Part 4



From the Texas Association of Journalism Educators

Photojournalism Curriculum Guide

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PHOTOJOURNALISM

GRADE: 9,10,11,12

EVERY DAY, people are bombarded with thousands of visual images. The print media of the late 20th century and beyond will continue this visually-oriented and graphic trend. One of the key components to the success of these visual print publications is photography. Photojournalism introduces students to the world of photography and journalism. The law, ethics and history of photography complement the major units of study: operation and care of the camera, taking pictures, film and print processing, teamwork and management skills.

IN ADDITION, students will have the op-

portunity to use state of the art computer-aided publishing tools and other hands-on production tools as well as modern darkroom facilities. This course can serve as the prerequisite to Newspaper Production I or Yearbook Production I and may provide students insights into college and career choices.

SOME OUT-OF-CLASS TIME will be required including the time to shoot photo assignments. Completion of photo assignments includes taking the picture, processing the film, making a contact sheet, selecting the prints, making the prints and turning them all in with a completed evaluation form on time.

TEKS- Texas Essential Knowledge and Skills

¶74.§110.65 PHOTOJOURNALISM (1/2-1 CREDIT).

(a.) Introduction.

(1.)Students enrolled in Photojournalism communicate in a variety of forms and for a variety of audiences and purposes. High school students are expected to plan, interpret, and critique visual representation, carefully examining their product for publication. Students will become analytical consumers of media and technology to enhance their communication skills. High school students will study the laws and ethical considerations that impact photography. Technology, visual, and electronic media are used as tools for learning as students create, clarify, critique, and produce effective visual representations. Students enrolled in this course will refine and enhance their journalistic skills, plan, prepare, and produce photographs for a journalistic publication. For high school students whose first language is not English, the students' native language serves as a foundation for English language acquisition and language learning.

(2.) The essential knowledge and skills as well as the student expectations for Photojournalism, an elective course, are described in subsection (b) of this section. (b.) Knowledge and Skills.

1. The student interprets/critiques visual representatons. The student is expected to:

A. recognize the major events in the development of modern day photography;

B. recognize composition principles and their impact on photography;

C. recognize and apply ethical and legal standards to all aspects of photojournalism; and

D. recognize the impact of electronic technology and future trends in digital imaging on the traditional field of photojournalism.

2. The student produces visual representations that communicate with others. The student is expected to:

A. identify the basic parts of a camera and their functions;

B. identify different types of film and determine their appropriate uses;

C. produce a properly exposed print where the subject is sharply focused and demonstrate the use of the elements or principles of design;

D. use lighting and be aware of its quali-

Darkroom essentials:

- Wet area
- Dry area
- Enlarger
- Easel
- Timer
- Chemical trays Chemical
- storage bottles

 Developing
- tanks • Tongs
- Graduates
- Thermometer
- Paper safe
- Safelights
- Polycontrast filters

ties such as direction, intensity, color, and the use of artificial light;

E. stop action by determining appropriate shutter speed or use panning or hand holding with slower shutter speeds;

F. evaluate technical qualities of photos; G. practice safety in handling and dispos-

ing of chemicals when operating in a darkroom;

H. learn the theory of film developing by understanding the latent image, film structure, and method of development;

I. use appropriate equipment to process film and make prints and make contact sheets;

J. create digitized images using technol-

COURSE OUTLINE

I. CAMERA BASICS

- A. Camera parts
 - 1. Lens
 - 2. Shutter
 - 3. Aperture
- B. Film
 - 1. Types
 - 2. Film speed (ASA/ISO)
- C. Filters

II. COMPOSITION

- A. Rule of Thirds
- B. Balance
- C. Framing, S-curves, Repetition of shapes
- D. Evaluating composition

III.TECHNICAL QUALITY

- A. Focus
- B. Lighting
- C. Stopping action
 - 1. Fast shutter speeds
 - 2. Panning
- D. Depth of field
- E. Equivalent exposures
- F. Evaluating technical quality

IV. DARKROOM PROCEDURES

A. Film developing

ogy to complete the process; and

K. improve print quality by using appropriate equipment or technology.

3. The student incorporates photographs into journalistic publication. The student is expected to:

A. plan photo layouts;

B. illustrate events with appropriate photos and captions;

C. plan photographs in relation to assignments from an editor; and

D. set up or follow a system for keeping track of negatives, photo images, contact sheets, and meeting deadlines.

- 1. Theory
- 2. Equipment/chemicals
- 3. Process
- 4. Push processing
- B. Printing
 - 1. Theory
 - 2. Equipment/chemicals
 - 3. Process
 - a. Dodging and burning
 - b. Making contact sheets/prints
 - c. Making test strips
 - d. Using polycontrast filters
 - e. Mounting
- C. Troubleshooting
 - 1. Dust spots on print
 - 2. Over/underexposure
 - 3. Over/underdevelopment
 - 4. Film developer blotches
 - 5. Other

