EVENINGS FOR EDUCATORS 2012–2013

LOS ANGELES COUNTY MUSEUM OF ART
5905 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90036

EDUCATION DEPARTMENT

LACMA

Image and Illusion

WE LIVE IN A VISUAL CULTURE. STUDENTS ARE bombarded with images that they consume through a variety of formats. Smartphones and iPads are increasingly accessible, even infiltrating classrooms as the next wave of educational technology. This development has propelled educators to consider a new kind of aptitude—media literacy. The capacity to utilize technology, and to decipher and evaluate broadcasts of information and images are essential for navigating the twenty-first century.

Students who access new media acquire skills without even realizing it; these skills often go untapped and undeveloped in the classroom. The critical thinking and visual analysis required to consume and assess new media are also inherent in "reading" illusions at play in traditional and contemporary art forms. For example, an artist may repeat the same figure numerous times in a painting to convey a sense of movement, just as the filmmaker utilizes the rapid sequence of a figure in numerous frames to represent action. In both examples, movement is implied, not actual, and it is up to the viewer to interpret the illusion within each art form in order to understand it as such. The curriculum materials provided here examine how artists have utilized image and illusion throughout the ever-technological-changing world of the last 150 years, as well as identify key components of visual media with the goal of fostering media literacy.

Illusion in the Technical Age

Image and illusion are as old as human history. Humans have represented images of their surroundings and of their imagination reaching back to the prehistoric days of cave painting. Traditional art techniques changed during the nineteenth century when technological advances sparked the invention of photography, and expanded the tools available to artists. Images could now mirror reality, or at least record scenes as they appear to the human eye, thus bypassing the representation of reality created by the artist's hand. The application of visual illusion remained, however. As photography, film, and other new media developed, artists used new art forms in combination with traditional elements of art developed over the previous millennia: the illusion of movement, space, sound, time, and light. The following works of art and cinema represented here—chosen from LACMA's permanent collection and from two special exhibitions currently on view, *Masterworks of Expressionist Cinema: Caligari and Metropolis* (September 22, 2012–March 10, 2013) and *Stanley Kubrick (*November 1, 2012–June 30, 2013)—do not mark the first time such concepts were utilized in technology-based media, but they do serve as excellent examples of these elements.

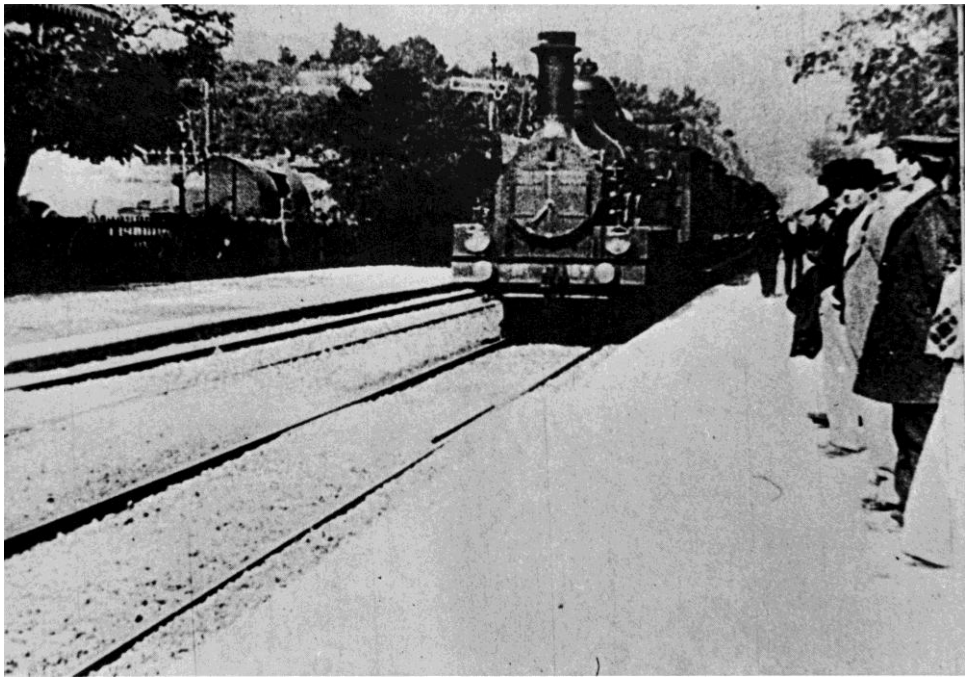
The Illusion of Movement

THE MOVING IMAGE IS SO UBIQUITOUS TODAY THAT we rarely consider how people first responded to the new art form. In 1896 the filmmaking duo of Auguste and Louis Lumière premiered one of the first motion pictures: a silent, documentary film of a steam locomotive arriving at La Ciotat station in Bouches-du-Rhône, France. According to the American Film Institute (AFI), it is rumored that the audience became so alarmed by the illusion of the moving image that they ran to the back of the room, screaming out in fear that the train might jump from the screen.[1]

Film, by its very definition, is the repetition of a series of images. When images are projected in rapid succession (twenty-four frames per second), the optical illusion of seamless ***movement*** is created for the viewer. The Lumière brothers understood that if they placed the camera on the station platform where the train was set to arrive, the transition from the long shot (the train as it appears in the background) to the medium shot (the train as it appears in the middle ground) to the close-up (the train as it appears in the foreground) would create one continuous, real-time shot. The quick progression of images from these perspectives created the illusion of motion —and the perception that the train might actually come to life.

