

Video Production Reference Guide



This reference guide is intended to familiarize teachers with basic terminology and techniques in video production, which is only one component of the media arts. In our media-rich world, the ability to produce engaging and effective videos is an increasingly important literacy skill and can be an effective communication tool for students. They can use video to express their perceptions, concerns, ideas, and even what they are learning in school. It is a collaborative activity that requires students to engage in creative thinking, critical thinking, problem solving, and producing.

Students consume visual media throughout their daily lives, and as mobile devices become more prominent and more robust, they find themselves in the role of content creators. For example, students can easily take pictures, capture video, edit, and share their creations with a larger, virtual community on one device. Educators can embrace these new capabilities as opportunities to engage students, while also helping students learn to be responsible, effective, and skillful digital content creators and consumers.

The experience of sharing their stories, demonstrating understanding, and collaborating as a team also provides students with skills needed for future success. Student video projects can be used to teach almost any content as long as the time and equipment are available to them. There are numerous ways you might want to incorporate video into your instruction, such as PSAs, documentaries, demonstrations, interviews, newscasts, commercials, and animations.

Here's What You'll Find In This Section of the Media Arts Toolkit:

- Sharing the Work with an Authentic Audience
- Terms and Techniques
- Roles and Careers
- Sample Documents for Students
- KET Activities

Sharing the Work with an Authentic Audience



One of the most important components of a media arts project is sharing student work with an authentic audience. When students know that people other than their teacher will see their work, their motivation is immediately increased.

Each project should be designed for a specific audience, so have your students consider appropriate and creative ways to reach that audience as part of the assignment. It may be

that the best way to share the work is in person, or it might be through a website.

Some other options for sharing include:

- Presenting the project to a panel of professionals who can give feedback.
- Creating online portfolios using a tool such as Wix or Weebly.
- Posting to the [KET School Video Project Site](http://svp.ket.org). <http://svp.ket.org>
- Entering projects into the annual Student Technology Leadership Program Showcase.
- Submitting projects to the [PBS NewsHour Student Reporting Labs](http://www.studentreportinglabs.com). <http://www.studentreportinglabs.com>

In addition to sharing the work as a summative experience, projects should be shared with peers and others throughout their development so that students can learn from receiving feedback. This sharing deepens the relationship students have with the project and provides information to guide revisions, which are a natural part of any creative work. It also helps them learn from and correct any mistakes during the project instead of at the end, when the bulk of learning on the project has ended.

Without careful planning and communication, it can be difficult to evaluate projects, especially when you give students some voice and choice in the project. That is why it is critical to have a **rubric** with clearly defined criteria and to review that rubric with students in advance. You can even start with a basic rubric and give students some voice in the criteria included. It is critical that students understand how their project will be evaluated.

Self-reflection helps students recognize what they have learned through the process and what they must work on to improve. Students can use the project rubric and evaluate themselves both as a formative assessment and as part of the summative evaluation. Alternatively, the teacher can create a more student friendly handout or online form for the student to use that is based on the rubric.

Terms and Techniques

Phases of Production

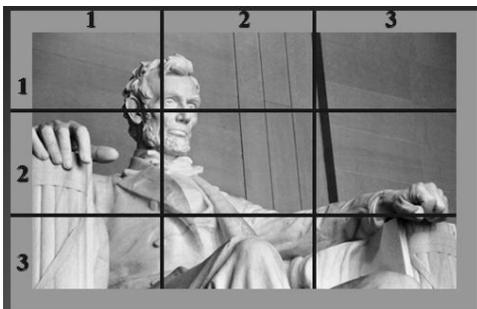
- **Pre-production** is the planning phase of the video production process. It is important for students to develop a clear and meaningful topic through research and writing. The product of this phase will be either a script or a storyboard to guide the rest of the production.
- **Production** is the phase in which the video and audio are recorded. The script or storyboard will serve as a blueprint for the entire production process to help the crew efficiently record video and audio to use in post-production.
- **Post-Production** is the phase in which the recorded media is assembled into one cohesive production. Editing is the dominant component of the post-production process. Preparations made during the pre-production phase will serve as a road map for completion of the product.

Continuity

This is an important concept to keep in mind during recording of video/audio and later in post-production. Continuity means that if something is in one position or state-of-being in one shot, it needs to be the same way in the next shot unless it has purposely been changed for storytelling purposes. Some examples of lack of continuity are changes in a subject's clothing, hair style, body position, or the position of objects on the set. Another example is when a subject is traveling in one direction in one shot, but in the next shot the movement is in the opposite direction. Continuity changes can also occur with audio if scenes are shot in different locations or at different times but are supposed to be occurring in the same location.

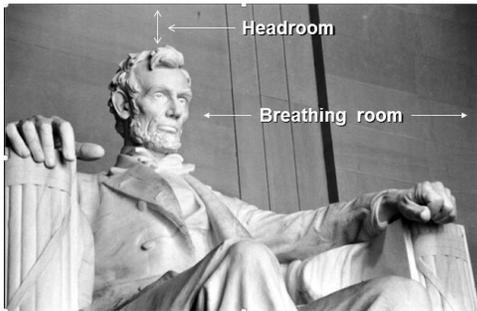
About Framing the Shot

Rule of thirds: Divide the image in the viewfinder into horizontal and vertical thirds like placing a tic-tac-toe grid over it. Place a key part of the image on one of the intersecting points. This keeps the picture interesting and creates a balanced image.



Head room: The space between the top of the head and the upper edge of the picture or television screen.

Breathing room: The space in front of a person's face when recorded in profile.



Lead room: The space in front of a moving object or person.



Types of Shots

Wide shot (WS): A shot taken from a distance to show a landscape, building, or large crowd, such as the view of New York City from Ellis Island. Wide shots are often used as establishing shots at the beginning of a scene.

Establishing shot (EST): A shot, usually wide, that shows the relationship among important characters and the setting or other objects. The establishing shot can also set the mood of the scene.

Medium shot (Med): A shot of the talent from waist up, or a shot of a subject or object at a medium distance from camera. This shot is at a conversational distance and is perfect for taping news anchors or people in an interview.

Close-up shot (CU): Only a person's head or a single object is shown, filling the screen completely. Close-up shots of just a person's face are used to show the emotions of a character. Close-ups can also be used to point out an object important to the story, for instance, a rose lying on the sidewalk.

Medium close-up shot (MCU): Halfway between a medium and a close-up shot.

Extreme close-up shot (ECU): A shot that shows only part of a person or a part of an object, for example, a person's eye with a tear falling from it or a detail of a machine.

Reaction shot: A close-up of someone reacting to something.

Reverse angle shot: A shot that is from the opposite angle as the one before it. For example, in the first shot, the character is looking in the refrigerator. In the second shot, the camera is positioned in the refrigerator looking out at the character making a snack selection.

One shot: A shot with one person in it, usually framed as a medium close-up. Examples include shots of someone eating alone at a table or running in a marathon.

