FOUNDATIONAL PHOTOGRAPHY SKILLS LESSON 4

Lighting

Grade Levels: 9–12
Duration: One 45-minute to one-hour classroom period
MESSAGE TO EDUCATORS

Everyone has the ability to create and interpret images. This lesson-plan series guides students through the foundational elements of photography, outlines the artistic process, and aims to strengthen their visual literacy skills. The lessons build upon one another and are developed to familiarize students with photography and become comfortable operating the camera as a tool for creative self-expression. Once your students develop an understanding of fundamental photography techniques, their photographic explorations can lead them on journeys that capture the world from their point of view.

You do not need to be practiced in the skills of photography and facilitating discussions about art to effectively lead this lesson, but we would encourage you to try some of the photography assignments included in order to share your experience with students. The Getty Museum is committed to supporting meaningful dialogue through art, and therefore this lesson plan was created with educators to carefully walk you through the steps needed to effectively facilitate and guide your students.

We encourage you and your students to use this lesson to spark ideas and conversations about the world around them.

Student Learning Objectives

• Students examine and analyze photography that uses lighting to direct the viewer’s attention to highlighted points in an image.
• Students create four photographs that incorporate lighting techniques such as hard light, soft light, back lighting, and “golden hour” light
• Students begin curating a body of work that has a cohesive theme based on their interest.

Students Create

• A photograph that uses a hard light
• A photograph that uses a soft light
• A photograph taken during the “golden hour”
• A photograph that uses backlighting
• A photograph using color transparencies or gel light filters (optional)

ASSOCIATED STANDARDS

Common Core State Standards

CCSS.ELA-LITERACY.SL.9–10.1.D

Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

CCSS.ELA-LITERACY.SL.11–12.1.D

Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible, and determine what additional information or research is required to deepen the investigation or complete the task.
National Core Arts Standards

Anchor Standard #5. Develop and refine artistic techniques and work for presentation.
Anchor Standard #8. Interpret intent and meaning in artistic work.
Anchor Standard #9. Apply criteria to evaluate artistic work.
Anchor Standard #10. Synthesize and relate knowledge and personal experiences to make

CA VAPA Standards

Adv.VA:Cr2.1: Experiment, plan, and make multiple works of art and design that explore a personally meaningful theme, idea, or concept.
Adv.VA:Cr2.2: Demonstrate understanding of the importance of balancing freedom and responsibility in the use of images, materials, tools, and equipment in the creation and circulation of creative work.
Prof.VA:Re7.2: Analyze how one’s understanding of the world is affected by experiencing visual imagery.
Acc.VA:Re7.2: Evaluate the effectiveness of an image or images to influence ideas, feelings, and behaviors of specific audiences.

MATERIALS

- Projector/screen sharing on your monitor
- Photographs from Getty Museum collection (provided)
- Photographs from Getty Unshuttered community (provided)
- Getty Unshuttered challenge videos (Hyper-linked at the end of this lesson)
- A digital camera or smartphone

VOCABULARY

Natural Lighting Light that is present without human interference. This can be the direct light of the sun on a bright sunny day, or the light created by a cloudy or foggy day. Natural light also includes the light of the moon at night. With natural lighting you may need to position yourself, the object, or the person you are photographing to achieve the lighting you want.

Artificial Lighting Light that has a human-made source (lamp, flashlight) and can often be moved around and adjusted. With artificial light, it is easier to manipulate or position where you’d like the lighting to focus.

Golden Hour The brief period of daytime shortly after sunrise or before sunset. During this time daylight is often redder and softer than when the sun is higher in the sky. Cinematographers also refer to the golden hour as the “magic hour.” The “hour” actually lasts about twenty or thirty minutes.

Hard Light A type of bright light in photography that casts harsh, sharply defined shadows and typically draws the viewer’s attention to a specific area.

Ambient Lighting In photography, ambient light is considered the “natural light” within a room.

Back Lighting (Backlight) A light source located behind the person or object you are photographing. Back lighting creates great opportunities to play with silhouettes and create long shadows in your photography.
**Soft Light** Soft lighting occurs when your light source is diffused. A soft light is the effect is more subtle than it would be with a direct source of light. By using soft light, you will end up with less intense shadows, if any at all, and a lower contrast between the darks and lights in your photo.