1 Melinda Corey and George Ochoa, *The American Film Institute Desk Reference* (New York: Dorling Kindersley, 2002), p. 25.

Mini–Motion Pictures:
Create a flipbook by storyboarding a series of twenty-four images to create a moving story. Sketch each of the scenes using a variety of perspectives, showing setting, character, and action in the foreground, middle ground, and background. When finished, draw a final version of each frame on a separate sticky note. Seal all the notes together, and then flip to bring your story to life.



AUGUSTE AND LOUIS LUMIÈRE
France, 1862–1954 and 1864–1948
L'Arrivée d'un train en gare de La Ciotat (*Arrival of the Train at La Ciotat*), 1896
Photograph of a frame from *Arrival of the Train at La Ciotat,* depicting a train approaching a platform.
From the collections of the Margaret Herrick Library

AUGUSTE AND LOUIS LUMIÈRE
France, 1862–1954 and 1864–1948
L'Arrivée d'un train en gare de La Ciotat (*Arrival of the Train at La Ciotat*), 1896
Photograph of a frame from *Arrival of the Train at La Ciotat,* depicting a train arriving at a platform.
From the collections of the Margaret Herrick Library

The Invention of Special Effects

WITH A PENCHANT FOR PLAY, MAGICIAN-TURNED-filmmaker Georges Méliès used the medium of film to alter, rather than record, ***reality***. His best-known film, *A Trip to the Moon,* chronicles the whimsical tale of six astronomers who embark on an interstellar journey. They build a rocket in the form of a bullet and construct a canon to catapult themselves into the eye of the Man in the Moon. Upon arrival, they revel in such astronomical spectacles as the Big Dipper, the Great Bear, and the passage of comets and meteors. When snow-fall disrupts their sleep, they descend into a crater, where they are captured by aliens. The astronomers fight their way through, reducing the fragile beings to dust. They rush back to the rocket and return to Earth in a dramatic ocean landing.

According to the AFI, Méliès is credited with the invention of special effects, and in *A Trip to the Moon,* he experimented with the use of live action in combination with animation, including the *stop trick effect*.[1] Stop trick is the illusion of objects or people appearing, disappearing, or morphing into other objects, as seen in the fight scene in which aliens disappear into smoke with the stroke of a fist. To create this effect, Méliès deliberately stopped filming at the point of contact, asked the "alien" to step out of frame, then resumed filming. In true magician's form, the seamless result seemingly defies the laws and properties of physics.

Méliès was also one of the first filmmakers to layer compositional planes by physically dividing the frame into a separate background, middle ground, and foreground. Within the frame, he would place miniature models in front backdrops. To create the illusion of an underwater landing, for example, he placed a painting of a faux shipwreck and floating jellyfish in the back-ground, with a fish tank immediately in front of the camera. While filming, he dropped a miniature rocket in the water to mimic a life-size landing, complete with real fish swimming away from the tide of waves. It is this nexus of art and film, and the pursuit of visual illusion, that would later flourish in Europe with the advent of what came to be called Expressionist cinema (a movement characterized by the expression of emotional experience rather than physical reality).

1 Melinda Corey and George Ochoa, *The American Film Institute Desk Reference* (New York: Dorling Kindersley, 2002), p. 30.

Stop Trick Flick:

Translate your flipbook into a live action story, incorporating the stop trick effect. Photograph a series of images inspired by your flipbook's story, using classmates as actors and the school campus as the setting. From one image to the next, try jumping from one perspective to another (such as long-shot to close-up), or add or remove objects or people within the frame to create the illusions of appearance or disappearance. Upload the images to the computer and use them to create a slide show. Be sure to alter the speed at which they play to create movement.

GEORGES MÉLIÈS
France, 1861–1938
Le Voyage dans la lune (A Trip to the Moon), 1902
Photograph of a frame from *A Trip to the Moon,* depicting a rocket embedded in face of the moon.
From the collections of the Margaret Herrick Library

GEORGES MÉLIÈS
France, 1861–1938
Le Voyage dans la lune (A Trip to the Moon), 1902
Photograph of a frame from *A Trip to the Moon,* depicting a fight between voyagers and extraterrestrials.
From the collections of the Margaret Herrick Library

The Illusion of Space

THE PLOT OF *THE CABINET OF DR. CALIGARI* IS A complicated tale within a tale. It begins with a flashback in which a man named Francis recalls a visit to a carnival with his young friend Alan. At the carnival, Francis and Alan encounter the magician Dr. Caligari and the sleepwalker Cesare, who predicts that Alan will be killed that night. The murder does take place, seemingly at the hands of Cesare. Francis comes to suspect Caligari of masterminding the attacks, so he visits an insane asylum to inquire about a mysterious series of homicides. There he learns that Caligari is actually the facility's director. As the film returns to the story's present day, it is revealed that Francis and Cesare are inmates, and that the flashback was one of Francis's paranoid delusions. In the final plot twist, Dr. Caligari announces his intention to cure the troubled Francis.

