

Video Production 101

Tripod

To use a Tripod, or not to use a Tripod? That is the question.

And the answer depends on what you are trying to do. If you're following a person while they are giving a tour of a building you probably won't use a tripod because you need to be moving.

Basically, if you want a stable, smooth shot, use a tripod whenever possible. If you do not have a tripod, invent one. Your body is a natural tripod. You can also lean up against a tree or wall or sit on a chair for stability.

Proper set up

1. Use a wide footprint (the legs of the tripod should be as far apart as possible for the height you want it set at).
2. Extend the legs of the tripod out the distance needed to reach the appropriate height.
3. Attach quick release platform to the bottom of the camera.
4. Turn the crank until the camera lens is level or even with the subjects eye level.

Tripod Motion

The tripod allows you to move the camera in two ways - pan (side to side) or tilt (up or down).

Setting up the Camera

1. If not already done, place the camera on the tripod.
2. Insert battery or plug in AC adapter.
3. Turn the camera on.
4. Press "Eject" and insert VHS tape with the window facing out. Then "Push Here" gently.
5. Remove lens cap.
6. Make sure camera is set to "Camera" not "VCR".
7. Compose your shot.
8. When ready to record press the red button.

Camera Parts & Features

The following are standard or basic features on any camera. We will be working with Panasonic VHS video camera.

- **Battery Pack** - power source. Make certain you charge them!
- **AC Adapter** - power source. Use this power source over the battery pack whenever possible.
- **View Finder** - A small eyepiece or screen on the camera that allows you to see the image you're recording. (The camera also acts as a VCR, so you can play back and watch what you have already recorded through the view finder).
- **Zoom** – This feature allows you to gradually zoom in for close ups and zoom out for wide angle shots by pressing the “T” or “W”. This camera has a special two speed power zoom. By pressing the “T” or “W” lightly this will allow you to zoom in and out slowly. For quicker zooms press normally.
- **Focus** - There are two positions for focus - auto and manual. When you focus in "manual", you control the focus with the focus wheel. To make sure your shots are in focus, zoom in and focus up close first, then zoom back. This insures that what you are shooting is focused to the greatest extent possible. Manual focus is good to use when there is a lot of movement of dominant figures. When the camera is in "auto focus" it will automatically focus on the dominant figure in the center of the view finder. Because it focuses automatically on the dominant figure, it will adjust to whatever becomes dominant. For example, if you are focused on a person several feet away, and someone walks in between the camera and the other person, the camera will adjust to focus on the new dominant figure - the person who walked in front of the camera.
- **Fade** - a gradual increase or decrease of the image and sound. You can fade an image to black, or do the reverse.
- **Frame** - a single, complete video image that lasts 1/30th of a second. There are 30 frames in a second. If your camera or editing system can measure frames, you can use this as a counter to log your video tape.
- **Date/Clock** - generally much easier than setting your VCR! This will show the date and time - sometimes the date and time will not only appear through the view finder, but also on the video (which you may not want).
- **Backlight** – Use this feature if the main subject is darker then the surrounding scene.
- **Tally Light** – This is a recording indicator light. When lit it will let anyone in front of the camera see that it is recording.

Camera Shots

There are four basic camera shots

- **Wide shot** This shows the whole scene. Frequently, you'll see video pieces begin with a wide shot. This shot is also good if there's a lot of movement. This would show a person from head to toe.
- **Medium Shot** This shot shows less of a scene than the wide shot. For example, if you were interviewing someone, this shot would show him or her from about the waist up in a medium shot.
- **Close Up Shot** This shot shows an even smaller part of the subject or scene. Great for showing detail, like a person's emotional face or individual leaves on a tree. If you were interviewing someone, this shot would show the person from the top of the chest or shoulders up.
- **Extreme Close Up Shot** is even closer than a Close Up. For example, it is just of the person's eyes, or of a bug gnawing on a leaf.

Composition/Framing Your Shots

* **Composition** - There are many ways to compose a shot, depending on your goals. You want to be aware of what is in the shot and what isn't. Can you clearly see what you intend for the viewer to see?

* **Rule of Thirds** - this classic rule suggests that the center of the camera's attention is one-third of the way down from the top of the shot.

* **Headroom** - A term used with shots of people. This refers to the space above the subject's head. You'll see different amounts of headroom, depending on the intent of the creator of the video. In general, if you're standing right in front of someone, you'll see that they have space all around them - they aren't cut off by a frame. By leaving headroom, or space beside them, you are imitating what you see in real life.

* **Talking/Walking Room** - If you are interviewing someone or have video of someone talking, you generally do not want them looking directly at the camera (again, it depends on your goals - certain situations may call for that). Generally, you want the person to be looking off to the left or right of the camera a bit. When you do this, frame your shot so that there is some talking room. That is, you want to leave some extra space in front of their face as if you were going to draw a dialogue box in for them. This space is "talking room." If the person is talking to another person, this shows space between them. Walking room, if the person is in motion, gives them space to walk to. Talking/Walking Room leaves space in the shot for the action, whether it be words or movement.