(Vocabulary available as Unshuttered Lighting Sheet in Resources below, accompanied by additional specialist terms)

**Before Class Preparation & Accommodations**

- Select which Unshuttered photograph(s) and Getty collection photograph(s) you would like to discuss with your class. Depending on your class size and class period length you may want to discuss two or more of each.
- Consider how students will share the images they take. Using Google classrooms, Dropbox or similar platforms can allow students to upload and share their photographs with their classmates.
- If working with students who may require visual accommodations, the website Teaching the Visually Impaired, provides useful resources for educators.

**INSTRUCTIONAL PLAN**

**Lesson Description**

This lesson introduces students to photography lighting techniques. Students are then instructed to create four photographs that incorporate the following lighting techniques: hard light, soft light, golden hour light, and back lighting. Students are also given the option of creating one alternative photograph that uses gel filters.

**Set the Stage: Classroom Discussion**

- **Tell Students** Before we begin taking our photographs and experimenting with new techniques, we will be talking about lighting in photography. There are many different lighting techniques that can be used when taking a photograph.
  - There are two main kinds of lighting: There are two main kinds of lighting in photography, natural light and artificial light. Both artificial and natural lighting can be manipulated to create any number of styles of lighting, it is just a matter of practicing how to use them. However, within lighting there are different types of effects you can use to manipulate the light in a way that best fits your desired result. For this lesson, we will focus on five different examples of lighting.
- **Ask Students** In your opinion, how does lighting influence the vibe or feeling of an image? What kind of lighting techniques can you recall that you have seen? (Encourage students that there is no right or wrong answer)
  - **Tell Students** Similar to color, lighting can influence us on a subconscious level. Next we will review a few techniques that photographers use. I encourage you to experiment with all of these techniques. Let's take a look at some lighting vocabulary and lighting examples.

Review the Vocabulary: As a large group review the Unshuttered Lighting Worksheet. Encourage your students to keep the worksheet handy either printed or saved on their computer or mobile device.
**Tell Students** Let’s take a look at a few artwork examples that used lighting in thoughtful ways.

**Unshuttered Artworks** Project one of the four student photographs shown below. Ask students to pause for about 30 seconds, to simply observe the image then begin by asking students what they notice about the photograph.

- 30–45 seconds examining the artwork.
- 2–4 minutes discussing the artwork.
- Transition to next artwork.

![Image 1](https://unshuttered.org/untitled, Adam Chun, 2019)

![Image 2](https://unshuttered.org/untitled, Regina Zamarripa, 2019)

![Image 3](https://unshuttered.org/untitled, Sabinah Lopez, 2018)

![Image 4](https://unshuttered.org/untitled, Brian Waite, 2018)

**About the Artists** (Image 1) Adam Chun has been taking photos for four years and started by photographing and photoshopping buildings in his Los Angeles neighborhood. He has always been interested in cultivating a sense of community through photography.

(Image 2) Regina Zamarripa Aguilar (they/them/theirs) is a visual and written artist based in Southern California. Born in the city of Guadalajara in the Mexican state of Jalisco, Regina grew up in the community of Boyle Heights in Los Angeles. In their artistic craft, they often incorporate aspects of their cultural background, queer-migrant identity, and mental health. They consider their artistic style to be unapologetically honest. Currently, Regina is pursuing a degree in Sociocultural Anthropology from the University of California, San Diego.

**Suggested Questions for Discussion**

- What do you notice first about this image? Let’s talk about what is going on in the image.
  
  Encourage your students to be descriptive as possible. This is not about interpreting the image but rather simply describing details students notice.

- What stands out to you the most about the lighting in this photograph?
  
  For example:

  - Image 1: The artist used gel filters (colored transparent filters placed over light sources) to manipulate the lighting. The photograph has cool colors, such as purples, blues and some pink lighting surrounding the person being photographed. The subject is in a pose seen in more traditional studio portraiture.