The elaborate architectural settings by designer Hermann Warm are a hallmark of the aesthetic of *Dr. Caligari* and of German Expressionist film (a branch of the larger Expressionist movement that responded to post–World War I sentiment and is characterized by experimentation with new ideas and artistic styles). Warm stated that "films must be drawings brought to life," and he created the world of Dr. Caligari by constructing the sets entirely in studios.[1] He collaborated with two painters to craft illusions of disorienting ***space*** and perspective through the use of jagged forms, misshapen windows, and illogical shadows. The off-kilter composition evokes the altered psychological state depicted in the film's narrative. The use of iris framing adds to this. In iris framing, scenes are viewed through a triangular or circular frame. The effect mimics the voyeuristic act of peeking in on a scene unfolding before you.

1 Siegfried Kracauer, *Theory of Film* (Princeton University Press, 1997), p. 39.

Frame of Mood:

Print one of the images that you photographed in your stop trick flick. Think about the mood that the image evokes, such as cheerful, anxious, or excited. How would you alter or frame the image to enhance this mood? Add angular, geometric collage elements to the composition to elicit the bizarre (influenced by the *Dr. Caligari* aesthetic). Adding circular, organic lines and shapes might convey comfort or whimsy. When finished, choose a shape that appears prominently in your photographic collage, then cut the shape out of a black sheet of construction paper. Adhere the construction paper to your artwork to frame your image.

(GERMAN) ARTIST UNKNOWN
Untitled (Cesare [Conrad Veidt] Carrying Jane [Lil Dagover] across Rooftops), 1919
Set photograph from the film *Das Cabinet des Dr. Caligari* (The Cabinet of Dr. Caligari)
Gelatin silver print
The Robert Gore Rifkind Center for German Expressionist Studies (M.82.287.1e) LACMA

The Illusion of Sound

GERMAN EXPRESSIONIST CINEMA IS MASTERFULLY realized in another iconic film of the 1920s, *Metropolis,* set in a glittering city in the year 2026. The film's protagonist, Freder, is the son of a wealthy businessman who, along with other bourgeois intellectuals, rules from the city's skyscrapers while workers dwell and labor belowground on machines that need their constant attention. Freder meets an angelic young woman named Maria, who opens his eyes to society's oppressive inequities. He follows Maria into the subterranean city, where he gets wind of a strange plot: a mad scientist, Rotwang, is building a robot in the image of Maria. The robot drives the worker-citizens of Metropolis to madness, causing floods and destruction. Eventually, Freder and Rotwang confront each other on the roof of a cathedral. Freder triumphs over his adversary and declares a truce between the ruling thinkers and the toiling workers.

The set for *Metropolis*, designed by Erich Kettelhut, was inspired by director Fritz Lang's first glimpse of the New York City skyline. Monumental scale was achieved by means of an ingenious special effect called the Schüfftan process, for which cinematographer Eugen Schüfftan placed a mirror at a 45-degree angle between the camera and miniature models of skyscrapers. To create the illusion that the actors are interacting with a life-size set, he staged the actor in a precise location and looked at his/her reflection on the mirror. He then traced the actor's silhouette, cut the shape from the mirror, and then replaced the outline's shape with a regular piece of glass. Lang filmed only the actors, keeping the models and mirrors in place, thus capturing the actors and action against the world's first green screen.

Expressionist acting techniques, such as exaggerated gestures, enliven the space and create the illusion of ***sound***. Screaming, wailing, crying, although silent, add to the film's "chaotic" narrative and aesthetic. There are long, diagonal shots of tunnels from which leaders call followers forward from a distance, and scenes of a crowd running up an endless flight of stairs while droves of people squeeze into an escape elevator. Though silent, the result is the perceived sound of panic.

Mirror, Mirror:

With a partner, experiment with the properties of mirrors using a flashlight and two toilet-paper cylinders. Position one of the cylinders at 45 degrees against the mirror, then ask your partner to do the same. Place your circles together, holding at an angle to create a V shape. Next, shine a flashlight through one of the cylinders. Where did the light travel? What shape did it take? Try covering the cylinder opening with colored cellophane. What happens when you and your partner use different colors? Like professional cinematographers, experiment with sizes, shapes, and colors.

HORST VON HARBOU
Germany, 1879–1953
Untitled (People Rushing up the Steps toward the Chosen One), 1926
Film still from Fritz Lang's *Metropolis*
Gelatin silver print
Purchased with funds provided by the Robert Gore Rifkind Foundation,
Beverly Hills, CA (M.2008.70.2) LACMA

HORST VON HARBOU
Germany, 1879–1953
Untitled (Crowd in Worker's City), 1926
Film still from Fritz Lang's *Metropolis*
Gelatin silver print
Purchased with funds provided by the Robert Gore Rifkind Foundation,
Beverly Hills, CA (M.2008.70.3) LACMA

