Five C’s of Cinematography

**Objective:** Practice the art of framing your shot and how to recreate traditional camera moves in a virtual environment.

- Student successfully composed a sequence of traditional camera shots

**Definitions:**

- **POV (Point of View)** = location in the scene where the camera is placed; can also refer to the framing of the camera to represent a character’s perspective
- **POI (Point of Interest)** = location in space where the camera is focused; can also refer to a character, an item, or an action within the scene
- **Pyramid of vision (cone of vision)** = the portion of the 3D environment that can be seen through the camera
- **Line of Site** = the perpendicular line that travels away from the camera
- **Clipping planes (near & far)** = the planes perpendicular to the camera that define the closest (near) and most distant (far) area visible to the camera.
- **Field of vision** = defined by the space inside the pyramid of vision that falls between the near and far clipping planes; the Renderer ignores all geometry outside the field of vision.
- **Focal Length (Focal Distance)** = the distance from the camera to the focal plane
- **Focal Plane** = the plane perpendicular to the camera that is in perfect focus.
- **DOF (Depth of Field)** = the area around the focal plane that appears to be in focus; defined by the near and far focal planes.
- **Dolly** = horizontal camera move (X-axis)
- **Boom** = vertical camera move (Y-axis)
- **Truck** = depth camera move (Z-axis)
- **Tilt** = camera rotation around the X-axis (look up/ down)
- **Pan** = camera rotation around the Y-axis (look left/ right)
- **Roll** = camera rotation around the Z-axis (used when simulating a fly-through)
- **Zoom** = animating the camera’s focal length to make it appear to move

**Aspect Ratio** = determines the relationship between the width and height of the final image; a 2:1 aspect ratio means the image is twice as wide as it is tall. It’s important to set this early on because lighting & composition decisions are closely tied to it.

**Five C’s of Cinema**

- **Camera Angles** = defining the angle of the camera relative to the POI The angle of the camera helps establish the viewer’s emotional relationship with the POI.
- **Continuity** = establish a logical coherence between shots in both time and space
- **Cutting** = showing multiple views of the same action
- **Close Ups** = hide or reveal info
- **Composition** = defining the position, arrangement, and view of the objects within the frame
Camera Angles (aka Perspective)

- **Dramatic/ Extreme Angle Low** = items seem tall & powerful as viewer looks up to them
- **High** = items seem diminished as viewer looks down on them
- **Extreme Low** = exaggerated low angle; positioned below the character’s feet looking up at sky as if we’re about to get stepped on.
- **Extreme High** = exaggerated high angle; positioned on top of a tall building looking down on humanity
- **Bird’s Eye** = an extreme angle positioned directly above the scene, facing straight down.
- **Reverse Angle** = response to previous shot; commonly used to show the faces of 2 characters interacting with each other (see 180-Degree Rule)
- **POV** = “point of view”; audience sees exactly what the character sees; can be used to increase the viewer’s emotional attachment to the characters onscreen
- **POV 2nd Person** = We travel along right behind the subject and observe their experience as it happens.
- **Inventory POV** = (variation of the POV technique) whatever the character is carrying shows up in the frame and allows the audience to see what he is holding
- **POV object** = (variation of the POV technique) takes the perspective of an inanimate object or projectile
- **Voyeur** = framed in such a way (through binoculars, from inside a closet) to make us feel like we’re spying on the scene, rather than simply observing.
- **Reflection** = instead of seeing the real world, we see an image reflected off something in the scene; reflection can give us an insightful view of the action, showing us a hidden or psychological view of the scene.
- **Shadow** = instead of looking directly at the action, the action is seen as a shadow on a wall, floor, or other surface
- **Silhouette** = the subject is placed against a strong backlight so that its features and expressions become dark or completely black.
- **Subjective** = camera is strapped to the subject’s body, usually facing the subject, so that the camera becomes part of the subject’s experience.

Continuity

- We live life as one continuous "take" except when we sleep or get knocked unconscious
- Film is like dreaming, where we can jump from one place to another, or have the world change around us
- Viewer expects good continuity; poor continuity distracts from narrative
- Careful planning can create a consistent vision of the story/ narrative
  - Analyze and handle cinematic time/space
  - Build consistent space relationships (with Screen Direction)
  - Create consistent temporal sequencing (in Editing)
- **Screen Direction ("180-Degree Rule")** = keeping the direction an object is facing consistent from shot to shot; helps keep the viewer from getting confused about what character they’re looking at.
  Imagine an invisible line drawn through the characters in your scene & keep the camera within a 180-degree arc to one side of the line; results in characters favoring one side of the screen.
If your character is moving through a series of shots, keep directional continuity between them by never letting the camera cross the character’s path of movement.