Shot Angles

Your shot angle is the level from which you look at your subject.

* **Eye-level angle** - One of the most commonly used shots is the eye-level shot. Why? Because it's the perspective most familiar to us - we usually see things from our own eye-level. This angle also causes the least discomfort because we're used to it. If you're shooting a person, make sure you shoot at their eye-level, not yours.

* **Low Angle** - In this shot, the camera looks up at the subject, making it seem important, powerful, or perhaps larger than it is to the viewer. For example, you might be sitting on the ground looking up at someone who is standing.

* **High Angle** - In this shot, the camera looks down on the subject, decreasing its importance. The subject looks smaller. It often gives the audience a sense of power, or the subject a sense of helplessness. In this case, you'd be higher than the other person (maybe they're sitting, or maybe you're standing on a desk) looking down on that person.

Shot Movement

* **Pan** - A shot taken moving on a horizontal plane (from left to right, right to left). If you want to show a frisbee flying across a field, you might use this shot to follow the frisbee from one person to another.

* **Tilt** - Camera movement in a vertical plane. (up or down) If you want to show a tall building but you can't get it all in your shot, you might start at the bottom of the building and go up to the top.

* **Zoom** - This shot brings you closer to the subject. For example, from a Wide Shot to a Medium Shot or Close Shot. If you are looking at the Golden Gate Bridge, and you want to see individual people walking across it, you might zoom in.

* **Reverse Zoom** - This shot moves you farther away from the subject. For example, from a Close Shot to Medium Shot or a Wide Shot. If you have a Close Up shot of a flower, and want to see the entire field that the flower is in, you can reverse zoom.

Microphones

There are several types of microphones that you can use to gather sound depending on your purposes. We will describe just two of these.

- **Camera Mic** - This mic is built on the camera. This small microphone is "omni-directional," meaning it will pick up sounds from all directions. This is good to use to capture general audio from an event, but nothing very specific. Since the microphone is closer to you than to your subject, be careful - if you're talking, your voice will dominate.
- **Wireless Lavalier Mic** - This is a small microphone, about one inch tall, that can be clipped onto a piece of clothing about six to eight inches below the speaker's chin. A thin cord attaches the microphone to a battery pack that the speaker can put in their pocket or clip onto their clothing. Because it is not directly attached to the camera, it is called a "wireless" microphone. This is good to use to capture the sound of the speaker.

Setting up the Wireless Lavalier Mic

1. Insert a 9volt battery in both the transmitter and the receiver.
2. Screw on the antenna to the receiver and attach to camera.
3. Plug in the audio signal cable from the "ext mic" outlet on the camera to the "mic out" outlet on the receiver.
4. Plug in the earphones to the "Phone out" on the receiver.
5. Plug in the lavalier mic into the "Mike Input" on the transmitter.
6. Make sure the "Freq" switch is set to the same letter on both the receiver and transmitter.

7. Switch the "Power" button over to "On" on both the receiver and transmitter.
8. You should now be able to test the mic and listen with the ear phone.

Placement of the camera

Place the camera on a tripod generally between 1/3 and 1/2 of the way back from the front of the class. The physical arrangement of classrooms and the activities that take place within them vary greatly. It is helpful to plan when and where the action will take place. The camera should be placed so that it can easily tape the front of the room keeping in mind that you may want the main chalkboard or audiovisual device, and some of the students in the shot. If there is a camera operator, the position should also allow for easy panning to other areas of the classroom.

Light Sources

The camera should be set up on the side of the classroom with the largest set of windows, thus keeping the major light source at the camera back. This orientation will minimize overexposure due to backlighting. If the classroom has windows on both sides of the room, choose the side that looks best overall. Also, keep in mind that it often is possible to pull window shades if you feel positioning the camera opposite the windows would be a better alternative. In fact, often you will need to pull the blinds even if the windows are behind you so as to avoid reflection on the board or other equipment.

Other Issues to Consider in Placing the Cameras

Overhead projectors, slides, multiple AV presentations.

You should take into account the audiovisual materials that will be used so as to position yourself at a vantage point from which you can best capture see them.

Direction in which students are facing.

Try to position the teacher camera so that you can see the faces of at least some of the children (if not the majority). This will reduce the chance that you have to remove the camera from the tripod.

Clear view.