Two shot: A shot with two people in it usually framed as a medium close-up. This is a typical conversation shot between two people, such as a couple sitting together having a conversation on a park bench.

Cutaway shot: One that is related to the main action but briefly leaves it, or cuts away from it, such as a reaction shot or a shot of what a subject is talking about that is not on scene.

Point-of-view shot (POV): The camera is used to show a scene through a character's eyes or another observer's perspective. Any point-of-view shot takes the viewer out of the role of bystander and vicariously puts him/her into the action.

Over-the-shoulder shot: This type of shot is used in many interviews. It makes the audience feel they are in the room where the conversation is taking place, observing or eavesdropping over someone's shoulder.

High angle shot: The camera looks down on what is being photographed and creates a point of view, such as what the principal sees as he looks down at a young student or what a person sees as she stares over the parapet of a castle.

Low angle shot: The camera looks up at what is being photographed and creates a point of view, such as what a student sees as she stares up at the principal or the image of the castle looming over the character from ground level.

Head-on shot: A shot where the action is coming straight toward the camera, for example, a car is heading directly toward the viewer.

Dutch angle: Combines a low angle shot with the camera tilted sideways. For example, a shot of a haunted house where the house not only looms over the viewer, but also seems off-kilter to make the viewer feel disoriented or off-balance, like on the deck of a ship in rough seas.

Underexposed shot: The picture is darker because of insufficient lighting. Shots in horror films are good examples, such as the lighting in a haunted house or a midnight chase through the cemetery.

Overexposed shot: The picture appears washed-out because of too much lighting. A desert scene in which light shines directly into the camera, or when something explodes, causing the screen to go completely white, are examples of overexposed shots.

Camera Moves

Pan (panorama): The camera moves horizontally (left to right or vice versa) to take in a whole scene. For example, the camera might pan slowly, taking in the whole crowd to search for the person who called out. Avoid panning quickly unless for effect.

Whip Pan: Panning too fast across a scene will cause the image to have a blurred, streaked look. In most instances this is to be avoided. However, a whip pan can be used effectively as a transition between shots to show a passage of time or a very fast pace of action, such as in action/adventure movies.

Tilt: The camera moves vertically up or down to take in a scene or object from top to bottom or vice versa. For example, the camera shows enormous boots and then tilts up to reveal the giant that fills them.

Zoom: The camera doesn't move in this shot but the appearance of movement is achieved with a telephoto lens, which allows the distance between the camera and the object being recorded to change during the same shot. The camera can zoom in to get closer to an object, or it can zoom out by pulling back from an object.

Selective Focus (rack focus): This technique involves first focusing on one subject in a scene and then changing the depth of field to focus on something behind, or in front of, the original subject. For example, an alarm clock is in focus in the foreground with everything beyond it out of focus. The alarm sounds and we see it go out of focus, and the person rising from sleep beyond the clock then comes into sharp focus.

Dolly (tracking): This refers to a move where the camera is mounted on a platform called a dolly, which is pushed on rails toward or away from the subject. It can also follow alongside a subject; in which case, it is called a “dolly with.” This move can be done by safely placing the camera operator in a desk chair, wagon, or even a grocery cart.

Zolly (push-pull, trombone): A combination of the words zoom and dolly, this is a shot in which the camera zooms out from the subject while at the same time dollying toward it. This has a dizzying, disconcerting effect on the viewer. The classic example of this move is in the Alfred Hitchcock film *Vertigo*, where it was first used.

Trucking (crabbing): A tracking shot that moves from side to side instead of toward or away from the subject.

Audio Recording Field Production Tips



It may seem obvious, but selection and acoustic control of the location or venue for the shoot is very important for recording high-quality audio. Don't overlook environmental noise, like traffic and airplanes, or lack of sound-proofing of a shooting location.

Your brain does a marvelous job of masking or filtering out unwanted sounds that your ear captures, but when you put on the headphones and listen to playback from your media, you will notice, much to your frustration, that many of the noises your senses filtered out are all too distracting in your audio track.

Exterior Locations

1. Listen for lawnmowers, string trimmers, and other nearby noises, and, if possible, ask the operators to stop their work or maybe work farther away until you're finished recording. Please remember, however, that you are the guest, so be polite, or you will quickly wear out your welcome.
2. If you're recording human voices, don't shoot near airports, bus terminals, or construction sites unless it is absolutely necessary. If you are covering an activity at

- one of these kinds of sites, plan to shoot the video only with some of the natural sound (often referred to as “ambient” or “nat.” sound), and then arrange to have your interviews at another location where you can control the noise level. You can then use the interview as “voice over” (VO) in editing the piece.
3. Use directional microphones to get more of what you want to hear over what you don’t. When you visit a potential shooting location, listen with a critical ear. Be there at the same time and position where the actual production will take place.

Interior Locations

1. Listen for HVAC noises. Turn off a loud air conditioner if possible. Just remember to turn it back on before leaving. The same goes for major appliances that go through on-off duty cycles. Turn them off and remember to turn them back on when you’re done. A good tip is to leave car keys in the refrigerator to make sure you don’t forget to turn it back on.
2. If the lighting person doesn’t do it first, turn off noisy fluorescent fixtures.
3. Make sure all animals are comfortably located away from the scene.
4. Use packing quilts and other absorptive materials to dampen reflected sound in rooms with hard surfaces.
5. Make sure everyone on the set has turned off all personal electronic devices. Turn phones completely off—they can still be heard in vibrate mode.

Micing the Sound Source

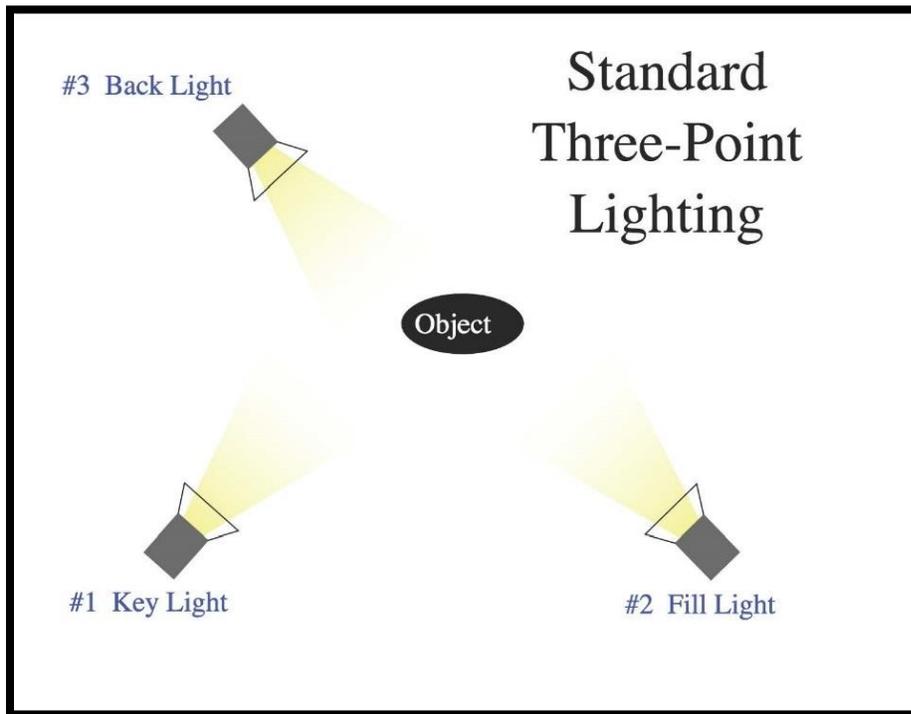
The abbreviation for microphone is “mic,” not the name “Mike.” Also, the mic plugs into a “cable,” not a “cord.”