The Illusion of Time

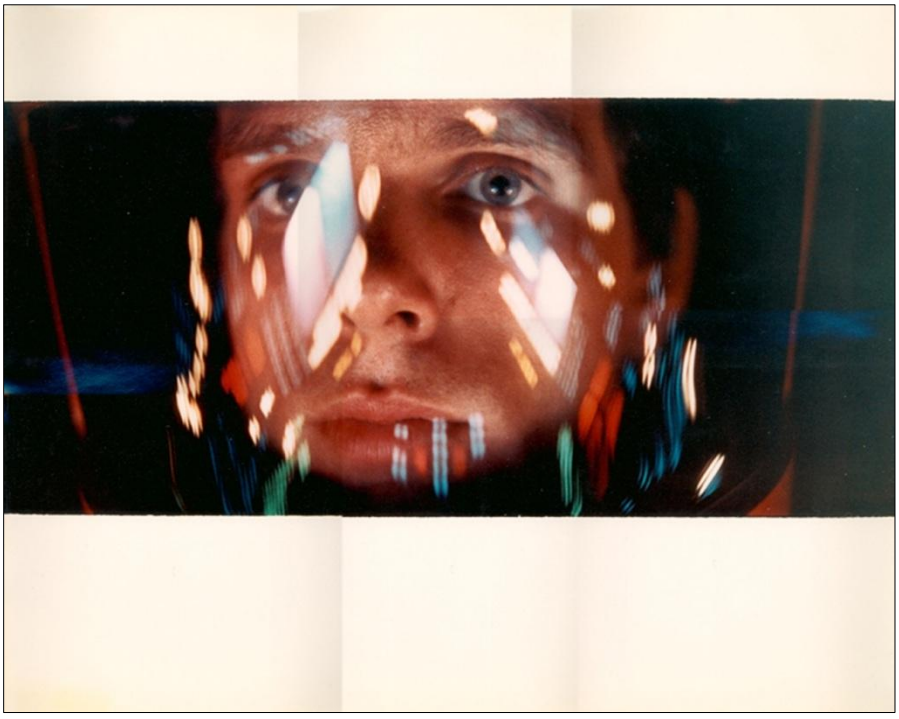
STANLEY KUBRICK'S EPIC *2001: A SPACE ODYSSEY* IS a work of compositional virtuosity: any one of the film's still images reveals an entire world tailored into a single frame.[1] The ambiguous story traces human evolution and a series of encounters with a peculiar black monolith. Sometime in the distant past, the monolith was buried under the lunar surface, and in the year 2001, a space voyage to Jupiter traces the monolith's electric signal or current. Two astronauts embark on the journey to reach its signal aided (or obstructed) by a "thinking" and "talking" computer.

Kubrick's manipulation of the passage of ***time*** in the film creates a sensory experience. The pace of the film is slow. Short spurts of dialogue only occasionally interrupt long expanses of slow motion and ambient sound. The smallest acts are prolonged, so as to seem revolutionary. Walking happens at a snail's pace to mimic zero gravity. Floating objects (including an ape throwing a bone in the air, a shuttle traveling through space, and a pen afloat in zero gravity) constitute a recurring motif. The distortion of time is expertly realized in the penultimate scene, in which one of the astronauts risks his life to save his comrade in danger. Ironically, a painstakingly slow pace shapes the most heightened sense of suspense.

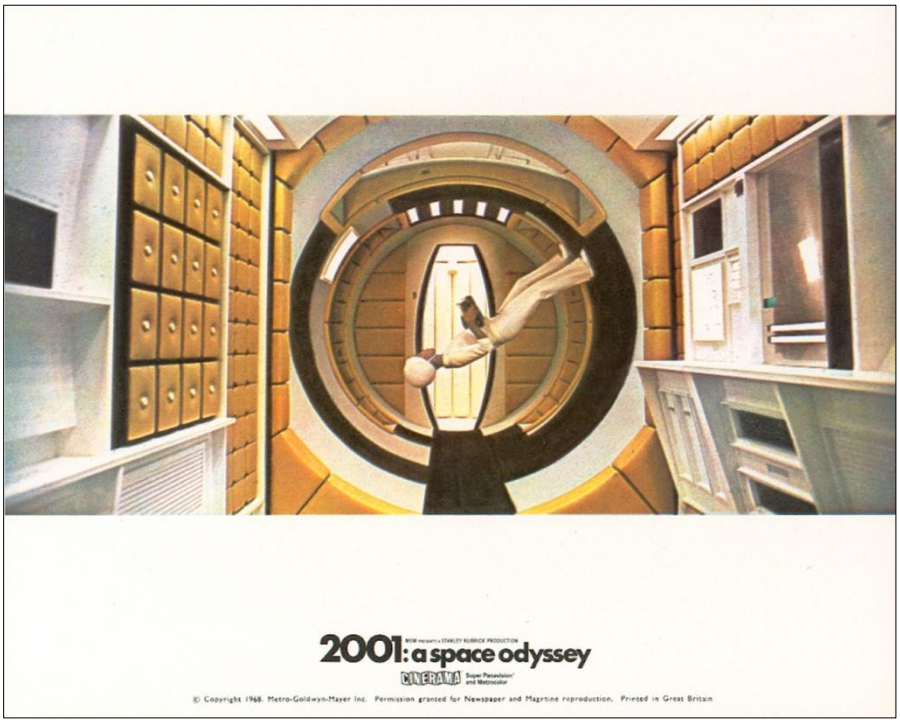
1 Elvis Mitchell, "The Art and Myth of Stanley Kubrick," in *LACMA Insider* (Los Angeles: LACMA, Fall 2012), p. 15.

