer can ask the subject to begin his or her answers by including the question in the answer. This can be a great help to the editor. For example, when asked a question like "When did you start swimming in ice cold water?," the interviewer would answer, "I started swimming in ice cold water when I was 10 years old" instead of answering, "10 years."
2. Have each group choose their subject, create a plan, agree on the questions, and develop the necessary structure to produce the movie in five days (from start to finish). Because all of the movies are short (under five minutes), it's important that each team identify the most important two or three questions to ask the subject of their movie.
3. The student groups should film their interviews and then edit their movies using Final Cut Pro.
4. Once the movies are produced, show them to the rest of the class and have students peer review each other's work. They should evaluate how the groups followed the guidelines discussed up to this point in the course, including the use of lighting, rules of composition, and how they recorded, normalized, and equalized their audio recording. Does the movie flow from question to question? Is the use of A-roll and B-roll effective? Does music hurt or help the project? Do they like the movie? Why? Students should consider these questions as they watch each movie.

## **Activity 2: Making a Movie About a Family Member**

1. Explain to students that now they will each choose a family member to be the subject of a mini-documentary. Have the class decide on up to three or four questions that all students will pose to their subjects. As with the first activity, the projects should be short, with the purpose being to effectively communicate a story in a short amount of time. Point out to students that this is different than the process of writing a paper. With a writing assignment, a teacher usually asks for a report with a certain number of pages. The student then writes up to the acceptable amount. In moviemaking, it's the opposite. Moviemakers try and slim down a movie to its bare essentials. Once something is said, established, and clear, the director must move on to the next subject or sequence. With all of our movies, we have never kept all of the answers we were given in the movie. Ask students to narrow their stories and avoid producing up to a specific time.
2. Divide students into teams and have students introduce the family member they want to interview. If there is time, each student can have the opportunity to interview his or her family member. If not, students can pick one family member per team. Everyone in the team should be given a role, whether it be director, cinematographer, lighting person, sound person, or editor.
3. After students film the interview, have them look at the footage together to determine what will be included in the movie. While one or two students edit, the other students can begin creating the soundtrack, gathering any necessary images or graphics, and working on credits.
4. Have students present their work to the class. Students should provide feedback to their fellow classmates on what worked and what they can improve on.

## **Project Duration**

2 weeks

## **Competencies, Standards Descriptions**

This project puts all of the pieces together. Students will demonstrate knowledge of the content and structure of moviemaking. They will demonstrate collaboration, problem solving, creative thinking, and project management. Also, they will connect the purpose of the product of filmmaking with a process that supports it. A culture of feedback will be created to help monitor progress and add value to the production. In other words, students will now have the right questions to ask when asking for feedback from others. Self-evaluation and peer evaluation are essential competencies to achieve.

## **Tips**

- Before they begin their movie projects in this lesson, you might want to show the class one or more documentary movies. If the students see something they like, they can try and duplicate the process in the class. The more they see, regardless of whether or not a topic is enjoyable, the more ideas students will have. They can look at the pacing, the balance between A-roll and B-roll, and how they use music and audio.

- You can encourage students to watch documentaries outside of class by pointing out that movies and television are dominated by the documentary style. Reality shows, news shows, and talk shows all use the genre to tell stories. Documentaries like *Fahrenheit 911*, *March of the Penguins*, *Winged Migration*, and even to some extent, *Jackass*, have all gained in the box office compared to the blockbusters. In 2005, *March of the Penguins* earned more money than all of the Academy Award nominees for best film put together. The movie consisted of a narration by Morgan Freeman and spectacular footage of penguins surviving for their families, and it brought people to the theater in larger numbers than most films of that year. Cable channels like Bravo and Sundance have great documentaries. Also, point out that DVDs of narrative movies that students buy or rent may include additional documentaries about that production.

## Tools and Resources

### Tools

- Final Cut Pro

### Resources

#### Books

- *Making Documentary Films and Reality Videos: A Practical Guide to Planning, Filming, and Editing Documentaries of Real Events* by Barry Hampe
- *Documentary Storytelling for Video and Filmmakers* by Sheila Curran Bernard
- *Writing, Directing, and Producing Documentary Films and Videos* Third Edition by Alan Rosenthal
- *Directing the Documentary*, Fourth Edition by Michael Rabiger
- *The Filmmaker's Handbook: A Comprehensive Guide for the Digital Age*, Completely Revised and Updated by Steven Ascher (Author), Edward Pincus
- *Making Media: Foundations of Sound and Image Production* by Jan Roberts-Breslin

Also, you can go online and search for blogs and forums that provide information on making documentaries.