  - Image 2: This photograph has natural soft light, the image is taken outside. The mirror the person is holding up slightly reflects on their face. There is light bouncing from their forehead and high contrast light and shadows in the background.
• Image 3: The portrait uses natural light. The image was taken when the sun was out, and the resulting image is brightly and evenly lit.
• Image 4: The portrait has a harsh light on the upper left corner, the model is also facing the same direction and their left side is illuminated by the light.

• How does the lighting influence the mood or perception of this image?
  
  For example:
  
  • Image 1: The lighting makes the photograph seem modern, serious, and/or innovative.
  • Image 2: The lighting is warm, playful, welcoming.
  • Image 3: The lighting is festive, particularly because the model is wearing yellow and the wall behind her is yellow. The sun is out and illuminating everything.
  • Image 4: The lighting makes the image feel playful, perhaps trying to draw attention to the object the model is holding up.

**Explore Further!**

**Getty Collection Artwork(s)** Project one of the two Getty collection photographs shown below. Ask students to pause for about 30 seconds, to simply observe the image then begin by asking students what they notice about the photograph.

• 30–45 seconds examining the artwork.
• 2–4 minutes discussing the artwork.
• Share the artist’s description with your students.
• Repeat as necessary.
• Transition to the next portion of the lesson.

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**Image 1**

**Image 2**
About the Artist Marian Drew is an Australian photographer. Her art practice spans more than 20 years and is characterized by innovation and exploration of photo-media. Drew’s unsettling and beautiful photographs serve as a reminder of the fragility of life and the impact that man has on our natural environment.

About the Artwork Drew’s tabletop still life compositions feature fruits, vegetables, and dead animals and birds presented as game. While the unusual angles and lustrous colors bring to mind post-impressionist paintings, the richness of the fabrics and dramatic lighting seems to be inspired by traditional European still life painting from the 17th century. (For an example from the Getty collection, view here.) For this series of photographs, Drew gathered animals that had been killed by cars (roadkill) for her compositions. Roadkill gives Drew’s photographs a twist that calls into question humankind’s stewardship of the earth and its creatures.

About the Artist Andy Warhol was an American artist, most notably known for his contributions to the Pop Art movement and his silkscreens and paintings of Campbell’s Soup cans. Warhol was also an avid photographer. He used Polaroids and black-and-white film to photograph the cultural icons of his time.

About the Artwork Princess Caroline, daughter of Hollywood star Grace Kelly and Prince Rainier III of Monaco, was 26 when Andy Warhol took this Polaroid. Warhol’s representations of Princess Caroline were in the traditions of Hollywood studio photographers or advertising rather than that of historical paintings of royalty.

Suggested Questions for Discussion

• What do you notice about this image?
  - Image 1: The photograph is taken at an unconventional angle, from high above and focusing on a specific corner of the table. The green fabric draping on the corner of the table draws the viewer’s eye in, there is a plate with a deceased bird at the top center of the photograph.
  - Image 2: The portrait is a profile of a woman, whose neck is exposed, her chin is facing upward and her eyes are facing down. A prominent shadow of her profile is on the wall behind her.

• What artistic lighting choices did the photographer make?
  - Image 1: The photograph uses a harsh light. One corner of the table is illuminated, particularly the green cloth and the plate. The corners of the photograph are dark.
  - Image 2: The hard, artificial lighting on the woman’s face casts a sharp shadow. Along with her downward gaze, the lighting makes her appear remote, perhaps domineering or arrogant.

PRACTICE

Suggested Time: 35–40 minutes + At Home Practice

Student Learning Objectives

Students will be able to apply their knowledge of lighting in photography and create four photographs that implement thoughtful lighting components.

Have students create

• Four photographs that implement lighting techniques that influence the mood and vibe in an image.
Let’s begin!

1. **Tell Students** It is important to remember that photography is all about the process. Today you’ll begin experimenting with four photography examples particularly focusing on color in your images.
   
   You’ll create:
   
   - A photograph that uses a hard light
   - A photograph that uses a soft light
   - A photograph taken during the “golden hour”
   - A photograph that uses backlighting
   - A photograph using color transparencies or gel filters (optional)

2. **Tell Students** Let’s look at a few videos that experiment with lighting in different ways.