Time Warp:

Film a short scene, focused on one act in motion—such as walking, running, jumping, or skipping—using a web-enabled smartphone. Be sure to choose a location with plenty of natural light, use a steady hand when filming, and try multiple takes to produce enough source footage for editing. When finished, download a free editing app (Android users, try VidTrimPro or Clesh Video Editor) onto the phone (iPhone users can choose from iMove or ReelDirector). Import the short film into the app, and either speed up or slow down the play rate to alter the pace of motion.



2001: A Space Odyssey, directed by Stanley Kubrick (1965–68; GB/United States)
The astronaut Bowman (Keir Dullea) in the storage loft of the computer HAL
© Warner Bros. Entertainment Inc. (pf_kubrick_2001_03)



2001: A Space Odyssey, directed by Stanley Kubrick (1965–68; GB/United States)
Scene photo
© Warner Bros. Entertainment Inc. (pf_kubrick_2001_04)

The Illusion of Light

IN STANLEY KUBRICK'S PERIOD PIECE *BARRY LYNDON* (1975), a young farm boy longs for recognition in his small eighteenth-century Irish village. After pursuing the love of his cousin and learning of her intent to marry a British captain, Barry ends up enrolling in the British Army to fight in the Seven Years War. An opportunist at heart, he steals the identity of an officer in order to desert the army, but is caught by the Prussian Army and forced to join. Working his way up the ranks, Lyndon saves the life of his captain, which affords him the position of a spy. Tasked with generating intelligence on an Irish gambler, the Chevalier de Balibari, he forges an alliance with the Chevalier to become his associate. Through his dealings fulfilling the vices of the elite, Lyndon meets and marries the esteemed Lady Lyndon and indulges himself in lavish consumption and entertainment. His obsession to align himself with nobility steers his fall from grace.

Barry Lyndon offers a stunning arrangement of tableaus copied from eighteenth-century paintings of British landscapes and aristocratic scenes. Shot entirely on location, the production required technical innovation in addition to traditional techniques to create the illusion of a world devoid of artificial ***light***. "For the day interior scenes, we used either the real daylight from the windows, or simulated daylight by banking [placing] lights outside the window and diffusing them with tracing paper taped on the glass," Kubrick noted.[1]

The majority of the night scenes were shot only with candlelight, so Kubrick and his team adapted NASA technology (developed to record Apollo moon landings in darkness) to create a camera and lens equipped to film in low light. In many scenes, dozens of candelabrum are placed in the foreground, middle ground, and background to illuminate the expansive, gold-gilt interiors of the eighteenth-century architecture. In intimate card-playing scenes, the glow of the flames bathes the actors in lush, sensuous light. The illusion of natural light is the perfect, atmospheric finish to *Barry Lyndon's* spectacular composition.

1 Michel Ciment, "Kubrick: The Definitive Edition," *The Stanley Kubrick Archives* (Los Angeles: Taschen, 1976), p. 443.

Final Saga:

Combine everything you have learned about composition, perspective, special effects, framing, light, and timing in a major motion picture. Storyboard, stage, and film using your web-enabled smartphone. Be sure to fill the frame of the camera with the action and characters of your story, and try filming from different angles and perspectives. Edit using your editing app and the tools at your fingertips to alter and manipulate individual frames and the overall film. Save the film file, email or upload it onto a computer, and then share with your peers in a classroom premiere.

Barry Lyndon, directed by Stanley Kubrick (1973–75; GB/United States)
Barry Lyndon (Ryan O'Neal) and the Chevalier de Balibari (Patrick Magee) at the roulette table
© Warner Bros. Entertainment Inc. (pf_kubrick_bl_01)

Barry Lyndon, directed by Stanley Kubrick (1973–75; GB/United States)
Lady Lyndon (Marisa Berenson) plays the piano with her son, Bryan Patrick Lyndon (David Morley), with tutor Reverend Samuel Runt (Murray Melvin), in the background
© Warner Bros. Entertainment Inc. (pf_kubrick_bl_01)

Glossary

animation the rapid display of sequential imagery to create the illusion of movement

close-up shot tight framing of a person or an object to display detail; an object as it appears in the foreground of a composition

composition the placement or arrangement of visual elements in an image

Expressionism a Modernist movement in art characterized by the distortion of subjective perspective for emotional effect; the expression of emotional experience rather than physical reality

film the repetition of sequential images at twenty-four frames per second

frame a single still image from a motion picture

German Expressionism a branch of the larger movement that responded to post–World War I sentiment, characterized by experimentation with new ideas and artistic styles

green screen a postproduction technique for layering two images on top of each other, which can be used to add or remove a background from the subject of a film

illusion something that deceives by producing a false or misleading impression of reality

iris framing a technique used to show an image in only one area of the frame, usually as a way of focusing attention on a specific part of the scene without reducing the scene in size

long shot framing of a person or objects in relation to its or their surroundings; an object as it appears in the background of a composition

media literacy the capacity to utilize technology, and to decipher and evaluate broadcasts of information and images

medium a mode of artistic expression

medium shot framing of a person or object from a medium distance; an object as it appears in the middle ground of a composition

motion picture *see "film"*

perspective the way in which objects appear to the eye based on their spatial attributes

Schüfftan process the visual effect of an object or person appearing to exist within, or interact with, the landscape of a miniature model through the use of mirrors and camera angles

stop trick the illusion that objects or people appear, disappear, or morph into other objects on film

These curriculum materials were prepared by Jennifer Reid, Mary Lenihan, and Holly Gillette and designed by Jenifer Shell. Essay text was adapted from *Masterworks of Expressionist Cinema: Caligari and Metropolis* and *Stanley Kubrick* exhibition didactics.

