

# **FUNDAMENTALS OF PHOTOGRAPHY**

## Curriculum Content Frameworks

**Please note: All assessment questions will be taken from the knowledge portion of these frameworks.**

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# Curriculum Content Frameworks

## FUNDAMENTALS OF PHOTOGRAPHY

Grade Levels: 9,10,11,12

Prerequisite: None

Course Code: 494350 Lab 494360

Course Description: This core introductory program is designed to provide practical knowledge and skill in preparation for a career in photography.

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# Unit 1: Studio Safety

## Hours: 10

Terminology: Boom, Cords, Hazards, Lights, Stands

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application	Skill Group	Skill	Description
1.1 Define terms related to safety in the Photography classroom	1.1.1 Use terms appropriately	Foundation	Reading	Applies and understands technical words that pertain to photography [1.3.6]
1.2 Identify safety procedures for handling equipment in the studio	1.2.1 Demonstrate safety procedures	Personal Management	Integrity/Honesty/Work Ethic	Complies with safety and health rules in a given work environment [3.2.2]
	1.2.2 Illustrate proper studio design and use	Personal Management	Organizational Effectiveness	Applies knowledge to implement work-related system or practice [3.3.4]
1.3 Identify hazards	1.3.1 Demonstrate procedures for emergencies	Personal Management	Integrity/Honesty/Work Ethic	Complies with safety and health rules in a given work environment [3.2.2]

## Unit 2: History of Photography

### Hours: 10

Terminology: Abstract, Calotype, Camera obscura, Collodian, Composition, Daguerreotype, Eastman

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do			<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application		Skill Group	Skill	Description
2.1 Define terms related to the history of photography	2.1.1	Use terms appropriately	Foundation	Reading	Uses written resources to obtain factual information [1.3.23]
2.2 Explain the development and influence of photography	2.2.1	Collect and analyze samples that illustrate different uses of graphic images	Thinking	Seeing Things in the Minds Eye	Organizes and processes images [4.6.2]
	2.2.2	Construct a timeline of major developments	Foundation	Writing	Organizes information into an appropriate format [1.6.10]
	2.2.3	Compare photography as an art form to other visual art forms	Thinking	Creative Thinking	Make connections between seemingly unrelated things [4.1.6]
	2.2.4	Analyze the mechanical development of photography	Foundation	Science	Explains scientific principles related to photography [1.4.13]

## Unit 3: Tools of Photography

### Hours: 10

Terminology: Aperture, Depth of field, Focal length, Iris, Lens element, Manual mode

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do			<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce		
Knowledge	Application		Skill Group	Skill	Description
3.1 Define terms related to photographic equipment	3.1.1	Use terms appropriately	Foundation	Reading	Applies technical words that pertain to photography [1.3.6]
3.2 Discuss similarities and differences between photography and human vision	3.2.1	Compare/contrast the mechanics of the human eye and the camera	Thinking	Reasoning	See relationship between two or more ideas, objects, or situations [4.5.5]
3.3 Describe different types of cameras	3.3.1	Demonstrate the use and purpose of various types of cameras	Thinking	Knowing how to Learn	Applies new knowledge and skills to photography [4.3.1]
3.4 Describe the use and purpose of the Single Lens Reflex (SLR) camera	3.4.1	Demonstrate the use of camera controls	Thinking	Knowing how to Learn	Applies new knowledge and skills to photography [4.3.1]
3.5 Describe the different types and uses of lens	3.5.1	Compare the effects of focal length, aperture, and point of focus relating to emphasis in a photograph	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]

## Unit 4: The Nature of Light in Photography

### Hours: 15

Terminology: Artificial light, Diffused, Fluorescent, Incandescent, Light meter, Modifiers, Natural light, Reflectors

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>	
4.1 Define terms related to light in photography	4.1.1 Use terms appropriately	Foundation	Reading	Comprehends written information and applies it to a task [1.3.8]	
4.2 Explain the nature of light in photography	4.2.1 Categorize the different types of light	Foundation	Science	Applies scientific principles related to photography [1.4.5]	
4.3 Discuss the use of natural light in the production of photographs	4.3.1 Practice making photographs in natural light	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]	
4.4 Discuss the use of artificial light in the production of photographs	4.4.1 Practice making photographs in artificial light	Thinking	Knowing how to Learn	Applies new knowledge and skills to photography [4.3.1]	
4.5 Describe how to meter for correct exposure of photographs	4.5.1 Practice metering light for the production of photographs	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]	
4.6 Explain the use of light modifiers in the production of photographs	4.6.1 Practice using light modifiers	Thinking	Knowing how to Learn	Applies new knowledge and skills to photography [4.3.1]	