3. **Show** your students the following videos: Colored Light, Artificial Lighting, Natural Light, Window Lighting and Flash.

4. **Begin Creating** Grab your cameras, be intentional about taking your photographs and have fun!

   **For the next lesson** Students will be asked to select 7–8 photographs that are thoughtfully curated. (They will be narrowing it down to 5 next week)

   We recommend having students devote 10–15 minutes at home looking through the images and jotting down and generating 3–5 ideas or themes that they have noticed during the last three lessons.

   Students are to consider:
   
   - How does the photograph implement thoughtful components of the four photography skills mentioned so far? (composition, perspective, color, lighting)
   - What story is my photograph trying to tell? Have I respectfully represented my vision?

5. **Creating Gel Filters (Optional)** Gel filters are transparent colored filters that are placed over light sources in order to cast a color onto the scene and/or subject being photographed.

   **Materials**
   
   - Cardboard
   - Saran Wrap
   - Acrylic Paint
   - Thumbtacks
   - Hot glue gun

   **Step 1:** Using an Exacto knife or scissors, cut out two pieces of cardboard into squares that are the same size. Once you have your pieces, measure a one-inch border and cut out another square inside, creating a hollow frame out of the cardboard. Make both cardboard frames the same size. To do so, you may want to trace your first frame to create the second.

   **Step 2:** Take a piece of saran wrap and place it on top of one of your cardboard frames. Place one thumbtack on each corner of the frame to hold the saran wrap in place.

   **Step 3:** Paint the inside of your saran wrap, apply one layer of paint. Let it dry and apply a second coat of paint. Let it dry.
Step 4: Once dry, carefully remove the thumbtacks. Take your second piece of cardboard and place it down, on top of the first piece, with the painted saran wrap between the two frames.

Step 5: Once you have confirmed your frames fit, carefully take your glue gun, and glue both frames together, gluing the saran wrap in place. Once dry, you can cut out any excess saran wrap outside of the frame.

Step 6: (Optional) You can paint the cardboard frame black or the same color of your new DIY gel filter!

**How to use Gel Filters** Once you have created the gel filter(s), place them in front of your light source(s) (like a lamp or flashlight) to experiment with lighting a scene or subject. You may find it helpful to have someone help you hold the gels in place. Please keep the gels a safe distance from your light, and do not have them touch the light directly, to ensure they do not get too hot. For more tutorials search youtube for “DIY light gels.”

1. **Write (Optional)** Artists often sketch or write down their ideas in a sketchbook or journal. This helps you keep track of your ideas and become helpful in the future when developing new ideas.

2. **Reflection** Suggested Time: 5 minutes

   We encourage you to take the last five minutes of class to check-in with students to learn about what techniques worked, did not work as well, and what can be improved for the next class. Reflection can take place in the group setting or individually, it can be verbal or written. Encourage your students to continue taking photographs and experimenting with various composition angles. Students should come prepared to discuss one of their photographs.

THANK YOU...

...for your commitment to inspiring young people to create art and tell their stories.

Please adapt and improve upon this lesson plan to meet the needs and age range of your group

OTHER RESOURCES

**Related photography videos**
- Colored Light
- Artificial Lighting
- Natural Light
- Window Lighting
- Flash
- DIY Gel Filter: Using Cardboard, Saran Wrap, and Paint

**Resources**
- Unshuttered Lighting Reference Sheet
- Condensed Instructional Plan
- Practice Worksheet
FOUNDATIONAL PHOTOGRAPHY SKILLS LESSON 4

LIGHTING REFERENCE SHEET

**Natural Lighting** Light that is present without human interference. This can be the direct light of the sun on a bright sunny day, or the light created by a cloudy or foggy day. Natural light also includes the light of the moon at night. With natural lighting you may need to position yourself, the object, or the person you are photographing to achieve the lighting you want.

**Artificial Lighting** Light that has a human-made source (for example a lamp or flashlight) and can often be moved around and adjusted. With artificial light, it is easier to manipulate or position where you’d like the lighting to fall.