1. The secret to the best sound possible is to get the mic as close as possible to the sound source. This generally means using a video camera with an external mic input. Don’t use the built-in mic unless you don’t need to clearly hear people talk.
2. Use a proper mic for the job. A lapel or lavalier (“lav”) mic works best if you don’t mind having the mic seen. However, lav mics can be hidden under clothing. Take care to secure the mic so it is not rubbing against cloth or jewelry.
3. Protect the mic from wind noise and even breath noise from talent by using a windscreen (like a soft foam cover).
4. If you have access to directional microphones, which are highly focused, you might use these to record the sound out of the frame of the camera shot. This allows you proximity to the sound source without being seen. These shotgun mics can be mounted on a “fishpole” (you could acquire a professional boom pole or use the shaft of a floor mic stand) to follow moving talent.
5. With a meter and/or headphones, monitor the level, or volume, of the signal as close to the recording device as possible to avoid any unwanted noise.

In summary, pay special attention to the environment in which you record sound and get as close as possible to the audio source. Remember, the video won’t be successful if you can’t hear the audio.

Standard Lighting

The following graphics show the standard three-point lighting setup that will help make your video look great. To properly light something or someone, start with the key light, which serves as the main light source. The fill light then gets rid of some of the shadows created by the key light. The back light helps separate the subject from the background.



Roles and Careers

The roles required in a classroom video project reflect common professional careers in television and video production. The following job categories provide basic information about those careers.



Job Category: Producer

The producer is the main organizer of a program or video. He/she researches ideas and develops them into project proposals or adapts existing ideas or scripts. Once a production is under way, the producer takes care of all financial matters and prepares the production schedule. As the supervisor of the director, the associate producers, the production assistants, and the technical crew, the producer has the ultimate responsibility for the project.

Collaboration: The producer brings everyone together in a collaborative way. The producer might call a meeting of the writer, associate producers, and director to discuss the theme of a project, then bring together the technical crew (lighting director, scenic designer, costume designer, camera operator, etc.) to discuss achieving a certain look or feel. The producer allows for the open exchange of ideas, which is

critical in the creative process and makes the project stronger.

Education Needed: No one course of study will get you ready to be a producer. A background in communications, mass media, arts, music, or drama is helpful, but good producers come from all walks of life.

What the Supervisor Looks for When Hiring: A producer must be able to tell good ideas from bad ones and must also possess the ability to present a program to the public in the most original, exciting, creative, and effective way possible. A producer must possess storytelling skills, creative vision, organizational skills, effective and efficient budgetary skills, “people skills,” and effective communication skills.

Job Category: Director

The director is the person responsible for the final look and feel of the video or program. A successful program must effectively deal with the feelings and emotions of the viewers. Therefore, the director’s first responsibility is to the viewing audience. The director takes all

the elements of a production—script, set, talent, and the crew—and uses them creatively to tell the story. To do that, a director must be able to “think in pictures”—to take a script made up of dialogue and stage directions and visualize what it will look like as a video program. The director then takes that visualization and, working with the production crew and the talent, brings it to life on the screen.

A director must be able to judge when a particular picture, sound, or camera movement is good or bad and be able to say why. In overseeing the production crew, the director’s job is to help each person do his or her best, so that the final product is the best it can possibly be.

A director must be quick and decisive—especially in live television! The director literally “calls the shots.” You often do not have time to try two or three different shots or angles. In a highly technical medium like television, the director must be creative and artistic, yet be mindful of the limitations of the equipment and the production crew.

To help you imagine yourself as a director, here is a list of the things the director does during a live program. Remember, you have to do all of these at once!

- Talk to, and listen to, the camera people, audio operators, floor director, and video engineers. You may instruct the talent as well.
- Follow the script, making sure each camera has its assigned shot.
- In the studio, watch multiple monitors to make sure the next shot is ready.
- Keep track of the time, giving floor cues and countdowns to the floor director or talent.
- Listen to the audio. If an announcer makes a reference to a man with a funny blue hat, the director must quickly instruct a camera operator to get a shot of that person.

Education Needed: A good director has a varied education that includes a background in the creative arts—music, drama, painting, or dance. Most often, directors have prior experience at other production jobs such as camera operator, assistant director, and technical director.

What the Supervisor Looks for When Hiring: A director must work well under pressure and make artistic or crew management decisions quickly. Like the producer, the director must be able to tell good ideas from bad ones and possess the ability to present a program to the public in the most original, exciting, creative, and effective way possible. A director must possess storytelling skills, creative vision, organizational skills, “people skills,” and effective communication skills.

Job Category: Associate Producer

Associate producers help the producer and director during production in many ways. They time segments or programs, follow scripts, log (write down) camera shots, work with cue cards or the teleprompter, keep continuity notes, proofread electronic graphics, and help schedule guests and talent.

As a project is being planned, associate producers research the program’s topic, searching for old photos, film, and video recordings that might be needed and obtaining copyrights and permissions where needed. They maintain records and files, including budget information and talent contracts, and they help make arrangements for travel and location work.

Education Needed: Many associate producers start in the television business as interns or production assistants. Associate producers often become producers after they gain enough experience and have some credits to their name.

What the Supervisor Looks for When Hiring:

Excellent organizational skills (the ability to handle numerous details and budgets); good communication skills (both in person and on the phone); adaptability (if the director needs a fog machine but you can’t find one, can you improvise with buckets of dry ice?); strong clerical and computer skills (for keeping notes, logging footage, etc.); the ability to act as the producer’s representative in dealing with staff, talent, and the public.



**Job Category:
Videographer (Camera Operator)**

The videographer runs an ENG (electronic news gathering) or DSLR (digital single lens reflex) camera in the studio or at remote locations, working closely with the producer and director. In the studio, several camera operators may be receiving instructions from the director through their headsets. The director can switch between

the cameras to choose the view he or she wants at any moment. The videographer may also work individually on a remote shoot (a production that is away from the studio). In that case, the videographer needs some knowledge of lighting and working with talent to perform those jobs, too.