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DCA DEPARTMENT OF CULTURAL AFFAIRS City of Los Angeles

Classroom Activity

Time-Lapse Photography

Enduring Understanding	Photographers and filmmakers capture and manipulate the passage of time through time-based media and framing techniques.
Grades	3–12
Time	One class period
Visual Art Concepts	Shape, movement, representational and non-representational, positive and negative space, form, time, space
Materials	Glass tray, transparent cooking oils and/or syrups, color dyes (food coloring), color inks and various other household liquids (car oils, house paints, etc), black paper to mount finished photos, digital camera (camera phone, iPad, etc), web-enabled computer, digital printer, and photo paper.
Talking about Art	View and discuss the *2001: A Space Odyssey* (1965–68) film stills included in the curriculum. Stanley Kubrick's epic *2001: A Space Odyssey* is a work of compositional virtuosity; any one of the film's still images reveals an entire world tailored into a single frame. The ambiguous story traces human evolution and a series of encounters with a peculiar black monolith. Sometime in the distant past, the monolith was buried under the lunar surface and in the year 2001, a space voyage to Jupiter traces the monolith's electric signal or current. Two astronauts embark on the journey to reach its signal, aided (or obstructed) by a "thinking" and "talking" computer. Kubrick's manipulation of the passage of time in the film creates a sensory experience. The pace of the film is slow. Short spurts of dialogue only occasionally interrupt long expanses of slow motion and ambient sound. The smallest acts are prolonged so as to seem revolutionary; walking happens at a snail's pace to mimic zero-gravity. The distortion of time is expertly realized in the penultimate scene when one of the astronauts risks his life to save his comrade in danger. Ironically, a painstakingly slow pace shapes the most heightened sense of suspense.

Look closely at the film stills provided, what appears to be happening? How does Kubrick use composition to mimic zero-gravity in this scene photograph? If he were to zoom-in on the action, would a detailed shot have the same effect? How would the action progress in a related series of photographs?

Making Art

In *2001: A Space Odyssey*, Kubrick manipulated the passage of time by capturing slow motion on film. Experiment with documenting the passage of time using digital photography and simple, household materials.

Pour a one-inch-thick layer of a light, transparent cooking oil or syrup into a glass tray. Place the glass tray on a flat, well-lit surface. Position your camera so that it is ready to shoot, then ask a partner to drip colored ink into the tray of oil. As the oil and ink interact, quickly photograph close-up shots of the ink as it moves through the oil. Take several photographs to create a series, experimenting with different colors.

Download all photos to a computer (or email them to yourself). Edit and crop photos as necessary. Print three photos and juxtapose them together to create a triptych. Choose three that capture motion and progression, representing time-lapse photography.

Reflection

Mount photographs on black paper then display them around the classroom. Facilitate a gallery walk so that students can view all of the photographs. Remember, no touching artworks in the gallery.

Revisit Kubrick's representation of time and zero-gravity space travel. How do your photographs evoke a sense of space and time? What role does chance play in creating artworks such as these? What role did technology play in your experimentation?

Curriculum Connection

Use time-lapse photography to document the stages of plant life. Plant a seed in a glass vase, directly against the glass for an optimal view. Set up a digital camera on a tripod in a well-lit part of the classroom and take regular photographs of the seed for the length of its gestation to mature plant. Download the photographs onto a computer and edit photos together. Present the series in a science fair with accompanying research and information.

Classroom Activity

Stop Trick Animation

Enduring Understanding	Artists and filmmakers use special effect techniques to create stories that suspend disbelief.
Grades	5–12
Time	One to two class periods
Visual Art Concepts	Background, middle ground, foreground, space, frame, composition, color
Materials	Paper, pencils, pens, colored pencils. Optional: *AnimAction* Software, standard camcorder, copy stand or camera tripod, computer, storyboards, field guides, peg bars, animation paper. Software and animation materials can be found at http://www.animaction.com.
Talking about Art	View and discuss the *A Trip to the Moon* (1902) film stills included in the curriculum. With a penchant for play, magician-turned-filmmaker George Méilès used the medium of film to alter, rather than record, reality. His best-known film, *A Trip to the Moon*, chronicles the whimsical tale of six astronomers who embark on an interstellar journey. They build a rocket in the form of a bullet and construct a cannon to catapult themselves into the eye of the Man in the Moon. Upon arrival, they revel in such astronomical spectacles as the Big Dipper, the Great Bear, and the passage of comets and meteors. Snowfall disrupts their sleep and they descend into a crater where they are captured by aliens. The astronomers fight their way through, reducing the fragile beings to dust. They rush back to the rocket and return to the earth's atmosphere in a dramatic ocean landing. Méilès experimented with the use of live action in combination with animation, including the stop trick effect. Stop trick is the illusion of objects or people appearing, disappearing, or morphing into other objects, as seen in the fight scene where aliens disappear into smoke with the stroke of a fist. To create this effect, Méilès deliberately stopped filming at the point of contact, asked the "alien" to step out of frame, then resumed filming. In true magician's form, the seamless result seemingly defies the laws and properties of physics.