**Golden Hour** The brief period of daytime shortly after sunrise or before sunset. During this time daylight is often redder and softer than when the sun is higher in the sky. Cinematographers also refer to the golden hour as the “magic hour.” The “hour” actually lasts about 20 or 30 minutes.

**Hard Light** A type of bright light in photography that casts harsh, sharply defined shadows and typically draws the viewer’s attention to a specific area.

**Ambient Lighting** In photography, ambient light is considered the “natural light” within a room.

**Back Lighting (Backlight)** A light source located behind the person or object you are photographing. Back lighting creates great opportunities to play with silhouettes and create long shadows in your photography.

**Soft Light** Soft lighting occurs when your light source is diffused. A soft light is the effect is more subtle than it would be with a direct source of light. By using soft light, you will end up with less intense shadows, if any at all, and a lower contrast between the darks and lights in your photo.

**Explore further!**

Lighting is arguably one of the most important aspects of photography. While this lesson focuses on a few foundational techniques to get you started, here are a few other ideas to experiment with:

**Split Lighting** Shining light on half of a subject to highlight one side while leaving the other side mostly dark.

**Rim Lighting** Moving the light source behind the subject to create a halo effect. This can be achieved outdoors when the sun is low in the sky, or in the studio by moving the lights directly behind the subject.

**Short Lighting** A classic portrait lighting pattern where the person being photographed is lit from the side of their face opposite from the camera.

**Broad Lighting** In portrait photography, when a subject’s face is slightly tilted away from the center but lit from the direction of the camera.
Loop Lighting In portrait photography, loop lighting creates a shadow that loops down and around the side of the nose, and on the neck and under the chin. These shadows subtly help define the subject’s bone structure. To do this, place your light slightly above your model’s eye level, then angle the light slightly downward at about a 45-degree angle.

Butterfly Lighting A type of soft lighting pattern for traditional studio portraiture. A light is placed above and directly centered with the person’s face. It forms a butterfly-shaped shadow under the subject’s nose, which is the source of the name.

Rembrandt Lighting A popular lighting technique in studio portrait photography. It can be achieved using one light and a reflector, or two lights. Place your main source to the left or right side of the subject and aim it down at the face at about a 45-degree angle. On the other side of the subject, place the reflector or second light about 3 or 4 feet away at a 45-degree angle to the subject. Keep adjusting the light’s position until you see the telltale triangle and the shadow to the side of and slightly below the nose.
FOUNDATIONAL PHOTOGRAPHY SKILLS LESSON 4

CONDENSED INSTRUCTIONAL PLAN

Student Learning Objectives:

• Students examine and analyze photography that uses lighting to direct the viewer’s attention to highlighted points in an image.
• Students create four photographs that incorporate lighting techniques such as hard light, soft light, backlighting, and “golden hour” lighting.
• Students begin curating a body of work that has a cohesive theme based on their interest.

Instructions for Educators

Suggested Duration: 15 minutes

Essential Question: How does lighting influence how we perceive meaning in a photograph?

Set the Stage

Background Information for Educator During this lesson, students will explore lighting and lighting techniques in photography. After discussing the artworks, students will create photographs that explore light in photography.

Classroom discussion

• Tell Students Before we begin taking our photographs and experimenting with new techniques, we will be talking about lighting in photography. There are many different lighting techniques that can be used when taking a photograph.

There are two main kinds of lighting: There are two main kinds of lighting in photography, natural light and artificial light. Both artificial and natural lighting can be manipulated to create any number of styles of lighting, it’s just a matter of practicing how to use them. However, there are different types of effects you can use to manipulate the light in a way that best fits your desired result. For this lesson, we will be focusing on five different kinds of examples.

• Ask Students In your opinion, how does lighting influence the vibe or feeling of an image? What kind of lighting techniques have you seen? (Encourage students that there is no right or wrong answer)

Students take turns answering the question.

• Tell Students Similar to color, lighting can influence us on a subconscious level. We will review a few techniques that photographers use. I encourage you to experiment with all of these techniques. Let’s take a look at some lighting vocabulary and lighting examples.

• Review the Vocabulary As a large group review the Unshuttered Lighting Reference Sheet. Encourage your students to keep the worksheet handy either printed or saved on their computer or mobile device.