## Evaluation Ideas

Students peer review all projects. As they view the movies, they can use a checklist that lists the basic goals of the project as developed by the class at the beginning of the process.

## Conclusion: Real-World Connection

Keeping the movies in this project short means students build their portfolios quickly and experiment with different styles. Having a paper trail of their planning will be part of what will make them more marketable in the work place.

## LESSON 11

# Producing a 30-Second Super Bowl TV Ad

Thirty-second ads are difficult to produce because a lot has to be communicated in a very short period of time. This means that other production elements like light, color, pacing, and music need to be brought into the mix to present a clear message to an audience. Sometimes commercials have more instructions than movies or music videos because of the tight timeline. In this project, students brainstorm for ideas, generate a basic map or blueprint for the project, define roles and tasks, and create a storyboard, a production workflow, and a schedule. They will give and receive ongoing feedback to and from peers (“three before me” policy).

## Project Steps

1. Show students Super Bowl commercials that have aired in the past. Have students take notes and discuss what makes certain commercials great. Explain to students they will work in groups to produce their own original Super Bowl ad, with the following guidelines:
  - The commercial should be 30 seconds long. Not one second shorter or longer.
  - It can be a narrative, documentary, or abstract movie.
  - Students need to adhere to the production guidelines of light, composition, and sound.
  - There needs to be good communication between the writer and the editor (and all of the people in between).
  - If music is used, it must be either original or copyright free.
2. Have students work in groups to brainstorm what products or services their team would like to sell and market to the world. Remind them that the Super Bowl is the biggest day of the year for commercials. The key here is to be different. Students should include as many people as possible in discussions of products and services people like or dislike and then take notes from those discussions. They should write down who benefits, who loses out. What is the product’s or the service’s purpose? These brainstorm sessions can generate good ideas for how to present a commercial. If a team cannot come up with a good idea, encourage the team to come up with bad ones. Challenge the team on who can come up with the worst idea. Any idea is a good idea. Otherwise, the group members just sit there and stare at each other.

Some ideas they can choose from are:

- An item in the classroom or at home
- An invention that improves a mundane process
- A schoolwork helper
- A satire of an already existing item

3. After groups have an idea, they should come up with the plan, assign roles, and define a timeline for the project, and then produce it. They can use the Student Guide: Producing a Movie Plan to help with the planning process.
4. When the commercials are done, use a projector to show them to the class. Students should peer review each other's work.

## Project Duration

4 days

## Competencies, Standards Descriptions

Students will produce a well thought out 30-second commercial. They will assemble a team, generate an idea, convince the team to produce the idea, create a project plan, manage the process, edit it, and showcase it to the class for final evaluation. Students will work together in a team to complete this project. They will learn valuable project management skills.

## Tools and Resources

### Tools

- Final Cut Pro
- Student Guide: Producing a Movie Plan (included with Lesson 9)

### Resources

YouTube is a great site for commercials. Every Super Bowl ad since "1984" can be found online.

## Evaluation Suggestions

Students produce a 30-second commercial and can showcase their brainstorming and planning skills. The commercial can be a narrative, documentary, or abstract movie. Students need to adhere to the production guidelines of good use of light, composition, and sound. It is important that there be good communication between the writer and the editor and other team members. Students peer review each other's work.

## Conclusion: Real-World Connection

The most difficult movie story to tell is the one that is told in 30 seconds. Filmmakers have to be able to master the various factors in movie storytelling to help convey the story in such a short time. Color, camera movement, composition, angles, lines, sound, acting, pacing, and art direction are supportive players when telling a story. Mastering as many of these elements as possible makes the filmmaker that much more valuable to a producer. Most effective commercials are funny or touching. Students will find making such commercials to be a valuable skill.



## LESSON 12

# Creating a Cross-Curricular Project

In this project, students create a short video related to one of their other classes. The projects can be anything related to the content area. Some students might do a scene from a book they are reading while others might do a short piece on a chemistry project. Whatever they decide, it is important to let the story be theirs. This is where the students start to get ownership of their projects.

