

Production Cycle

1. What are the 3 phases of the production cycle?
Pre Production, Production, Post Production
2. What happens during the Pre-Production Phase?
Planning, Budgeting, Location Scouting, Hiring
3. What are some key crew positions?
Director, Director of Photographer (DP)/Cinematographer, Writer, Producer, Location Scout, Gaffer(Electric Dept), Grips (move equipment), Wardrobe Dept, Hair, Makeup, Props, etc.
4. Who is responsible for the look of the film?
Director of Photography (DP) / Cinematographer

Image Formation

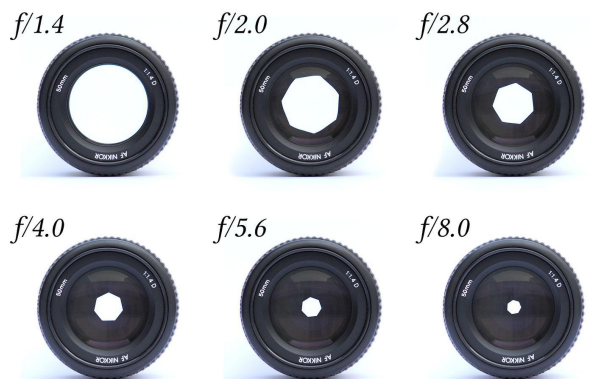
1. Who invented the first movie cameras?
Thomas Edison and William Kennedy Dickson invented the first early motion picture camera.
2. How are images formed?
Light that bounces off an object passes through the lens, that light is turned into an electrical charge that hits the camera's video sensor. This results in the camera's video image.
3. What are the two scanning cycles that form an image?
The scanning cycle is either "progressive or interlaced.
4. What is Progressive scanning?
Pixels are scanned from left to right from the top to the bottom completing a video image.
5. What is Interlaced scanning?
Pixels are scanned by every other line (skips a line), reading only the odd numbers. The next scan reads the even numbers and a complete picture is produced.
6. **SD VS HD**
In video or digital photography, the resolution is the ability of a video or digital camera to record details, such as the number of pixels and their size.
SD is 480 or below.
HD is 720 and above.

Camera Lens

1. What are the 3 types of lens (focal lengths)?
Wide (wide angle of view, landscapes), Normal (see how the eye see), Telephoto (objects appear closer than they are, zoom in).
2. What is "Focal Length?"
The distance from the lens to the image plane.
3. What is a "Zoom" lens?

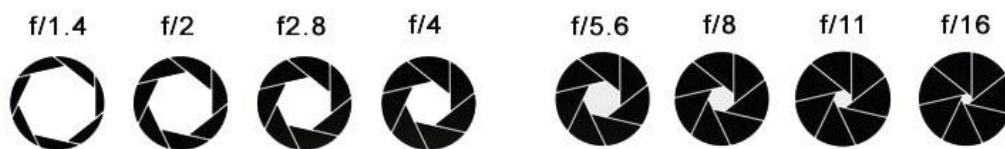
Lens that can change the focal length (zoom in or out).

4. What is a “Prime” lens?
Fixed focal length, does not zoom in or out.
5. What is Depth of Field?
The distance between the closest and farthest objects in a photo that is in focus.
6. What affects the Depth of Field?
The focal length, f-stop, and the distance from the camera to the subject.
7. What is the Aperture and f-stop?
The opening of a lens. The smaller the *f*-stop number, the larger the aperture allowing more light into the camera.



**Larger Aperture
More Light**

**Smaller Aperture
Less Light**



8. What are some benefits of a Tripod?
A tripod is a three-legged stand designed to support a camera. A major benefit is stabilized footage (no shaky footage). Additionally the tripod also allows the camera to pan left and right or tilt up and down.
A quick-release plate allows the camera to be mounted on and off the tripod quickly.
The level bubble in the back ensures the camera is leveled.

Analog vs Digital

1. **What is an Analog?**

An electrical copy of the original stimulus. The signal is continuous. Ex, film cameras, old televisions, audio cassette tapes, vhs tapes, old land-line telephones, your voice.