Méilès was also one of the first filmmakers to layer compositional planes by physically dividing the frame into a separate background, middle ground, and foreground. He often hand-tinted his film stills as well. Take a look at the black-and-white reproductions. If you painted them with watercolor, what colors would you choose? Would you use warm colors like red and yellow or cool colors like blue and green? Do you think the colors would influence the feel and emotion of the film and its story?

Making Art

Film, especially animation, requires you to suspend natural disbelief. Frames of two-dimensional images, when presented in rapid succession, transform into three-dimensional motion. When you watch an animation, you understand the images are not real yet you get caught up in the illusion.

Using *AnimAction* software, animation tools and supplies, create a short animation incorporating stop trick techniques. First, storyboard a narrative about an object or character appearing or disappearing. Compose the key frames on the storyboard and then transfer the drawings to animation paper (tracing paper). Design the drawings or shots so that each has a foreground, middle ground, and background. Add extra frames between the key frames on separate sheets of animation paper to heighten the illusion of seamless movement. You should assemble the frames in shooting order, which is the same sequence as you drew them. Then, color the frames to add an emotive touch.

When finished, use a camcorder connected to a PC/MAC computer and *AnimAction* software to capture each frame individually. Film all frames then test your animation by watching it play. This is called a pencil test. Make adjustments to your drawings as needed by adding or removing frames. The more frames you add between key frames, the smoother and longer your animation will be. Finally, add complementary music to your short.

Reflection

Facilitate a final screening of the animations in class. Discuss the fun and difficulties of using drawing and technology to create animations. How might the process differ if you filmed the same story using live action characters and setting? How might the process be similar?

Elementary Connection

For lower grades, create an animation flipbook. First, draft the story on a storyboard. Every day for one month, ask students to draw one to two pages of the book. At the end of the month, bind the book together using hole punches and string then flip to bring the animation to life.

Classroom Activity

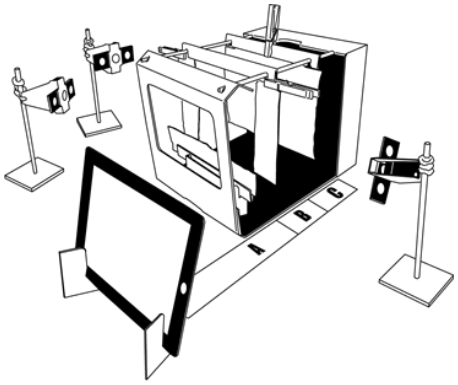
Monumental Mini Movies

Enduring Understanding	Filmmakers capture and manipulate the illusion of space, scale, and sound through set design techniques.
Grades	6–12
Time	Three class periods (production, filming, screening)
Visual Art Concepts	Line, space, size, scale, organic and geometric, contour and organic lines, two-dimensional and three-dimensional forms, linear and atmospheric perspective, staging, layering, and relative size.
Materials	Markers, crayons, colored pencils, glue, tape, cardstock and construction paper; iPad or video-enabled smartphone. Optional: *Tabletop Moviemaking Studio*, LED light kit with gels; Cityscapes Worksheet.pdf (provided on curriculum CD). *Tabletop Moviemaking Studio* is available at http://www.tabletopmedia.org.
Talking about Art	View and discuss the *Metropolis* (1926) film stills included in the curriculum. The set for *Metropolis*, designed by Erich Kettelhut, was inspired by director Fritz Lang's first glimpse of the New York City skyline. Monumental scale was achieved by means of an ingenious special effect called the Schüfftan process, for which cinematographer Eugen Schüfftan placed a mirror at a forty-five degree angle between the camera and miniature models of skyscrapers. To create the illusion that the actors are interacting with a life-size set, he staged the actor in a precise location and looked at his/her reflection on the mirror. He then traced the actor's silhouette, cut the shape from the mirror, and then replaced the outline's shape with a regular piece of glass. Lang filmed only the actors, keeping the models and mirrors in place, thus capturing the actors and action against the world's first green screen. Look at the scale of people and buildings depicted in *Metropolis*. What shapes do they form? Analyze the contour lines of the buildings; are there straight lines with ninety degree intersections or are there organic lines? Compare these images of cities with the city or neighborhood that surrounds you. How have technology and new building materials changed the way the city looks? Do you think today's buildings will be around in 500, 1000, or even 2000 years? Why or why not?

Imagine life in an ancient or futuristic city. In what ways might life be similar or different? Think about the environment in which you might live. How would living in a single-story mud and stone dwelling differ from living on the 100th floor of a glass and steel structure?

Making Art

In *Metropolis*, Kettelhut was able to create the illusion of space through set design and special effect techniques. In small groups, use simple drawing materials, an iPad or smartphone with a video camera, and the *Tabletop Moviemaking Studio* to create a short thirty-second film.