## Project Steps

1. Explain to students that they will create a short video with a subject matter that is related to one of their other classes. Provide them with some examples if necessary.
2. Have students complete an outline, a script, and storyboard before they begin filming. If they are making a documentary, they need to provide an outline, shot list, and a list potential interviews.
3. As students are working on these projects, they can also be learning lighting, camera work, audio, and editing using the certification materials.

## Project Duration

3 weeks

## Competencies, Standards Descriptions

Students will demonstrate an understanding of the following:

### Pre-Production

- Script, storyboard, schedule

### Production

- Basic lighting techniques
- Basic camera framing and positioning
- Audio microphone placement and positioning
- Procedures for the staff

### Post-Production

- Capturing and editing in Final Cut Studio
- Exporting their project

Students will work as part of a collaborative team to accomplish tasks.

## Tools and Resources

### Tools

- Final Cut Pro

### Resources

- *Apple Pro Training Series: Final Cut Pro 6* by Diana Weynand

## Evaluation Suggestions

Students peer review all projects together. Students help each other with challenges of Final Cut Pro when possible.

## Conclusion: Real-World Connection

To complete this project, students will learn to manage their schedule and others. They will learn that often even with a plan, things change and the task still needs to be accomplished. Students will work with other teachers, students, and even parents to finish. It is the students' reactions to setbacks that will determine if they will be successful. In the real world, this is similar to any project where you manage people and accomplish a common goal, react to setbacks, and problem solve. It takes creativity, planning, and high standards to have a quality video. These skills translate to any career path.

## LESSON 13

# Film • Fiction

Students will create a five-minute fictional film that has a fully developed script, storyboard, and budget. This lesson synthesizes many elements of what students have learned so far. The key areas of the project can be easily linked to Final Cut Studio Training series lessons.

## Project Steps

1. Explain to students that they will create a five-minute fictional film in this project. In addition to developing a script and a storyboard, they will produce a budget. Introduce Lesson 14 with this lesson so students can develop a full budget for their movie based on the current prices for services and equipment.
2. Have students develop their movie script, storyboard, and budget before casting and filming their movies.
3. Students should edit their films in Final Cut Pro.
4. As students work on their movies, they can also be learning lighting, camera work, audio, and editing using the certification materials.
5. When the films are done, use a projector to show them to the class. Students should peer review each other's work.

## Project Duration

1 to 6 weeks

## Competencies, Standards Descriptions

Students will demonstrate an understanding of the following:

### Pre-Production

- Script, storyboard, schedule, and budget

### Production

- Basic lighting techniques
- Basic camera framing and positioning
- Audio microphone placement and positioning
- Procedures for the crew

### Post-Production

- Capturing and editing in Final Cut Studio
- Exporting their project

Students will work as part of a collaborative team to accomplish tasks.

## Tools and Resources

### Tools

- Final Cut Pro

### Resources

- *Apple Pro Training Series: Final Cut Pro 6* by Diana Weynand

## Evaluation Suggestions

Students peer review all projects together. Students help each other with challenges of Final Cut Pro when possible.

## Conclusion: Real-World Connection

To complete this project, students will learn to manage their schedule and that of others. They will learn that often even with a plan, things change and the task still needs to be accomplished. Students will work with other teachers, students, and even parents to finish. It is their reactions to setbacks that will really determine if they will be successful.

In the real world, this is similar to any project where you manage people and accomplish a common goal, react to setbacks, and problem solve. It takes creativity, planning, and high standards to have a quality video. These skills translate to any career path.

## LESSON 14

# Budgeting

Have students create a budget for the film they make in Lesson 13 or for another recent class movie project.

## Project Steps

1. Discuss with the class what information is needed to produce a budget for film productions and how students can obtain that information. If necessary, go over the basics of using a spreadsheet application.
2. Have students create a budget for a film. The budget should be based on current pricing of all expenses related to the project. Students need to do research online and to make phone calls to rental houses. They will also need to check with different unions to find out their fees and rates. You can hand out the sample budget, Student Guide: Production Spreadsheet.

## Project Duration

1 week

## Competencies, Standards Descriptions

Students will demonstrate an understanding of the following:

- Knowledge of a basic spreadsheet
- The ability to research and interact with businesses both online and on the phone

Students will work as part of a collaborative team to accomplish tasks.