A good videographer knows how to tell a story with a camera—and knows the differences between various brands and models of cameras. Once the basics of shooting (such as panning, zooming, and framing a shot) have been mastered, then the camera operator can be artistic and take chances.

Education Needed: Videographers often have a bachelor’s degree in videography, video production, photography, or a related field. Because technology is always changing, videographers need to continue their professional education.

What the Supervisor Looks for When Hiring: Many videographers enter the field as a

production assistant to get on-the-job experience. An experienced videographer will produce a “reel,” or professional portfolio, of their best work.

Job Category: Technical Director (TD)

The technical director operates and adjusts electronic television studio equipment. Before shooting starts, the TD works with the producer and director to make sure all equipment needed for a production is available and working. The TD may also operate a switcher, digital effects generator, and other equipment during the production or during editing. The TD often acts as the editor as well.

Education Needed: A degree from a technical school or an associate degree in broadcasting.

What the Supervisor Looks for When Hiring: A technical school degree and previous job experience helps.

Job Category: Editor

The editor operates all the equipment and software connected to the editing process and works with the producer and director to assemble the finished program out of all the media captured.

Education Needed: Editors may have a bachelor’s degree in video production, a degree from a technical school, or an associate degree in broadcasting.

What the Supervisor Looks for When Hiring: A technical school degree and previous job experience.

Job Category: Audio Engineer

Audio engineers are responsible for the sound and all the elements it contains—dialogue, sound effects, music, narration—and for mixing all those elements into a pleasing and accurate soundtrack. For audio, you need the ability to hear subtle differences in sound volume and quality.

Education Needed: Various backgrounds, including training and experience in music, theater, radio, sound reinforcement, and electronics (or a combination).

What the Supervisor Looks for When Hiring: A supervisor might look for an appreciation of sound and how to produce and reproduce a quality product and a good balance of artistic (musical) and technical (electronic) abilities.

Job Category: Lighting Technician

Electrical lighting technicians (ELT), or simply lighting techs, design and set up stage and location lights and control artificial lighting for art and entertainment venues or in video, television, or film production. In television, lighting technicians work under the direction of the director. Lighting technicians are responsible for the transport and set up of various pieces of equipment for managing light and shadow, contrast, depth of field, and/or visual

effects. Lighting technicians may also lay electrical cables, wire fixtures, install color effects or image patterns, focus the lights, and assist in creating effects or programming sequences. A lighting technician's work involves the safety of rigging and working with objects, which can be very heavy and get very hot.

Education Needed: A high school diploma and a degree from a technical school may be required.

What the Supervisor Looks for When Hiring: A technical school degree and previous job experience help. A supervisor would also be looking for someone who can operate this equipment safely.

Job Category: CGI Animator

The CGI (Computer Generated Imagery) animator designs and produces complex, professional computer and film on-screen graphics and animation for television or the web. The animator will work closely with the director, content producer, and others to design graphics that match the theme and look of the production and help tell the story or explain a concept.

Education Needed: A college degree in art, commercial art, graphic arts, or design, or a degree from an art school with two years of field experience.

What the Supervisor Looks for When Hiring: Potential animators, makeup artists, electronic graphics personnel, and photographers usually show a portfolio of their previous work.

Job Category: Photographer

A photographer uses film or digital still cameras to create black and white prints or color photographs for news, advertising and other web or print needs. A photographer also uses Photoshop or other photo editing software to enhance the appearance of images.

Education Needed: A high school or college diploma and professional photography experience.

What the Supervisor Looks for When Hiring: Potential animators, makeup artists, electronic graphics personnel, and photographers usually show a portfolio of their previous work.

Sample Documents for Students



The following documents are samples of student handouts that may be useful for a video production project. These documents include some of the required materials for the KET Activities section.

- **Pitch Your Story:** Plan a video.
- **Roles of the Production Team:** Decide who does what.
- **Sample Script:** Plan video imagery and audio side-by-side.
- **Storyboard Template:** Map out your shoot.
- **Shot Sheet:** Plan the logistics and coordination of each shot.
- **Tips for a Successful Interview:** These ideas will help the conversation.
- **Animation:** Some video projects include stop-motion animation.

Pitch Your Story

Answer all questions carefully and obtain approval from your teacher prior to beginning your project.

1. What is the objective or goal of your video?

2. Who is the audience for this video? Include an age range.

3. List the characters in your story, and tell why they are significant.

4. What background information does your audience need to know in order to understand your story? (Location, time period, history of characters, vocabulary, etc.)

5. If this is a news story, please answer the following. If not, skip to question 6.
 - What is the headline?

 - What is the background of this story?

 - What central question(s) do you intend to investigate in your news story?
 - o Question 1:

 - o Question 2 (optional):

- Who do you plan to interview and what types of information can each provide (facts/statistics, a personal perspective, the other side of the story)?
 - Do you have an opinion about this story?
 - Explain how you will not distort the story based on personal bias.
 - Describe how you will maintain a balance in your story and show two or more perspectives.
6. Describe your opening shot.
7. What images do you think you will need to properly tell your story? Include locations.
8. What other visuals do you plan to use (photos, animations, maps, graphics, character generation, greenscreen, etc.)?
9. What types of audio do you plan to add during post-production?

Roles of the Production Team

- Producer – oversees project, guides main idea, works with director to make sure story gets told
- Director – guides actual production, works closely with the producer on many aspects of the production
- Writer – writes scripts, storyboards, and support and promotional materials
- Assistant Producer/Assistant Director – finds resources, gets copyright permissions, sets schedules, arranges interviews and locations
- Camera Person (videographer) – operates cameras, tripods, and related equipment and tells story visually as guided by director. He or she ensures best quality video recording possible.
- Audio Engineer – records and manages sound during production and works with audio in post-production
- Talent – on-camera host, anchor, or actor delivers lines, acts in character, and follows director’s cues.
- Lighting Technician – uses lighting equipment to provide enough light on subjects and set to get best images and/or to set a special tone or mood
- Computer Generated Imagery (CGI) Designer – creates text, still images, and animations
- Editor – assembles (puts together) video, audio, and graphics into a completed program ready for distribution

VIDEO

SCRIPT

AUDIO

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Shot Sheet

Location	Shots needed	Person/crew responsible

Tips for a Successful Interview

1. Don't ask *Yes/No* questions. Ask open-ended questions instead.
2. Don't ask multiple choice questions.
3. Try some questions that don't include the words *who, what, when, where, why, or how*.
4. Don't ask questions at all! Instead, give prompts or commands that begin with "Tell me about...." "I'm curious about...." "Describe for me..." "I've always wondered about..."
5. Don't list your questions. Instead, write down key words on an index card.
6. Maintain eye contact. Don't let your eyes glaze over.
7. Listen to the answers. Lean forward and show interest.
8. Don't interrupt!
9. When they stop talking, YOU stop talking. Allow them to fill the empty spaces.
10. Listen closely to the person you are interviewing so you can ask appropriate follow-up questions.