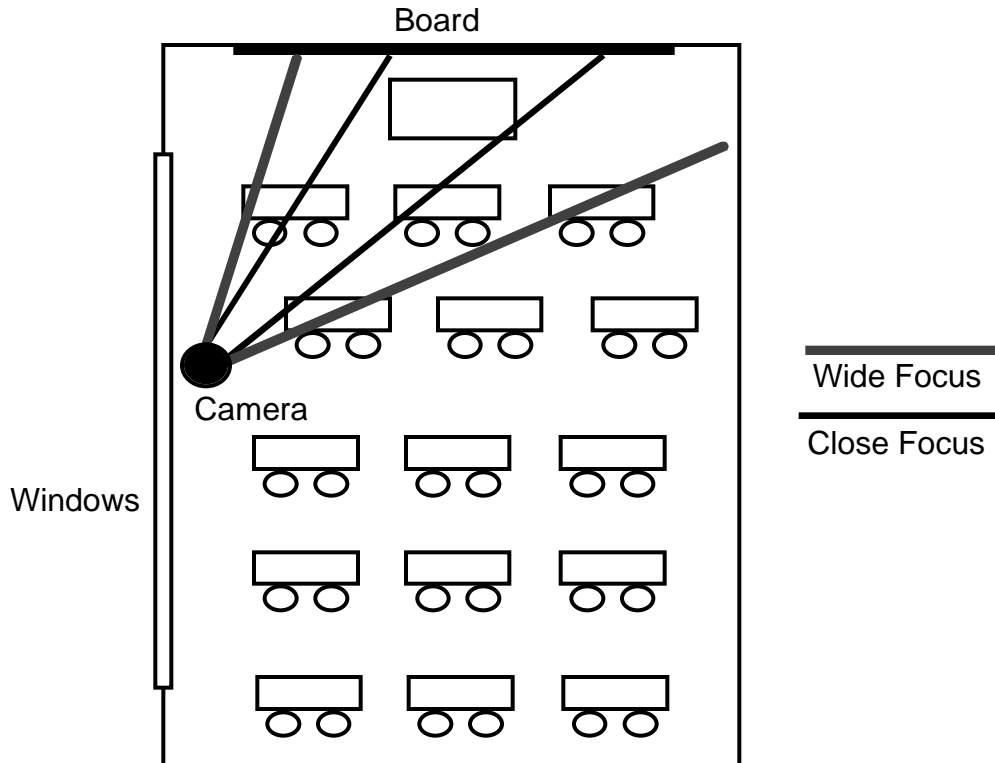
You want to avoid having students sitting directly in front of the camera because they will block your view. If you find a very good position, but a student is in your way, ask the student to move.

Some Common Situations, and Where to Place the Cameras

In this section we will illustrate where to place cameras in a variety of classroom settings with different instructional activities. In any event, you should always keep in mind in making your decisions of where to place cameras.

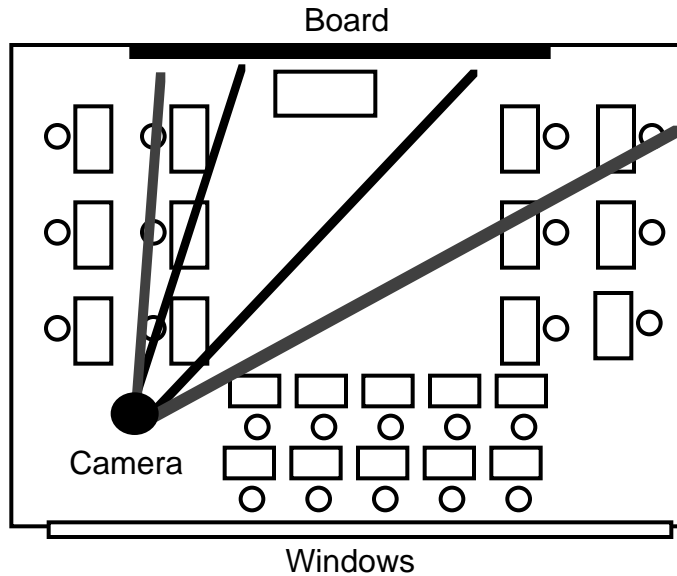
Situation 1: Window Opposite from the Door, Chalkboard at the Front, Movable Student-Desks Facing the Front

This situation is probably the most common classroom setting. You can place the teacher camera by the window, 1/3 of the way from the front, and the student camera near you, leaving it aimed at the students behind the camera. Keep the teacher camera on the tripod as long as you can document what the teacher and students are doing.