## Unit 5: Camera/Media Controls

### Hours: 25

Terminology: Exposure, f-Stop, JPEG, Media storage, Panning, RAW, Shutter speed, TIFF

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
5.1 Define terms related to camera controls	5.1.1 Use terms appropriately	Foundation	Reading	Applies and understands technical words that pertain to photography [1.3.6]	
5.2 Explain the use of shutter speeds to control motion in photographs	5.2.1 Use the camera shutter speed controls to shoot stop action, showing motion, and panning photographs	Personal Management	Responsibility	Pays close attention to details [3.4.8]	
	5.2.2 Make a contact sheet and print stop action, showing motion, and panning	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]	
5.3 Explain how cameras control the depth of field	5.3.1 Use the camera aperture control to make photographs exhibiting depth of field	Thinking	Creative Thinking	Creates new design by applying specified criteria [4.1.3]	
	5.3.2 Make a contact sheet and print maximum and shallow depth of field	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]	
5.4 Control digital output	5.4.1 Use various types of media storage	Foundation	Science	Applies knowledge to complete a practical task [1.4.3]	
	5.4.2 Use output media	Foundation	Science	Applies knowledge to complete a practical task [1.4.3]	
	5.4.3 Control output resolution	Foundation	Science	Uses equipment and techniques in photography [1.4.23]	

## Unit 6: Photographic Composition and Print Production

### Hours: 25

Terminology: Form, Line, Pattern, Perspective, Rule of thirds, Shape, Texture

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>	
6.1 Define terms related to print composition and print production	6.1.1 Use terms appropriately	Foundation	Reading	Comprehends written information and applies it to a task [1.3.8]	
6.2 Discuss the rules of composition	6.2.1 Make photographs using the rules of composition	Thinking	Creative Thinking	Creates new design by applying specific criteria [4.1.3]	
6.3 Explain how to make photos using compositional elements	6.3.1 Practice making photos using the compositional elements of line, pattern, texture, shape, form, and perspective	Thinking	Seeing Things in the Mind's Eye	Organizes and processes images – symbols, pictures, graphs, objects, etc. [4.6.2]	

## Unit 7: Matting and Display of Photography

### Hours: 5

Terminology: Bevel cutter, Easel, Elliptical circle cutter, Foam core, Matt board

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>	
7.1 Define terms related to matting and display	7.1.1 Use terms appropriately	Foundation	Reading	Applies and understands technical words that pertain to photography [1.3.6]	
7.2 Explain the use of matting and display in photography	7.2.1 Produce an exhibit	Thinking	Creative Thinking	Develops visual aids to create audience interest [4.1.4]	

## Unit 8: Professional Development

### Hours: 20

Terminology: Appropriate dress, Attendance, Brainstorming, Copyright, Freelance, Grooming, Invasion of privacy, Leadership, Model release, Oral communications, Personal cleanliness, Teamwork, Timeliness, Written communications

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
Knowledge	Application	Skill Group	Skill	Description	
8.1 Define terms related to professional development	8.1.1 Use terms appropriately	Foundation	Reading	Applies and understands technical words that pertain to photography [1.3.6]	
8.2 Demonstrate ethical actions in the field of photography	8.2.1 Evaluate situations in which ethics is an issue	Personal Management	Responsibility	Sets high standards for self in completion of a task [3.4.9]	
8.3 Summarize careers in photography	8.3.1 Research career opportunities	Personal Management	Career Awareness, Development, and Mobility	Develop skills to locate, evaluate, and interpret career information [3.1.4]	
8.4 Explain the components of a portfolio	8.4.1 Create a portfolio	Personal Management	Career Awareness, Development, and Mobility	Monitors progress toward goal attainment [3.1.10]	
8.5 Describe the traits which an employer considers desirable	8.5.1 Demonstrate the desired traits of an employee	Personal Management	Organizational Effectiveness	Adapts to the organizations goals, values, culture, and traditional modes of operation [3.3.1]	
8.6 Explain the parts of a letter of application	8.6.1 Write a letter of application	Personal Management	Self-Esteem	Creates a positive self-image by selling self in a letter of application [3.5.2]	