## Tools and Resources

### Tools

- Microsoft Excel or Numbers
- Safari or another web browser with an Internet connection
- Student Guide: Production Spreadsheet

### Resources

Google or another search site

## Evaluation Ideas

Students submit their budgets in their production package containing all of the resources related to their film project. Students help each other whenever possible.

## Tip

We try not to give the students exact websites to look up. They start helping each other and often find some great resources along the way. They also learn that they do not necessarily need to own the equipment to shoot a production. Students are often shocked at what they have access to in class and how much it would cost them to shoot their project commercially.

## Conclusion: Real-World Connection

This lesson is often one of the first times the students make any kind of budget in their life. This is a critical part of understanding this business. Often, students don't realize that the business is not "just editing." In the future, they may be running or working for a small business and will need to have some financial understanding and business sense.

## Production Spreadsheet

		Period 4							
<u>Equipment/Personelle Needed</u>	<u>Cost</u>	<u>Per</u>							
(DP)	Director of Photography	1000 day							
(HDV)	Sony Z1U HDV Camcorder	350 day							
(MIC)	Audio Technica 897B	25 day							
(BP)	Boom Pole	20 day							
(W/L)	Sennheiser Wireless G2	80 day							
(TRI)	Tripod Sachtler DV4	100 day							
(STDCM)	SteadyCam	150 day							
(LC)	Light Kit (1 650W, 2 300W)	90 day							
(SL)	Deneke Slate	50 day							
(ACT)	Actor Expenses	1040 week							
	<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>	<b>Day 6</b>	<b>Day 7</b>		
(DP)	1000 DP	1000 DP	1000 DP	1000 DP	1000 DP	1000 DP	1000 DP	1000 DP	1000
(HDV)	350 HDV	350 HDV	350 HDV	350 HDV	350 HDV	350 HDV	350 HDV	350 HDV	350
(MIC)	25 MIC	25 MIC	25 MIC	25 MIC	25 MIC	25 MIC	25 MIC	25 MIC	25
(BP)	20 BP	20 BP	20 BP	20 BP	20 BP	20 BP	20 BP	20 BP	20
(TRI)	100 TRI	100 TRI	100 TRI	100 TRI	100 TRI	100 TRI	100 TRI	100 TRI	100
(STDCM)	150 STDCM	150 STDCM	150 STDCM	150 SL	50 STDCM	150 STDCM	150 STDCM	150 STDCM	150
(ACT)	149 ACT	149 ACT	149 ACT	149 ACT	149 ACT	149 ACT	149 ACT	149 ACT	149
(LC)	50 SL	50 SL	50 SL	50 SL	50 SL	50 SL	50 SL	50 SL	50
<b>Total</b>	<b>1884 Total</b>	<b>1884 Total</b>	<b>1844 Total</b>	<b>1844 Total</b>	<b>1744 Total</b>	<b>1844 Total</b>	<b>1844 Total</b>	<b>1844 Total</b>	<b>1844</b>
			<b>Grand Total</b>		<b>Grand Total</b>		<b>Grand Total</b>		12848 dollars

## LESSON 15

# Filming a Professional-Looking Product

This lesson is designed to get the students thinking and understanding how and why movies look different than those created with consumer or prosumer camcorders. Some of the reasons relate to lighting and framing, as discussed in earlier lessons. Even with perfect framing, however, there is still a significant difference in the picture, most of which has to do with the depth of field. Most cameras below \$6,000 have lenses that make it difficult to control depth of field. In this lesson, the students create a short scene with two people that they shoot three times with three different camera angles.

## Project Steps

1. Explain to students that in this project they will shoot the same two-person scene three times with three camera angles: one wide shot with both of the actors in the shot (a *2 shot*) and close-ups (*singles*) of each of the actors. The main goal of this lesson is to make sure that the background is out of focus. Demonstrate what is necessary to accomplish this with the classroom cameras. You will need to use a camera that lets you control the iris and shutter speed manually.
2. Have the students work in groups to come up with a short script of no more than a page for this project.
3. Students should draw a map of the shooting location that includes camera positions and distances from the camera to the foreground and the camera to the background.
4. Have students write down all settings of the camera, including the f-stop, shutter speed, and gain.
5. Once students have shot their footage, watch their footage and either approve them to begin editing or send them back to redo it. You can check for proper framing and lighting as well. When we do this lesson with our classes, we don't worry about audio too much because we want them to focus on the picture.
6. The editing process for this project is a good time for students to work with the multi-clip editing feature in Final Cut Pro.
7. Use a projector to show all the edited pieces to the class and ask students to evaluate each other's work.