Situation 2: Chalkboard at the Front, Window On the One Side, Student Desks Arranged in a U-Shape

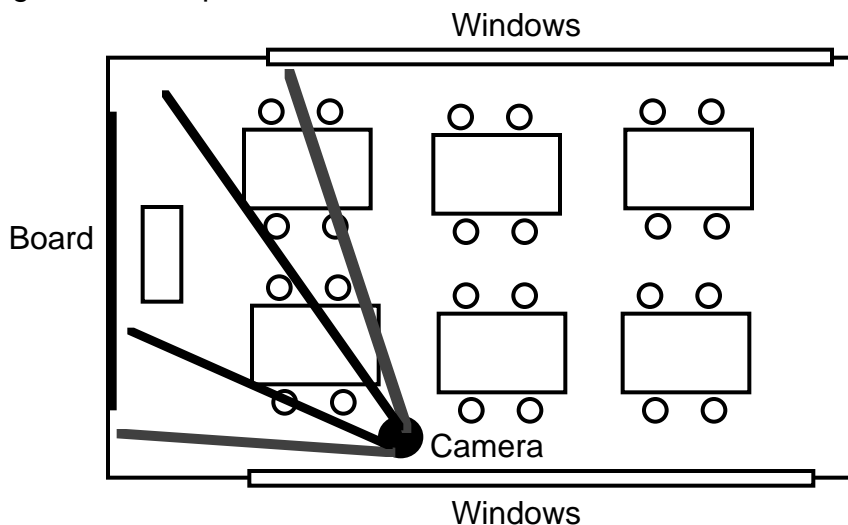
You should place the teacher camera where you have a good view of the teacher and the chalkboard, and students are not blocking your view. Place the student camera in the front corner where the camera is not in the view of the teacher camera.



- Make sure that you set up the student camera as high as possible to avoid students' heads blocking its view.

Situation 3: Students Sit in Groups, Windows on Two Sides of the Room In this situation 1/3 view may apply. The 1/3 view is placing the subject towards the upper third of the screen. If you place the head of your subject in the middle of your screen you will create empty space at the top.

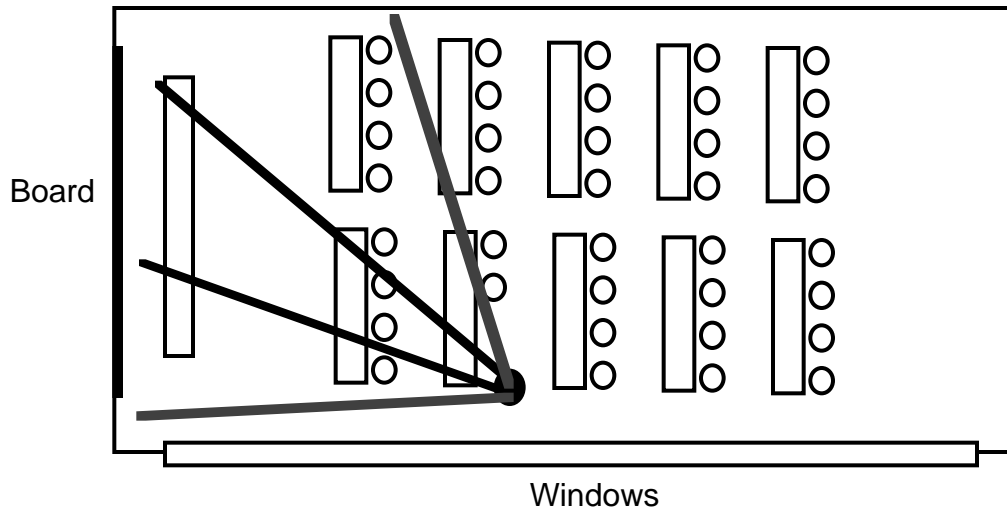
Again place the teacher camera so that you have a good view of the teacher. Try to avoid backlighting situation. If possible, close the blind of the window that is in your view.



Situation 4: Large Science Lab, Student-Desks Not Movable

Often science labs are much larger than normal classrooms, and student-desks are built-in so that you cannot move them. Because the room is large, often there are enough rooms for students to sit even if you occupy few seat spaces (see the diagram below). However,

make sure you ask the teacher if it does not cause any problem. When group experiment starts, you may need to lower the angle of the student camera slightly so that it captures the group in front of the camera while documenting other groups' activities as well.



Things to remember

If being on camera is new to you, it may be uncomfortable. The camera is recording everything you say and do. So if you want to whisper something to someone and don't want it on the tape remember to turn the mike off. You will soon be aware of unpleasant habits and detail to bodily functions. Once you get used to this it will become easier. The more often you view yourself, not just video yourself the quicker you will become at ease.

Caution

When leaving the camera unattended for a long period of time you may want to remove it from the tripod until ready to record.

Most devices continue to draw power even when turned off. Be sure to remove batteries when the camera is not in use. If you will not be using the camera for more than an hour or so you may want to remove all batteries from the camera and microphones.

Check List - Part of planning your video shoot is making sure you have everything you're going to need (cables, lights, microphone, video tape, tripod, camera, etc.). Test all equipment ahead of time. Better to replace a dead battery before you leave for a shoot, than have to cancel the shoot when you get there.