V. PHOTOJOURNALISM

- A. Caption writing
- B. Cropping photos
- C. Role of the photographer
- D. Filing system
- E. Law and ethics
- F. History of photography
- G. Digital imaging

Chemicals needed for a black and white darkroom:

- Film developers available
 D-76
 T-Max
- HC-110
- Microdol-X
- Paper developer Dektol
- Stop Bath
- Rapid Fix
- Hypoclear
- Photoflo

SEMESTER SYLLABUS

THE GRADING PERIOD

Schools across the state of Texas are varied in the adoption of a 6-week or 9-week grading period and the schedule of a 7-period, alternating block, or compressed block day. This calendar is developed by weeks, so each teacher can convert it to his/her teaching schedule.

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Good photos
1	Course Discuss check-o	 are: Sharp Clear Clean and have: Excellent contrast A wide range of tones A center of interest Spontaneity Action Identifiable people doing identifiable things 				
2	Safety i Camera					
3	Develoj Darkroo					
4	Printing basics; Using polycontrast filters; Making a print; Making test-strips Making a print; Evaluation of prints; Review camera basics					
5						
6	Lightin	g; Develop film;	Composition			
7	Compos	sition; Develop fi	lm; Darkroom work			
8	Darkroom work; Advanced printing- Dodging and Burning- in					
9	Action ning	photography; Rev	view film and shutter	speed; Pan-		
						TAJE

SEMESTER SYLLABUS

		<i>stuff</i> - opaque
	Manday Tuanday Madagaday Tayanaday Friday	safelights
Week	Monday Tuesday Wednesday Thursday Friday	Procedure:
	Film development, Deview composition.	-Remove one sheet
	Film development; Review composition;	of paper under safe
10		light conditions;
		-Place emulsion
	Film development; Darkroom work; Lenses and filters	side up;
11		-Arrange some
		small objects on the
l t		Ť
10	Lenses and filters; Darkroom work	paper; -Be careful not to
12		
		move objects;
	Film Development; Caption writing; Trouble shooting	-Expose to room
13	in the darkroom	lights for as long as
		it takes to turn the
I H		exposed portion
14		black
14	Film development; Photo layout; Plan photo story; Darkroom work	• To make perma-
		nent: immerse in
		fixer for normal
15	Darkroom work; Cropping photos; Mounting	time and wash
		Photogram-
		developed out:
16		Materials needed:
_	Definition of Digital Imaging; Digital Imaging projects	same as above,
		plus enlarger and
17		developing chemi-
17	Digital Imaging; Photo ethics; Pinhole camera	cals
		Procedure: Denset store 1.4 or
		-Repeat steps 1-4 as
		above;
	History of photography; Careers in photography	-Expose to enlarger
		light 3-5 seconds;
L		-Remove objects;
		-Process as a print

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Photogramplain & simple:

Materials needed:
 photo paper

CLASSROOM ACTIVITIES

¶74§(110.65(1)(A)

Illustrate news events

with appropriate photos

- Activities: Look through a local newspaper, a daily or weekly, and find examples of timely, photojournalistic photos. Have students discuss why these photos are appropriate or why they aren't.
 - Some news events require photo illustrations and not field work. Help students set up a studio in the classroom using whatever light sources are available. You might try illustrating crime with a pair of handcuffs and some other props from your local law enforcement agency or drama department. You might try illustrating Spring with some flowers. Experiment. The point is to look beyond the obvious and to realize that some news events require more thought.
- Assessment: Have students pick the most appropriate photo for a given event and explain their reasoning.

¶74§(110.65)(1)(B) Understand available light, depth of field, and composition

Activities: • Complete photo assignments.

- Display various photos or give students copies of them. Have them pick which ones follow the Rule of Thirds and which ones don't and why. Try to pick some that don't follow the Rule of Thirds, but which are still good photos.
- It's fun to start teaching the Rule of Thirds with a few games of tic-tac-toe.
- As an alternate assignment, have students take a photo, with black and white film, illustrating a color. For example, shoot pictures of *yellow*. It's helpful if they learn the concept of complementary colors and how to use colored filters (if they're available) first. To keep things fun, make them shoot it all using available light or studio lights. No flash allowed.

Assessment: • Evaluate photo assignments.

$\P{74}{(110.65)(2)(A)}$

Operate a 35mm single-lens reflex camera with a variety of lenses

- Activities: Complete photo assignments as requested.
 - Using cardboard or other material, cut out a frame approximately the size of a 35mm piece of film. Have students hold it 6-8 inches in front of their face to simulate a camera, looking around the school for assignments.
 - Using a variety of lenses, demonstrate the different angles of view by allowing students to look at a fixed subject from a fixed distance with different lenses.