## Project Duration

1 week



## Competencies, Standards Descriptions

Students will demonstrate an understanding of the following:

- Composition skills with the camera
- How to use the shutter speed, iris, and focal length (zoom) to affect the depth of field
- Tracking their shots
- Multi-clip editing in Final Cut Pro

## Tools and Resources

### Tools

- Final Cut Pro
- *Apple Pro Training Series: Final Cut Pro 6* by Diana Weynand (information on multi-clip editing)

### Resources

- celtx scripting program  
[www.celtx.com](http://www.celtx.com)
- Articles and other information about video editing  
[www.videomaker.com](http://www.videomaker.com)

## Evaluation Ideas

Students need to get footage and documentation approved by you before editing. Students peer evaluate projects upon completion with feedback.

## Tip

This lesson is great for students to discover how they can control the differences in how a shot looks. They also discover how they can add emphasis to key elements of the story. If you want to add to the lesson, you might teach “Rack Focus,” which is something the students enjoy learning.

## Conclusion: Real-World Connection

This lesson is designed to help create an appreciation for visual imagery and cinematography as a craft. The students will become more aware and have a better understanding of how the camera is like a paintbrush for an artist.

## LESSON 16

# The Show!

Experience is one of the primary ways people develop into good editors and filmmakers. Knowing what does and doesn't work usually results from making mistakes and learning from them. Students need as much opportunity to create content as possible. To make all of the projects more meaningful and to help with the school's communication to students, teachers, and the community, the class produces an online show in the format of a news magazine. Students create content with real timelines and learn to work collaboratively as a team. If the content and the process are 100% student driven, students will maintain their interest.

## Project Steps

1. When you first start the project, explain that students will produce their own online news magazine show on a regular basis, such as once a month.
2. Divide roles among the students and set up a schedule so that students will rotate through each of the roles. One role is the overall show producer and another role is the segment producer who is responsible for managing each part of the show, such as sports or current events. The show also needs to have motion graphics people and hosts. Try to facilitate the learning in such a way that the students are in charge and handle most challenges along the way. The producers should set the timelines (each segment producer sets up a schedule for that segment) and it is up to the students to hit their target dates. Each team works together with writers, editors, and camera people. Sometimes a big part of what the students do is on the phone coordinating their segment. You can hand out the Student Guide: Magazine Show Workflow to students to help them get started.
3. Students should film their footage, create motion graphics and titles with Motion and LiveType, and then use Final Cut Pro to assemble each show.
4. Have the class review each show and provide feedback to the team that they can incorporate into their finished episode.
5. As each show is completed, post it to the school or class website so it can be viewed by other students, family members, and the community.

## Project Duration

All weeks

## Competencies, Standards Descriptions

Students will demonstrate an understanding of the following:

- Ability to work as a team to finish their segment
- Ability to work under time constraints
- Ability to problem-solve when setbacks occur
- How to use all aspects of Final Cut Studio, including Final Cut Pro, Motion, and LiveType

## Tools and Resources

### Tools

- Final Cut Studio
- Student Guide: Magazine Show Workflow

### Tips

As a teacher, you can help students learn to plan ahead for challenges and setbacks. We have found that invariably there always are setbacks. It is how the students react and problem-solve that provides powerful learning. Often students will have an interview fall through and have to figure out a way to still get the story. This lesson also helps them understand timelines. If they have time sensitive material, like a holiday episode of a show, and they release it after the holidays, they have put in a lot of work for something that has passed.

### Evaluation Ideas

Students peer evaluate projects and students incorporate feedback in the project. Students post their project online for the student body and community.

### Conclusion: Real-World Connection

Working as a team is an essential skill for careers in any field. In this case, being able to help each other when needed and to communicate appropriately and professionally when coordinating interviews and stories are key to being successful.

## STUDENT GUIDE

# Magazine Show Workflow