• Transition to the conversation and examination of Unshuttered artwork(s) and the Getty collection artwork(s).
• **Tell Students** Let’s take a look at a few artwork examples that used lighting in thoughtful ways.

• **Examining the Artworks**

Unshuttered Artwork(s): Project one of the four student photographs shown below. Ask students to pause for about 30 seconds, to simply observe the image then begin by asking students what they notice about the photograph.

- 30–45 seconds examining the artwork.
- 2–4 minutes discussing the artwork.
- Transition to next artwork.
- Repeat as necessary.


Getty Collection Artwork(s): Project one of the two Getty Collection photographs shown below. Ask students to pause for about 30 seconds, to simply observe the image then begin by asking students what they notice about the photograph.

- 30–45 seconds examining the artwork.
- 2–4 minutes discussing the artwork.
- Share the artist description with your students.
- Repeat as necessary.

• **Transition** to the practice portion of the lesson. Depending on how much time you have or if you are teaching in a hybrid model, you may want to provide students with additional time to take photographs at home.
FOUNDATIONAL PHOTOGRAPHY SKILLS LESSON 4

PRACTICE SHEET

Student Learning Objectives:

• Students will be able to apply their knowledge of lighting in photography and create four photographs that implement thoughtful lighting components.

Suggested Time 35–40 minutes + at home practice

Students Create

• Four photographs, implementing lighting techniques that influence the mood and vibe of an image.

Let’s begin!

1. **Tell Students** It’s important to remember that photography is all about the process. Today you’ll begin experimenting with four photography examples particularly focusing on color in your images.

   You’ll create:
   
   • A photograph that uses a hard light
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   • A photograph that uses backlighting
   • A photograph using color transparencies or gel light filters (optional)

2. **Tell Students** Let’s look at a few videos that experiment with lighting in different ways.

3. **Show** the following videos: Colored Light, Artificial Lighting, Natural Light, Window Lighting and Flash.

3. **Begin Creating** Grab your cameras, take photographs with intention, and have fun!

For the next lesson, students will be asked to select 7-8 photographs that are thoughtfully curated. (They will be narrowing it down to 5 next week)

We recommend having students devote 10-15 minutes at home looking through the images and jotting down and generating 3-5 ideas or themes that they have noticed during the last three lessons.

Students are to consider:

• How do my photographs implement thoughtful components of the four photography skills mentioned so far? (Composition, perspective, color, lighting)

• What story is my photograph trying to tell? Have I respectfully represented my vision?

   **(Optional) Creating Gel Filters** Gel filters are transparent colored filters that are placed over light sources in order to cast a color onto the scene and/or subject being photographed.
Materials

- Cardboard
- Saran Wrap
- Acrylic Paint
- Thumbtacks
- Hot glue gun, or regular glue

Step 1: Using an Exacto knife or scissors, cut out two pieces of cardboard into squares that are the same size. Once you have your pieces, measure a one-inch border and cut out another square inside, creating a hollow frame out of the cardboard. Make both cardboard frames the same size. To do so, you may want to trace your first frame to create the second.

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How to use Gel Filters Once you have created the gel filter(s), place them in front of your light source(s) (like a lamp or flashlight) to experiment with lighting a scene or subject. You may find it helpful to have someone help you hold the gels in place. Please keep the gels a safe distance from your light, and do not have them touch the light directly, to ensure they do not get too hot. For more tutorials search youtube for “DIY light gels.” For example: [https://www.google.com/url?q=https://www.youtube.com/watch?v%3DA4YhuXVBIs4&sa=D&source=editors&ust=1623107975946000&usg=AOvVaw19mjzv7EBn_G0fGVhf4KBK](https://www.google.com/url?q=https://www.youtube.com/watch?v%3DA4YhuXVBIs4&sa=D&source=editors&ust=1623107975946000&usg=AOvVaw19mjzv7EBn_G0fGVhf4KBK)

Write (Optional) Artists often sketch or write down their ideas in a sketchbook or journal. This helps you keep track of your ideas and become helpful in the future when developing new ideas.