• As an alternate assignment, have students shoot the 'macro' world. Using a close-up lens or filters, students should take pictures of a piece of something and have others guess what it is. It's fun to post these and have other students guess what the pictures are of. Any photographer whose picture remains unidentified should win some award. The idea here is to look beyond the obvious and to pay attention to detail. Be careful, these pictures often require additional light.

Assessment: • Evaluate photo assignments.

• Test how well (and fast) students can load film in a camera by having them load it while walking across the room. Give them room to walk about 30 steps at a fast pace and evaluate them on whether they can securely load the camera before walking the distance.

¶74§(110.65)(2)(C) Use of Composition Techniques

Activities: • Students will demostrate use of composition techniques in a photo assignment. Look for framing elements, S-curve, repetition of shapes, etc. Students should avoid the subject in the center of the frame.

Assessment: • Evaluate photo assignments.

¶74§(110.65)(2)(D) Operate a flash

- Activities: Allow students to use a flash either for one of the photo assignments or for a class exercise in artificial lighting.
 - Find examples of photographs used in newspapers or magazines taken with a flash. Why was a flash used? What problems did this create?
 - Take a trip to a local studio and have photographer (perhaps the school portrait photographer) demonstrate the set-up and use of studio lights.
 - Using a 'model' (preferably a student in class) demonstrate the harsh lighting of direct flash and the less harsh light of bounced flash by firing a flash and having students observe students. This works best in a dim, but not dark room. You can also use a slide projector or transparency projector to demonstrate this effect.

Assessment: • Evaluate photo assignment completed using flash.

• Given a specific lighting situation, have students predict the results in terms of harshness of light and direction/intensity of shadows.

¶74§(110.65)(2)(D) Read a light meter

- Activities: Make a meter-reading map of the school: Using a built-in or hand-held light meter and a map of the school record settings at various locations at various times of the day. Be sure to note the time of day and direction.
 - Set up a portrait studio in the classroom using studio lights or a slide projector or a transparency projector, or even a window. Demonstrate the vari-

Cropping guidelines:

- Crop so there is a center of interest
- Remember the rule of thirds
- Don't blow up small areas to grainy proportions
- Don't amputate hands, arms, legs
- Allow space in front of the subject for movement
- Crop to eliminate distracting areas

ous directions of light and how they can trick the meter. Then discuss compensation for the tricks, especially backlighting which requires additional exposure to allow more light to reach the subject.

Evaluate meter-reading map. Assessment: •

Given appropriate photos, have students identify the direction of light and any compensation that would be necessary to get a properly exposed subiect.

¶74§(110.65)(2)(D) Apply principles of balance and contrast

- Activities: Display photos of high and low contrast. Have students pick the appropriate ones.
 - Show examples of the different composition techniques: s-curves, informal balance, formal balance, framing, repetition of shapes, leading lines, texture, etc. Have students explain why these are powerful composition techniques.
 - As a photo assignment, have students shoot not a specific subject, but a concept such as repetition of shapes or framing. Every shot on the roll should demonstrate one of the techniques.
- Assessment: Given photos of varying contrast, have students pick the one with the highest contrast and the one with the lowest.
 - Have students match proper composition technique with photo.

¶74§(110.65)(2)(D) Creating Depth of Field

Activities: • Students will render the background of a photograph out of focus by using a low aperture such as f/4, f/2.8, f/2 or f/1.4. By blurring the background, emphasis is placed on the subject. This is also an excellent time to stress filling the frame. Move in close.

Evaluate photo assignments. Assessment: •

¶74§(110.65)(2)(E) Demonstrate knowledge of ASA, aperture, and shutter

- Activities: Complete photo assignments.
 - Show a series of photos taken of the same subject with different f/stops. Have students assign possible f/stops to the appropriate photos.
 - Show a series of photos taken of the same subject with different shutter speeds. Have students assign possible shutter speeds to the appropriate photos.
 - Set up various scenarios of action, and selective focus. Given certain lighting and using the F/16 Rule as a basis, have students determine the equivalent exposure.
 - Have students shoot fast action pictures. Students can take pictures of school sports, students jogging, riding a bicycle, etc. Students must stop action with correct shutter speed or use panning to make the moving subject clear.

Assessment: • Evaluate photo assignments.

¶74§(110.65)(2)(H) Understand developing chemistry

- Activities: Put an x/y grid on the board with chemicals in the vertical access and time, temperature, and agitation in the horizontal access. Have students fill in the chart as a group.
 - Using some litmus paper from the chemistry department, demonstrate how developer is a basic solution (try to determine actual pH at different dilutions) and acetic stop bath and fixer are acidic (again, try to determine actual pH). You may have to use other acid/base indicators to determine actual pH. Note that stop bath with indicator contains bromocresol purple, an acid base indicator. That is why it turns purple when too much developer gets in it.