As seen in the Top View, both cameras sit inside the 180 degree arc created by drawing a line through the characters. The result is that the **Black** Hat character favors the right side of the screen and the **White** Hat character favors the left side of the screen consistently when the camera angle is reversed.

- **Screen Direction** can also be used to emphasis a character’s emotional weight. For example: Good guys always face right, bad guys always face left.
Camera 2, on the side of the subject, still showing character walking to the RIGHT side of the screen maintaining continuity in screen direction

Camera 3, reverse angle from Camera 1, still showing character walking to the RIGHT side of the screen maintaining continuity in screen direction

**Cutting**

- ALWAYS cut on the action (wide shot of classroom with someone *entering*; CUT ON ACTION of *entering* to a closer shot of who it is)
- Avoid "jump cuts" (a cut that is a small, barely different camera *angle* or *framing* -- very disconcerting; looks like mistake; use sparingly and with intent)

**Close Ups**

- Close ups *hide* or *reveal* information

**Composition**

- Elements and Principles of Design
  - **Line Angles**
    - Horizontal & vertical lines match the straight edges of your frame and add stability and tranquility.
    - Angled lines conflict with the straight edges of your frame and create tension and a sense of movement.
- “Rule of Thirds” Guideline for composing your image created by dividing the screen into a 3x3 grid & nine equal parts (two equally-spaced horizontal lines and two equally-spaced vertical lines), and that important compositional elements should be placed along these lines or at their intersections.
Aligning a subject with these points creates more tension, energy and interest in the composition than simply placing the subject “Dead Center”. Consider where the most important element is in each frame, and how its location changes from shot to shot.

- **Framing** = defining the distance from the camera to the POI
  - The rule of thumb for shooting a scene sequence is that you start farther out to show the scene’s location and surroundings, and then move in closer to focus the viewer’s attention on the details of the scene.
  - Therefore, the list of defined shots starts with a series of far (long) shots, and then moves in for a series of near (close-up) shots.
  - **Long**
    - **Extreme Long** (ELS, XLS) = shows environment from very far away (IE. Earth viewed from outer space).
    - **Medium Long** (MLS) = shows general typography & sky
    - **Long** (LS) = shows local scenery; characters barely recognizable
  - **Medium**
    - **Wide** = shows enough of scene to include the full bodies of 5 character
    - **Knee** = cropped at subjects’ knees; used for conversation between 2 or 3 characters
    - **Medium** (MS) = cropped from the hips up
    - **Waist** = cropped from the waist up; focuses on upper body language & gestures; head and face never cropped
  - **Close-up**
    - **Medium Close-up** (MCU) = also called a “head shot” because it includes face, head, neck, & shoulders; focuses on facial expressions and head movement
    - **Close-up** (CU) = fills frame with subject’s head excluding all other items from view
    - **Extreme close-up** (ECU, XCU) = cropped even closer; presents very small details

**Practice (Camera Shots)**

① You will create a scene with 2 teapots (one RED and the other BLUE) to layout your NARRATIVE. Create several cameras to be set up around the scene and rendered in sequence to tell the story.
- You will need at least:
  - A couple of “long” type shots showing the town and establishing the location
  - 2 or 3 “medium” type shots (Wide, MS, Knee, Waist) showing the stand-off
  - 4 “close-up” type shots (MCU, CU, XCU) on the main 2 characters
- You may want to set up several other cameras to show other elements within the scene.

1. Create your scene with a ground plane and 2 teapots -- one with a RED wireframe, and the other with a BLUE wireframe
2. Create a camera
a. Create>Camera>Target Camera
b. Click & Drag in the top viewport
c. Change the Perspective view to the Camera View [c]
d. Type in a descriptive name (IE. “LongCam”)

3. **Move** [w] and **ORBIT** the “LongCam” to create an interesting composition.
   a. Remember to use the “Rule of Thirds” and the “180-Degree Rule”.

4. Add a new camera.
   a. Create>Camera>Target Camera

5. Repeat the steps 2-6 until you have added enough cameras and composed each shot.

6. Render each camera and post the sequence on your blog.

7. Save the working file – “Camera-Continuity_[F]-[Last].max” – and the rendered camera views to your STUDENT folder on the server.