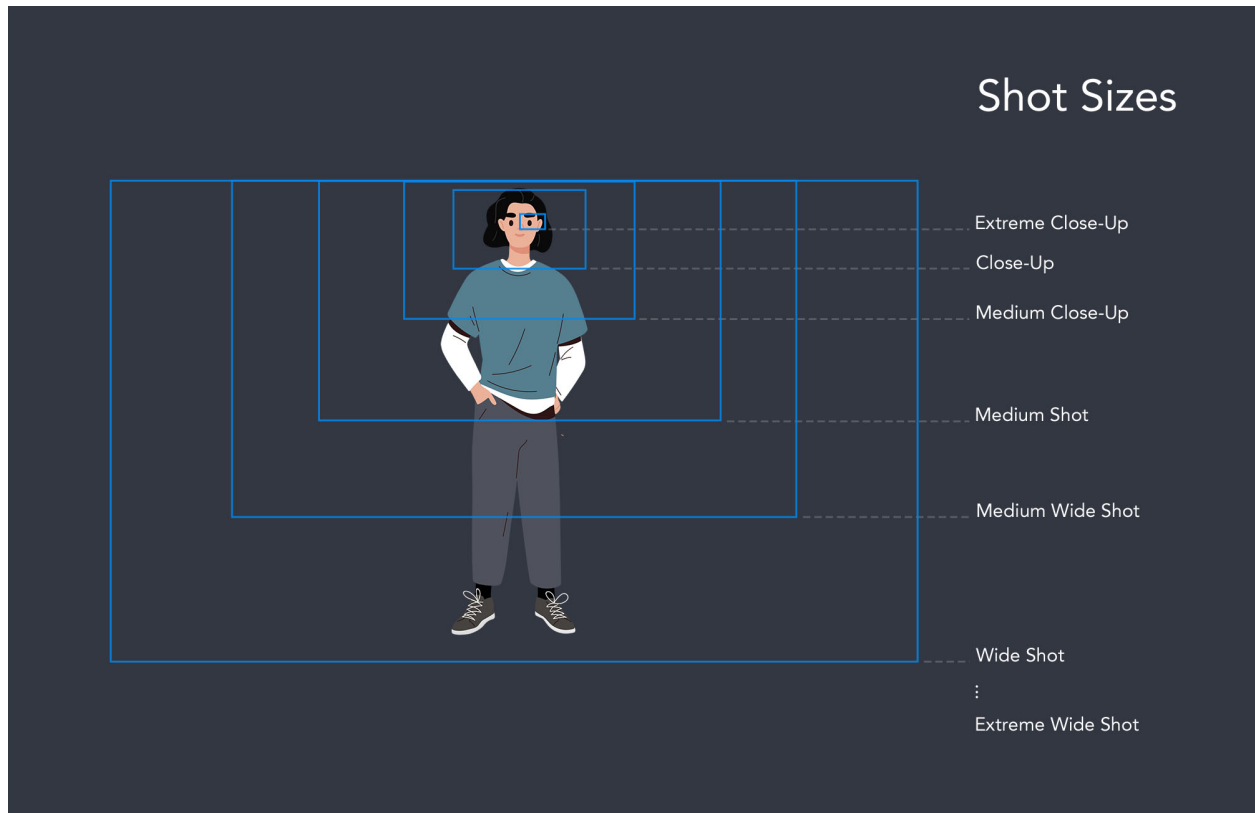
2. What is Digital?

Digital is a series of 1's and 0's. A digital signal is discontinuous. Digital signals can be compressed, and analog signals cannot. Ex, digital cameras, computers, digital phones,.

Camera Shots

The most common shot sizes in filmmaking

1. Extreme close-up (ECU)
2. Close-up (CU)
3. Medium close-up shot (MCU)
4. Medium shot (MS)
5. Medium wide shot (MWS)
6. Cowboy shot
7. Wide shot (WS) or Full shot (FS)
8. Extreme wide shot (EWS)
9. Establishing shot (ES)
10. Over the shoulder (OTS)
11. 2 Shot (Two subjects in the frame)
12. Low Angle
13. High Angle



Audio and Sound Control: Microphones (Chapter 7)

Pickup Pattern - the zone within which a microphone can hear well.

Most microphones used in video production are either omnidirectional or unidirectional.

Omnidirectional - Mic hears well from all directions.

Directional - Hears well from one direction, the front.

The most common **directional pattern is a cardioid microphone pattern**. Cardioid pattern mics capture sound in the shape of a small heart-shaped circle in front of the mic.

Microphones are made in different ways.

A Dynamic Mic - Rugged, can withstand rough handling.

A Condenser Mic - More sensitive, needs power/phantom power.

Ribbon - high quality, very sensitive, not used in film production that much

Different Mics

Lavalier

Handheld

Boom microphone (*shotgun mic*) : Major advantage is that you can get good sound pickup while keeping the microphone out of the shot. Because it's further away from

talent, usually a hypercardioid or supercardioid mic is used.

An audio mixer - Amplifies weak signals, and mix two or more sources.

XLR- Commonly used three-wire audio cable for professional microphones and camcorders.

Interior and Exterior Lighting (Chapter 8)

Types of Light

Directional Light: Precise beam that causes shadows.

Diffused Light: Soft light, its beam spreads out quickly and illuminates a large area.

Color Temperature

The standard by which we measure the relative reddishness or bluishness of white light is called color temperature. Color temperature is used to describe the color quality of the light.