How to Make a Stop Animation



1. Make sure you have a digital camera with lots of memory and a computer with either iMovie (Mac), Windows Movie Maker (PC), or another video editing software installed.

2. Think of an idea for your animation. What story are you trying to tell? How are your characters going to move? Are they going to be raising their hands, nodding, walking? Once you have a story written, it helps to sketch out the

actions of your characters in a storyboard.

3. Gather the figures and “props” that you want to use in your movie and to create your set. Use your imagination to find objects that will add interest to your project. Easy materials to find and use are felt, clay, wire, Legos, blocks, pennies, etc. Consider using recycled materials to keep expenses low.
4. Create a set that will complement your story.
5. Set up characters in your first planned position on the set.
6. Place your camera in front of the set. Make sure that your camera is supported in place, like on a tripod, so that it doesn’t shake or move as you take photos. If the camera moves, the result will lack the necessary continuity for a successful stop motion. Keep in mind the more photos you take the smoother the end result will be.
7. Set up good, steady lighting that won’t change from photo to photo.
8. Take a couple of photos of the figure in the starting position.
9. Then, begin the movement sequence. The key to a successful stop motion is to move your figures with very small movements and take a photo after every movement. If your figure does not want to stay in place during movements, you can use poster tack to hold the figure in place.
10. Repeat the movement sequence until your action is completed or the camera memory is full.
11. Save the photos onto your computer. This step is critical because your camera may behave like a storage drive and let you create a movie without saving the images to

the computer. If this is the case, when you unplug the camera, the images will no longer be accessible to the video editing software.

12. If you are using **Windows Essentials Movie Maker (Windows 7 and 8)**
 - a. Open Windows Movie Maker.
 - b. Click “Add videos and photos” and locate your photos.
 - c. Select all and click “Open.” The easiest way to “select all” is to click one and then use the Ctrl key + A shortcut.
 - d. The images should now be in the Windows Movie Maker timeline. By default, they are still all selected. If not, select them all again.
 - e. Click the “Edit” tab.
 - f. Change the “Duration” setting to 0.13.
 - g. Preview your movie by hitting the play icon on the right side of the screen.
 - h. Return to the “Home” tab and add a title, credits, and audio if desired. Click “Save Movie” at the far right of the “Home” tab and choose whichever option is suitable. “For computer” will create an MPEG-4 and allow you to save it to your computer.

13. If you are using an **older version of Movie Maker**
 - a. Open Windows Movie Maker
 - b. Import photos
 - c. Click “Tools,” then “Options.” Do this before placing the photos in the timeline.
 - d. Click the “Advanced” tab.
 - e. Under picture options, change the picture duration to 0.125 seconds a frame (the lowest setting).
 - f. Make sure your photos are in the correct order.
 - g. Load the photos into the storyboard.
 - h. Add titles, credits, and audio if desired.
 - i. Go to “Finish Movie” and click whichever option is suitable.

14. If you are using **iMovie**
 - a. Import your photos to iPhoto. Create an album with a specific scene/movie name and drag the pictures into it.
 - b. Open iMovie and click “File,” then “New Project.”
 - c. Choose “No theme” and click “Create New Project”
 - d. Click on the “Photos Browser” button at the lower right to show the photo library.
 - e. Choose the album you created from the drop-down menu, select all photos (click first photo, hold down shift, click last photo), and drag it into the timeline in the upper left part of the screen.
 - f. Click Edit, then “Select All.”
 - g. While all photos are selected, click “Window” and select “Cropping, Ken Burns, and Rotation.” Make sure “Fit” is selected, then click “Done.”
 - h. Again, while all photos are selected, click “Window” then “Clip Adjustments.” Under duration, type 0.1s and select “Apply to all stills” then click “Done.” This controls the seconds per frame.
 - i. Add titles, credits, and audio if desired.

- j. Convert movie to QuickTime. To do this, look for the “Share” and “Export” options. Try one of the defaults.

Helpful Links for Learning Stop Animation

Stop Animation How To Instructions

Step-by-step directions on how to make your own stop animation.

<http://www.wikihow.com/Create-a-Stop-Motion-Animation>

Engage elementary students with stop animation! From ISTE:

<http://www.iste.org/explore/articledetail?articleid=128>

Examples of Educational Stop Animations

Watch a stop animation that teaches about clouds and weather.

<http://www.pbslearningmedia.org/resource/evscps.sci.life.clouds/clouds-and-weather>

Watch a stop animation about the food chain.

<http://www.pbslearningmedia.org/resource/thnkgard.sci.ess.chain/think-garden-whats-a-food-chain>

Watch a stop animation about healthy eating.

<http://www.pbslearningmedia.org/resource/3966366d-90dc-428b-80fd-589741788ca0/a-healthy-plate>

Examples of Early Stop Animations

J. Stuart Blackton's *Humorous Phases of Funny Faces* (1906)

<http://www.youtube.com/watch?v=wGh6maN4I2I>

Emile Cohl *Fantasmagorie* (1908) <http://www.youtube.com/watch?v=aEAObel8yIE>

Lotte Reiniger was the first women animator. This is her animation of Hansel and Gretel.

<http://www.youtube.com/watch?v=KxkIGXVwZTM>

Stop Motion iPad Apps

Stop Motion Studio

<https://itunes.apple.com/us/app/stop-motion-studio/id441651297?mt=8>

iMotion (time lapse and stop motion)

<https://itunes.apple.com/us/app/stop-motion-studio/id441651297?mt=8>

Pay Stop Motion Software

DragonFrame is what we use at KET and what a lot of the pros use as well.

<http://www.dragonframe.com>

Animation Planning Worksheet

Step One: Research

What is the subject?

Who is the audience?

What is the purpose of the animation?

How long should the animation be?

Step Two: Concept

Give a brief summary of the story and draw out the action using the provided storyboard.

More Media Arts Resources



Classroom Video Production

<https://ket.pbslearningmedia.org>

Search for: Classroom Video Production

This introductory course provides teachers with the tools to facilitate student video production across the curriculum and at all levels. Participants will learn about video production techniques, basic equipment needs, production roles, and careers.

Throughout the course, fellow teachers and the KET production team will guide

and inspire participants to initiate student video projects. At the end of this course, learners earn a certificate of completion for three hours of PD Credit.

Learning Through Video Production

<https://ket.pbslearningmedia.org>

Search for: Learning Through Video Production

This media-rich self-paced lesson for teachers lets you experience what it's like to go through the video production process so that you can guide your students through this process. Walk through research, treatment, scripting, and capturing digital assets. Create a portfolio to track your experience, and keep classroom-planning notes to develop a successful video-production activity for your students. This lesson also features a list of additional resources for further reference.

Off Book Collection

<https://ket.pbslearningmedia.org/collection/off-book>

Learn about the art, the people, and the culture of the digital revolution with *Off Book*. This revolutionary program from PBS Digital Studios combines top-tier journalism with the underground, and often ignored, subject matter of today's modern digital age. With topics ranging from internet culture and graphic design, to the worlds of videogames and coding, *Off Book* examines the changing world of contemporary art as it has never been seen before.