First, use cardstock and construction paper to create three separate planes that represent the set's foreground, middle ground, and background. If you are using the *Tabletop Moviemaking Studio*, compose a stage by clipping in a setting marked (C), two "wings" (B) for the middle ground, and a texture in the foreground (A). Look through the proscenium (stage opening) to see how foreground, middle ground and background combine to create a complete scene. Then, clip in the cityscape background, place the middle ground elements such as buildings, and place foreground elements in focus.

See the PDF "CityScapes Worksheet" to help you design the scale and perspective of the stage. Use the template to draw buildings to scale then work in groups to create a layered metropolis of overlapping buildings. Achieve depth by placing structures on different planes or distances from the proscenium. Place the tallest buildings in the rear to create a vanishing point effect. A combination of two-dimensional cutouts, two-dimensional cutouts with folds, and three-dimensional forms will help fill the frame and create a cityscape with depth.
See the following instructional videos for a live demonstration of the process as well as the "Cityscape Tips" PDF saved on the curriculum CD.
Drawing and Coloring the Cityscape—http://youtu.be/WxNROjwbSYo
Creating the Pop-Up Background—http://youtu.be/RJtuixwgwAI
Staging a Scene—http://youtu.be/c1kMmOwAm4A

Reflection

Facilitate a final screening of the movies in class. Discuss the fun and difficulties of creating a set with the illusion of space and depth. How might the process differ if you used objects, backdrops, or real locations in the city to stage the setting? How might the process be similar?

Curriculum Connection

Turn the "Cityscapes Worksheet" into a mathematical grid by assigning values to the individual units. Explore the relative scale of various buildings using ratios to determine different heights.

Classroom Activity

German Expressionism: Art, Film, and History

Enduring Understanding	Artworks often respond to the historical context in which they were created, while artists draw inspiration from the social, political, and economic climate that surrounds them.
Grades	6–12
Time	One to two class periods
Visual Art Concepts	Line, shape, geometric and organic, composition, realism, mood, expressionism, color, collage
Materials	Construction paper, newspapers, magazines, glue, scissors
Talking about Art	View and discuss the *The Cabinet of Dr. Caligari* (1920) film stills included in the curriculum.

Expressionism was an avant-garde art movement that began in the early twentieth century. Today, the term unites a group of modern artists such as Ernst Ludwig Kirchner, Wassily Kandinsky, Franz Marc, and Paul Klee who used artmaking to express a subjective version of reality, as opposed to an objective or realistic representation. Their works are often characterized by bold, vigorous brushwork, forceful line, and bright color and they evoke feelings of an inner, emotional world. The movement, originating in Germany, responded to Europe's social, political, and economic climate following the death, destruction, and poverty created by World War I.

As with many art movements, expressionism spread to a wide range of art disciplines, including literature, music, theatre, and cinema. German filmmakers largely defined the characteristics of expressionist cinema. The country's political isolation and the government's ban on foreign films sparked demand for film production. One of the most influential German Expressionist films is *The Cabinet of Dr. Caligari*, directed by Robert Wiene and designed by Hermann Warm.

What is your impression of the *Dr. Caligari* set? What types of lines and shapes do you see? How does the angular pathway and triangular architecture guide the viewer's eye throughout the scene? Who are the characters and what action might be taking place? How does the overall composition, or arrangement of visual elements, evoke mood? Chart a list of synonyms that describe the feeling of this scene.

Set designer Hermann Warm worked with painters Walter Reimann and Walter Röhrig to create the disorienting space and perspective characterized by *Dr. Caligari's* aesthetic. Jagged forms, misshapen windows, and heightened shadows form an illogical, geometric composition that parallels the film's illogical narrative.

Compare and contrast this work of cinema with a German Expressionist work of art from LACMA's permanent collection, *Apocalyptic Landscape* by Ludwig Meidner (1913), pictured below. What compositional elements do you notice? What type of mood does the composition evoke? Describe the characters, action, and setting. If the characters were to speak, what would they say? If you were to title this painting, what title would you choose? What might have inspired Meidner to create this painting?

Ludwig Meidner (Germany, 1884–1966) , *Apocalyptic Landscape,* 1913, painting, oil on canvas, 37 1/2 x 31 5/8 in., gift of Clifford Odets (60.65.1b) LACMA

Making Art

Chart a list of issues that concern our contemporary world. What are the feelings surrounding these issues? How can you translate one of these feelings into a work of art?

Choose a piece of colored construction paper to serve as the background of your collage (cool colors, such as blue or green, evoke tranquility or melancholy while warm colors, like red or orange, evoke tension or excitement). Use source material from magazines and newspapers to design your scene. Include geometric or organic (curvy) shapes, cut from patterned paper, along with words. Arrange all of the visual elements on the background, trying different configurations. Once you have reached a desired composition and emotional effect, glue and layer the elements on top of each other.

Reflection

Mount collages in the classroom. Compare and contrast the final works with the original list of current events and emotions. Do the works evoke the intended message?

Curriculum Connection

Use this lesson as an entry point into a history or social sciences unit. Juxtapose works of art with informational texts and talk about the relative strengths and weaknesses of recording history through art versus journalism. Who, in society, witnesses historical events and how do they record their interpretations? What 21st-century tools do the media use today?