Color Temperature Standard

5,600K Daylight - outdoors, bluish light

3,200K Indoor - warmer more reddish light

High Key Lighting - Brightly lit frame with soft lighting, minimal shadows, and low contrast.

Low Key Lighting - Accentuates shadows, high contrast, and dark tones.

3-Point Lighting (triangle lighting)

Key light - Primary light source. Illuminates subject.

Fill light - Fills in shadows from key.

Back light - Separates subject from the background.

Adjusting the color temperature.

Color Correcting Gels: Used to convert the color balance of a light.

If your light is cooler than you want, use a CTO (Color Temperature Orange)

If your light is warmer than you want, use a CTB (Color Temperature Blue)

Graphics (Chapter 9,11)

Essential or Action Area/Title Safe Area

Is centered within the TV screen.

All important information must be contained in the essential area

Lettering For Graphics should be simple and bold so it's easier to read.

Aspect Ratio

Aspect Ratio describes the basic shape of the television screen.

4x3 SD
16x9 HD

Chroma Key

Green or Blue backgrounds are replaced by the keyed background image. This occurs in post production.

Chroma Keys are often used to simulate backgrounds. Helpful in various production issues such as budget, location logistics, talent conflicts, etc.

Virtual Production

A process where real-time 3D engines (game engines/Unreal Engine) are used to create photorealistic sets, which are then shown on giant LED walls behind actual sets utilizing the game engines' real-time rendering capabilities. This occurs on set.

The Production Process Filming (Chapter 1, 17)

Shot List

A shot list is a document that maps out everything that will happen in a scene of a film, or video, by describing each shot within that film or video. It serves as a kind of checklist, providing the project with a sense of direction and preparedness for the film crew.

Blocking

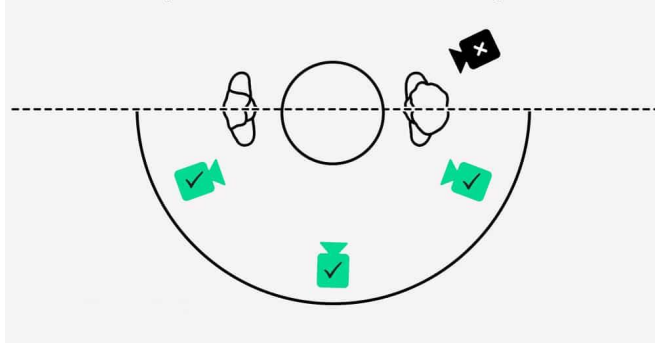
Performance blocking, or stage blocking, or actor blocking, refers to how one or more actors move around the space during a production.

Continuity

Generally speaking, the continuity system aims to present a scene so that the editing is "invisible" (not consciously noticed by the viewer) and the viewer is never distracted by awkward jumps between shots or by any confusion about the spatial lay-out of the scene. Classical editing achieves a "smooth" and "seamless" style of NARRATION, both because of its conventionality (it is "invisible" in part because we are so used to it) and because it employs a number of powerful techniques designed to maximize a sense of spatial and temporal continuity

180 DEGREE RULE

A filming technique where the camera must stay on only one side of the actions and objects in a scene. An invisible line, known as the 180 DEGREE LINE or AXIS OF ACTION, runs through the space of the scene. The camera can shoot from any position within one side of that line, but it may never cross it.



Screen Direction

Screen direction is a key component of continuity.

Maintaining a cohesive sense of direction is important to the clarity of a scene and for preserving the continuity of motion. **Screen direction**, also known as camera direction, is the direction that characters and objects move in the scene in relation to the frame.

EXAMPLE

If a character is walking from camera left to right in one shot, then from right to left in the very next shot within a scene in the same location, the result is jarring and confusing to the viewer. Camera left and right should remain consistent within a scene, unless the intent is to confuse or disorient.

Coverage

Shots needed to cover everything happening in the scene consisting of getting shots that will cut together smoothly, and getting the right shots for the scene to work.

Editing The Production

Film editing is the art and craft of cutting and assembling finished film. This work is done by a film editor who helps complete the director's vision of the movie.

Non-linear editing (NLE) – is an editing process that enables the editor to make changes to a video or audio project without regard to the linear timeline. It's non-destructive editing. In other words, you can work on whichever clip you want in any order. It doesn't matter if it lands in the beginning, middle, or end of the project. NLE uses software such as Final Cut Pro, Adobe Premiere, Avid, etc.

Linear Editing – Linear Editing is the process of making cuts and edits on film. It is destructive and must be done sequentially in order to create a final film print of an edited piece. Essentially,

you start editing the project at the beginning and finish at the end, with everything staying in order.

Editing is the vast majority of what happens during post-production. During the final stages of editing you can add **sound effects, color correct, hire a music composer, visual effects (VFX) or whatever is needed to enhance your film.**