Youth Radio Collection

<https://ket.pbslearningmedia.org/collection/youth-radio>

Youth Radio is an award-winning media production company that trains diverse young people in digital media and technology. Partnering with industry professionals, students learn to produce marketable media for massive audiences while bringing youth perspectives to issues of public concern.

Digital Tools

<https://ket.pbslearningmedia.org/collection/digital-tools>

In these short video tutorials from KQED, learn the basics for how to use free online tools for teaching and learning. The tools can be incorporated into the classroom to convey information visually, make persuasive arguments, and allow for a variety of collaborative opportunities.

Soundbreaking

<https://ket.pbslearningmedia.org/collection/soundbreaking>

Explore lesson plans and video that accompany the PBS series *Soundbreaking: Stories from the Cutting Edge of Recorded Music*. Lessons are tailored for students in social studies, language arts, geography, science, and general music classes. Each lesson includes clips from the *Soundbreaking* series, archival photography, period advertising and journalism, and activities for students to experience the music-making firsthand.

Confessions of a Media Arts Teacher Blog

<https://mediaartsconfessions.wordpress.com>

A primary school teacher in Australia gives tips, tricks, and project ideas for media arts in this fun blog.

KET Media Lab Workshops

<https://www.ket.org/education/collections/ket-media-lab-workshops>

The KET Media Lab in Lexington provides year-round training in technology resources, multimedia production, and more.

KET Multimedia Professional Development Day

<https://www.ket.org/education/collections/ket-multimedia-professional-development-day>

Every summer, KET hosts an event for educators interested in learning more about multimedia. Participants can attend up to four workshops on video production, digital storytelling, software applications, and more.

KET School Video Project

<http://svp.ket.org>

Submit school news programs, documentaries, art or music videos, PSAs—the only limit is your students’ imaginations! KET also offers students a video challenge several times a year. Once a video is approved for KET’s website, it can be viewed online and shared with friends, family, and schools.

KET MediaWorks Blog

<http://blogs.ket.org/mediaworks>

The MediaWorks blog is another great resource for anyone interested in making videos. The blog covers school multimedia equipment, instructional methods, resources, and news.

KET Activities

The Importance of Research

Activity

Construct interview questions based on research.

Goals

Students will relate knowledge and personal experiences to deepen understanding using societal, cultural, and/or historical context.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Anchor Standard 11: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Vocabulary

research

interview

Materials

The Importance of Research | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-5/the-importance-of-research>

Preparation

Watch the video as KET producer, writer, and host Renee Shaw talks about the importance of research in preparing for an interview.

Procedures

Think of someone you admire and would like to interview. What do you know about them? What would you like to know? Research this person and develop interesting interview questions based on your research. As Renee reminds us, don't just focus on what this person *does*, but focus on who this person *is*.

The Research Process

Activity

Develop an idea for a production.

Goals

Students will generate and organize ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Vocabulary

research

pitch

Materials

Research Process | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-14/research-process>

Pitch Your Story Handout

Preparation

Watch the video as KET administrative assistant and writer Anna Gordon talks about researching in pre-production for *News Quiz*.

Procedures

Knowing how important research is to a media production, develop an idea for a production about a current event that can easily be shot on a budget. Use what you learned from Renee's research tips (**The Importance of Research | Video Production: Behind the Scenes with the Pros**) as well as Anna's information to develop your idea. Use the **Pitch Your Story** handout to advance your idea.

Advice on Writing

Activity

Identify and find solutions to improve writing skills.

Goals

Students will evaluate work and refine their techniques.

Media Arts Standards

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 9: Apply criteria to evaluate artistic work.

Materials

Advice on Writing | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-7/advice-on-writing>

Preparation

Watch the video as KET producer, writer, and host Renee Shaw discusses the importance of good writing skills in production.

Procedures

In writing it's important to continue to strive for improvement. Compose a journal entry to answer the following question:

How do you work to improve your writing skills?

- Identify weaknesses in your own writing (e.g., lacking ample description).
- For each weakness, discuss avenues you could explore to improve in this area (e.g., creating a list of targeted adjectives and adverbs to infuse into a piece of writing).

Script Editing

Activity

Create a script for production.

Goals

Students will generate, organize, and refine ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 3: Refine and complete artistic work.

Vocabulary

pitch

script

Materials

Script Editing | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-15/script-editing>

Pitch Your Story Handout

Sample Script Handout

Preparation

Watch the video as KET administrative assistant and writer Anna Gordon talks about editing scripts for *News Quiz*.

Procedures

Using the **Pitch Your Story** sheet you completed in a previous activity (**Pre-Production Research | Video Production: Behind the Scenes with the Pros**), and considering Anna's description of script editing, develop a concise, easy-to-produce script for your production. You may want to use the **Sample Script**.

Extension

As Anna said, scripts go through several edits. Ask a teacher or peer to review your script using the editing process.

Preparing for an Interview

Activity

Construct and evaluate quality interview questions.

Goals

Students will develop work for presentation by synthesizing knowledge.

Media Arts Standards

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Vocabulary

interview

Materials

Preparing for an Interview | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-6/preparing-for-an-interview>

Interview Tips Handout

Preparation

Watch the video as KET producer, writer, and host Renee Shaw gives advice on preparing questions for an interview.

Procedures

Imagine you could interview Renee Shaw. Think about the tips Renee gives on preparing for an interview. What 10 questions would you ask her in an interview? Evaluate the quality of your questions by referencing the **Interview Tips** handout.

Extension

Design a rubric to evaluate the quality of an interview question.

Conducting Interviews

Activity

Conduct an interview.

Goals

Students will develop work for presentation that relates knowledge and personal experiences in order to deepen understanding using societal, cultural, and/or historical context.

Media Arts Standards

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Anchor Standard 11: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Vocabulary

interview

Materials

Tips on Conducting Interviews | Video Production: Behind the Scenes with the Pros
<https://ket.pbslearningmedia.org/resource/ket-vid-production-9/tips-on-conducting-interviews>

Interview Tips Handout

Optional: Preparing for an Interview | Video Production: Behind the Scenes with the Pros
<https://ket.pbslearningmedia.org/resource/ket-vid-production-6/preparing-for-an-interview>

Preparation

Watch the video as KET producer, writer, and host Renee Shaw gives tips on conducting a good interview.

Procedures

Using Renee’s tips in this clip and the **Interview Tips** handout, conduct an interview with a classmate or teacher. For additional information on interview questioning and how to prepare, see **Preparing for an Interview | Video Production: Behind the Scenes with the Pros**.

Extension

Create a set of criteria to evaluate your performance as an interviewer (e.g., on a scale of 1 to 10, with 10 being “excellent,” rate yourself on the following: maintaining eye contact throughout the interview, listening, asking follow-up questions, not interrupting, etc.).