<b>CAREER and TECHNICAL SKILLS</b> What the Student Should be Able to Do		<b>ACADEMIC and WORKPLACE SKILLS</b> What the Instruction Should Reinforce			
<b>Knowledge</b>	<b>Application</b>	<b>Skill Group</b>	<b>Skill</b>	<b>Description</b>	
8.7 Explain the elements of a resume'	8.7.1 Write a resume'	Personal Management	Self-Esteem	Creates a positive self-image by selling self in a resume [3.5.2]	
8.8 Explain the information requested on job applications	8.8.1 Complete a job application	Personal Management	Self-Esteem	Presents positive personal references of education and work experience [3.5.8]	
8.9 Explain the benefits of participating in student organizations	8.9.1 Compare/contrast positive and negative aspects of participation	Personal Management	Organizational Effectiveness	Promotes the goals and values of the organization [3.3.8]	

## **Glossary**

### **Unit 1: Studio Safety**

1. Boom – a mechanical arm on a tripod
2. Cords – electrical wiring to connect devices
3. Hazards – items or practices that could result in injury
4. Lights – something that makes things visible or affords illumination
5. Stands – upright poles that equipment may be attached to

## Unit 2: History of Photography

1. Abstract – to consider apart from concrete existence
2. Calotype – an early negative-positive photographic process patented by William Henry Talbot in 1841
3. Camera obscura – the ancestor of the photographic camera, a dark enclosure with an aperture
4. Collodian – a photographic process commonly used in the mid-19th century, a coating for photographic film
5. Composition – the act of combining parts or elements to form a whole
6. Daguerreotype – an early photographic process invented in 1839
7. Eastman – American inventor and industrialist who invented the dry-plate method of photography, flexible film, and a process for color photography

## Unit 3: Tools of Photography

1. Aperture – opening through which light enters the camera
2. Depth of field – distance between the nearest and farthest points that appear in focus
3. Focal length – distance from the optical center of the lens to the image sensor
4. Iris – mechanism to open and close a shutter
5. Lens element – a single piece of glass that acts as a lens or part of a lens
6. Manual mode – to have full control of all camera functions

## Unit 4: The Nature of Light in Photography

1. Artificial light – man-made illumination from sources other than the sun
2. Diffused – light scattered by reflection to give the appearance of originating from many directions
3. Fluorescent – lamps that produce light with a blue tonality
4. Incandescent – intense light produced by combining a conductive filament and inert gas
5. Light meter – a device to measure light intensity
6. Modifiers – to allow for light adjustment by degree
7. Natural light – illumination from the sun or moon
8. Reflectors – a surface designed to redirect light to another surface

## Unit 5: Camera/Media Controls

1. Exposure – the amount of light that falls on the photographic medium
2. f-Stop – the numerical designation indicating the size of the opening in a lens
3. JPEG – Joint Photographic Experts Group, the most common method of compressing images
4. Media storage – a method of recording and saving data
5. Panning – the horizontal movement of a camera
6. RAW – unprocessed data from an image sensor
7. Shutter speed – length of time light passes through the lens to focal plane
8. TIFF – Tagged Image File Format, uncompressed image file format

## Unit 6: Photographic Composition and Print Production

1. Form – the formal structure of a work of art
2. Line – the trace of a moving point, a regular pattern that joins together a number of elements of the image
3. Pattern – when graphic elements repeat themselves
4. Perspective – how you wish to convey the subject in relation to its surroundings
5. Rule of thirds – a compositional rule for placing the subject using two equally spaced horizontal and vertical lines
6. Shape – areas or masses that define objects in space
7. Texture – the visual and tactile characteristics of a surface

## Unit 7: Matting and Display of Photography

1. Bevel cutter – a device to trim mat board to produce an angled edge
2. Easel – a stand or frame to display work at an angle
3. Elliptical circle cutter – a tool designed to produce a desired shape opening in a mat board
4. Foam core – strong, lightweight material used to mount photographs
5. Mat board – material used to frame and enhance mounted photographs

## Unit 8: Professional Development

1. Appropriate dress – appearance as dictated by your job
2. Attendance – to be at work when you are scheduled to be
3. Brainstorming – method of problem-solving where members of a group contribute ideas spontaneously
4. Copyright – intellectual property of original work to the author for a specific length of time
5. Freelance – to work for various employers
6. Grooming – to present a pleasant appearance of hair, skin, nails, etc.
7. Invasion of privacy – unjustifiably intruding upon another's right to privacy by appropriating their name, information or likeness
8. Leadership – to assume a position of authority at appropriate times
9. Model release – a legal release signed by the subject of a photograph granting permission to publish the photograph
10. Oral communication – to convey information effectively by speech
11. Personal cleanliness – to be neat, clean, well groomed
12. Teamwork – to work with others, to share ideas, and to help one another
13. Timeliness – to be on time, at the right time, or to use time efficiently
14. Written communications – to convey information effectively by text