Stop-motion animations

Activity

Conceptualize a stop-motion animation project.

Goals

Students will create and pitch an idea for a stop-motion animation project.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Vocabulary

Stop-motion animation

Storyboard

Materials

Stop-motion animations | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-30/stop-motion-animations>

Pitch Your Story Handout

Animation Handout

Rubric

Preparation

Watch the video and study the **Animation** and **Pitch Your Story** handouts.

Procedure:

Think about a short video project you'd like to make. Could this project be written and produced as a stop-motion animation? Using the rubric as a guide and the **Pitch Your Story** handout, sketch out a rough idea of a stop-motion animation project you could produce that demonstrates a process that you have learned about in any one of your classes. For example, produce a stop motion that demonstrates metamorphosis. Pitch the idea to your teacher.

Storyboards

Activity

Create a stop-motion animation storyboard.

Goals

Students will create a storyboard in preparation for a 30-second stop-motion animation project.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 3: Refine and complete artistic work.

Vocabulary

storyboard

stop-motion animation

voiceover

Materials

Storyboards | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-31/storyboards>

Animation Handout

Storyboard Template Handout

Preparation

Watch the video with KET animators Sara O’Keefe and Allison NeCamp and study the stop-motion animation handout.

Procedure

Using Sara and Allison’s tips and the **storyboard template**, create a storyboard to map out your shoot for a 30-second animation. Share your storyboard with your teacher for approval prior to producing your video.

The Purpose of Animation

Activity

Plan shots with a purpose.

Goals

Students will develop a shot list for an upcoming stop-motion animation shoot.

Media Arts Standards

Anchor Standard 4: Select, analyze, and interpret artistic work for presentation.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 6: Convey meaning through the presentation of artistic work.

Vocabulary

animation/CGI

Materials

The Purpose of Animation | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-36/the-purpose-of-animation>

Completed Storyboard

Shot Sheet

Preparation

Watch the video with KET graphic designer/ animator Clark Bradshaw.

Procedure

Listening to Clark's description of animation in a production, and using the storyboard you created in plans for a stop-motion animation that demonstrates a process, sketch a quick **shot list** to create a simple animation for your production.

Math In Production

Activity

Using math, develop frames to go along with a stop-motion animation.

Goals

Students will produce a few frames of their planned video using math skills.

Media Arts Standards

Anchor Standard 4: Select, analyze, and interpret artistic work for presentation.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 6: Convey meaning through the presentation of artistic work.

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Materials

Using Math in Production | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-32/using-math-in-production>

Animation Handout

Video Recording Device

Tripod

Materials for Animation Project (e.g., clay, cardboard, construction paper, scissors, etc.)

Completed Storyboard

Preparation

Watch the video and review your storyboard.

Procedure

Using the storyboard you created, develop a number of frames and/or shots that you might need to get for your production. How many frames do you need to fill the audio? You may want to use the animation handout to help with editing a stop-motion animation using MovieMaker or iMovie.

Storytelling Skills

Activity

Pitch a story.

Goals

Students will generate, organize, and develop artistic ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Vocabulary

pitch

Materials

Storytelling Skills | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-19/storytelling-skills>

Pitch Your Story Handout

Preparation

Watch the video as KET producer, director, and videographer Frank Simkonis talks about how a producer needs to possess good storytelling skills for a successful production.

Procedures

Using an idea for a production that you might have, fill out the **pitch your story** handout and submit to your teacher for approval.

Skill of Imagination

Activity

Create a storyboard to visualize a short film.

Goals

Students will generate, organize, and develop artistic ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Vocabulary

storyboard

Materials

The Skill of Imagination | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-18/the-skill-of-imagination>

Storyboard Template Handout

Preparation

Watch the video as KET producer, director, and videographer Frank Simkonis talks about an important skill needed to be successful in production.

Procedures

Using this rubric as a guide, create a storyboard for a short film using the **storyboard template**.

Lighting Strategies

Activity

Design a lighting arrangement to use in production.

Goals

Students will organize and refine artistic ideas and work.

Media Arts Standards

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Vocabulary

natural light

box light

back light

side light

key light

diffused lighting

Materials

Lighting Strategies | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-17/lighting-strategies>

Standard Lighting Handout

Preparation

Watch the video as KET producer, director, and videographer Frank Simkonis talks about how to make less-than-ideal lighting work for you.

Procedures

Using what you learned from the video and the **Lighting Graphic**, sketch a lighting arrangement using the window(s) or overhead lights in your classroom.

Extension:

If equipment is available, set up a photo shoot and experiment with lighting.

- What works best to create specific moods?
- What works best at different times of day?
- What works best to improve complexion?
- What works best for those who wear glasses?

Composing a Good Shot

Activity

Practice shot composition and framing.

Goals

Students will produce well framed photos and videos and respond to their work with evaluation and reflection.

Media Arts Standards

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 9: Apply criteria to evaluate artistic work.

Anchor Standard 8: Interpret intent and meaning in artistic work.

Vocabulary

rule of thirds

headroom

breathing room

lead room

types of shots

camera moves

Materials

Composing a Good Shot | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-21/getting-a-good-shot>

Terms and Techniques Handout

Camera (to capture both stills and video)

Preparation

Watch the video to get tips from KET photographer Steve Shaffer and study the terminology handout.

Procedure

Using Steve's tips and the **Terms and Techniques** handout, practice shot composition and framing, first by using a still camera and then by capturing video. Get at least three samples of each.

Evaluation

Evaluate your shot composition by answering the following questions using proper terminology.

- What needs to be improved?
- What is most appealing about your shots?
- How does the way you frame a shot change the way your story is told?

Getting a Great Shot

Activity

Storyboard for best shot composition and framing.

Goals

Students will storyboard well framed shots for their production and respond to their work with evaluation and reflection.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 3: Refine and complete artistic work.

Anchor Standard 4: Select, analyze, and interpret artistic work for presentation.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 6: Convey meaning through the presentation of artistic work.

Vocabulary

rule of thirds

headroom

breathing room

lead room

types of shots

camera moves

Materials

Creating a Great Shot | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-20/creating-a-great-shot>

Storyboard Template Handout

Preparation

Watch the video to get tips from KET producer, director and videographer Frank Simkonis and study the storyboard terminology handout.

Procedure

Using Frank's tips, storyboard a couple of ideal shots you'd like to get for your video project. Do these planned shots fully tell the story? What could make the shots more effective and more engaging?

Director Skills

Activity

Create a shot sheet detailing a production.

Goals

Students will generate and organize ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Vocabulary

director

field shoot

Materials

Director Skills | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-29/director-skills>

Shot Sheet Handout

Preparation

Watch the video as KET producer/director Nick Helton discusses what skills are necessary to become a good director.

Procedures

Based on the skills Nick describes, imagine a field shoot you will need for a class project or a possible video you would like to produce. Fill out the **Shot Sheet** to plan your event.

Live Directing Challenges

Activity

Brainstorm possible challenges and solutions to filming live.

Goals

Students will generate ideas and work.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Vocabulary

director

live shoot

Materials

Live Directing Challenges | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-26/live-directing-challenges>

Preparation

Watch the video as KET producers/directors Carl Babcock and Nick Helton discuss the challenges of live directing.

Procedures

In the video, Nick and Carl describe challenges a director faces on a live shoot.

- Create a list of possible challenges that may occur during a live shoot in your production. Then, brainstorm what you do beforehand to minimize or avoid these challenges.
- How might the challenges differ depending on location (e.g. filming inside of a school gym, filming on a downtown street, etc.)?

Advice for Getting Good Audio

Activity

Listen to the sound of the room.

Goals

Students will investigate a specific space and use variables to plan a future shoot in which they obtain quality audio.

Media Arts Standards

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Materials

Gathering Good Audio | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-13/gathering-good-audio>

Audio Recording Field Production Tips Handout

Preparation

Watch the video as KET senior audio technician Brent Abshear explains how to capture good audio for video.

Procedure

Using Brent's advice and the **Audio Recording Field Production Tips** handout, what setup and types of audio would you need to effectively cover a basketball game for your school news? If you do not have the ideal equipment, what could you do to improve the audio that you do capture? What could you do in audio post to further improve the quality of your production?

NOTE: It is also advised to have someone document shoots for the producer, the director, and the editor with information about the best take(s) and possible audio needs/fixes.

Microphones

Activity

Determine the best areas for capturing audio in your school/video recording environment.

Goals

Students will connect what they have learned about audio to their immediate environment to overcome foreseeable obstacles while recording video in the area.

Media Arts Standards

Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Vocabulary

voiceover
lavalier microphone
shotgun microphone
boom

Materials

Microphones | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-10/microphones>

Audio Recording Field Production Tips Handout

Preparation

Watch KET senior audio technician Brent Abshear describe types of microphones. Study the Audio Production Tips handout.

Procedure

1. Explore your current location to determine the best areas to shoot a video that will have good quality audio. Document the ideal places in your building to get a good, usable audio recording and then answer the following questions for each location you test:

- What microphone or microphones would work best in this setting?
- If it isn't an ideal location, what microphone could you use to minimize the other noise in the room?

2. Compare your findings with other groups that explored your environment and answer the following questions:

- Were there any trends among the groups performing this activity?
- Were there any discrepancies?
- What types of videos could successfully be recorded in each possible location, e.g., interviews, action, voiceover, stop motion, etc.?

Common Audio Mistakes

Activity

Avoid common audio mistakes.

Goals

Students will create a list of ideal places to record video that will capture the best audio in their immediate location.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 3: Refine and complete artistic work.

Materials

Common Audio Mistakes | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-12/common-audio-mistakes>

Audio Recording Field Production Tips Handout

Preparation

Watch the video as KET senior audio technician Brent Abshear describes common audio mistakes.

Procedure

Think back to your list of ideal places to gather audio. Using Brent's tips in this video and the tips in the provided handout, what plans can you make in advance to avoid these common mistakes? Document your notes for each location.

The Editing Process

Activity

Put it all together.

Goals

Using any available editing software, students will edit their production that they have been developing throughout this collection/course.

Media Arts Standards

Anchor Standard 1: Generate and conceptualize artistic ideas and work.

Anchor Standard 2: Organize and develop artistic ideas and work.

Anchor Standard 3: Refine and complete artistic work.

Anchor Standard 4: Select, analyze, and interpret artistic work for presentation.

Anchor Standard 5: Develop and refine artistic techniques and work for presentation.

Anchor Standard 6: Convey meaning through the presentation of artistic work.

Vocabulary

a-roll

b-roll

editing

post-production

Materials

The Editing Process | Video Production: Behind the Scenes with the Pros

<https://ket.pbslearningmedia.org/resource/ket-vid-production-1/the-editing-process>

A computer or device with editing software

Rubric

Preparation

Watch the video as KET technical director and editor Jim Piston describes the editing process and then upload or import all of the video and audio you captured in your production to a computer or a device equipped with editing software.

Procedure

Listening to Jim's description of the basic editing process and using the rubric as a guide, edit together the production you have been working on throughout this collection/course.

Share with peers to gather feedback throughout the editing process. Once complete, request others to evaluate your production using the same rubric you followed. You may want to develop your own rubric more specific to your project and share with a community of professionals to get feedback from them.

KET Media Arts – Video Production Equipment and Software, Sharing of Projects

Here are some example hardware and software solutions to work from when planning school video production projects for the classroom or school clubs and organizations. This document includes examples of popular equipment that schools have found to be useful. As a Kentucky state agency, KET cannot promote the purchase of particular brands.

Basic Video Recording Setup Using a Camcorder

- Camcorder, with internal and/or memory card recording storage
- Tripod

To improve sound, lighting, and to add chromakey/greenscreen effects, add:

- External microphone, handheld and/or lavalier
- External microphone cable(s)
- Audio mixer for camcorder – adds better mic input(s)
- Light kit
- Greenscreen background (can be purchased with lights in a kit)

Basic Video Editing of Student Projects

- PC/Mac for editing and sharing projects
- Software for editing video projects
 - Adobe Premiere Elements
<http://www.adobe.com/products/premiere-elements.html>
 - Hitfilm Express – free, with add-on modules for purchase
<https://hitfilm.com/express>
- Cloud editing of projects (a solution for Chromebooks that can't edit video)
 - YouTube.com basic online editing in account channel video area (free)
<https://www.youtube.com/editor>
 - WeVideo.com basic/advanced online editing, paid service for extended resources
<https://www.wevideo.com/schools>

Basic Video Recording and Editing Setup Using an iPad or Smartphone

- iPad or Smartphone such as iPhone
- Video editing software such as *iMovie* for iOS: <http://www.apple.com/imovie>

To improve sound, lighting, and to add chroma key/greenscreen effects, add:

- Tripod
- Tripod adapter for iPad or smartphone
examples: <https://www.ioographer.com>
- External microphone, either handheld or lavalier
examples: www.ikmultimedia.com
- Light kit, softbox or LED type
- Greenscreen background – can be purchased as portable or with stand and lights in a kit
- Chroma key/greenscreen app such as *Greenscreen by Doink*:
<http://www.doink.com>

Sharing of Student Video Projects – Local School Network or the Web

- School website area or blog
- Shared folder on school network with links to video(s) published by teacher
- Live streaming of video announcements/news over school local area network via Skype Meeting, setup for viewing by teacher in staff's Microsoft Outlook Calendar – use pc webcam or camcorder-to-pc webcam adapter
- KET School Video Project website at www.ket.org/svp – free sharing service
- Other website sharing: The Cube – stream or share pre-produced school video projects: <https://thecube.com> (free, with ads)