Assessment: Make a chart showing the chemicals used, times, temperatures and agitation rates for the film developing process.

¶74§(110.65)(2)(I) Process film

- - Activities: Make a game out of practicing rolling film with two exposed rolls of film. Have two students compete against each other. The person who rolls the film the fastest on the reels to be used for developing keeps competing until he looses. The winner should get some reward. This can be done in the light.
 - Process the film for assignments and other assignments as required.
 - Assessment: Using the practice roll, have each student (for a grade) roll the film on an appropriate reel in the dark and put it in a canister. Check it. If it's not done completely right, they should try again the next day (or significantly later in the period) until they get it right.
 - Evaluate processed film.

¶74§(110.65)(2)(I) Print photos

- Activities: Demonstrate (or have a student demonstrate) how to make a print, stressing negative placement, easel adjustment, enlarger height adjustment, choosing an f/stop, choosing a polycontrast filter, making a test strip, and developing the paper in the proper sequence including adequate rinsing time. Also stress and demonstrate darkroom cleanliness and the dangers of dirt and dust.
 - Make the required number of prints for assignments 1-8 and other assignments as required.
 - Have students bring in five small, favorite objects (1/2-3'). In the darkroom, put these objects on a piece of paper and expose them to light for a few seconds at a random f/stop (f/8 works well, usually). Semi-transparent objects (like money and glasses) work best. Then develop this photogram normally. When they're dry, have students sign them with a felt-tip pen and display them. This is a

Two-Dot Crop: A Fast and Easy Way to Crop **Photos**

- Supplies needed Ruler Grease pencil Layout Picture
- Select photo
- Find the center of interest
- Place a dot on the desired final top left-hand corner
- Place ruler on the diagonal that runs from the upper left-hand corner to the lower right-hand corner of the layout area
- · Without moving the ruler, slide the picture under-neathe the ruler
- •Position the picture
- Place a dot for the desired lower right-hand corner
- Pull out the picture
- Mark each margin
- Rub off the dots

good printing exercise and is fun to display for parents. This is an especially good exercise to convey the concept of density and contrast.

- Assessment: Have students write a narrative 'how-to' essay on how to make a print.
 - Evaluate print quality.
 - Use photogram grade as an easy grade a good reward.

¶74§(110.65)(2)(K) Understand use of darkroom

equipment

- Activities: Have students make a print on the first assignment with a high-contrast filter and a low-contrast filter as well as the 'right' one. Make sure they do a new test strip with each one to demonstrate the difference in exposure.
 - Demonstrate (or have a photo editor demonstrate) the equipment used in developing film and making a print.
- Assessment: Evaluate prints made with different filters.
 - Make a list of all the equipment used in developing film and explain its use.
 - Make a list of all the equipment used in printing and explain its use.

¶74§(110.65)(2)(K) Crop and scale photos

- Activities: Give students a scaling device and have them learn the concept of proportion for photographs. It's also useful to show this on the computer, keeping the photograph in proportion. Show how one dimension can't change without changing the other.
 - Have students mark a photograph that you give them for reproduction in the yearbook.
 - Demonstrate use of a proportion wheel. Using the photos marked for reproduction in the yearbook, use a proportion wheel to calculate the percentage of enlargement or reduction.
 - Have students complete some proportion equations as a review of math.

Assessment: • Grade proportion questions.

• Given a photo and a space for it on the page, have students calculate percentage of enlargement or reduction.

¶74§(110.65)(3)(A) Plan photo layout

- Activities: Using newspaper photo pages or magazine spreads as examples, have students sketch the pages using paper divided into columns or grids. Pay particular attention to internal margins, size of dominant photo, eyeline, etc.
 - Using photo copies of 5-10 photos, have students pick photos and plan a layout. This can also be a photo editing exercise. Pay particular attention to caption and copy placement.
 - Using a layout previously designed by student, have another student use the same elements at the same size to create another layout. This is particularly

useful for yearbook layouts from which four layouts can be made from one basic layout by flopping the layout horizontally and vertically.

Assessment: • Evaluate photo layout.

¶74§(110.65)(3)(B) Write captions

- Activities: Using a well-respected publication, read some photo captions and determine what makes up a good caption. Be sure to stress how, particularly in magazines, a good caption goes beyond just stating the obvious.
 - Given a photo, have students write a complete caption. This is particularly useful around deadline time when photojournalism students can, as a class exercise, write complete captions for the publications answering the 5W's and H.
 - Discuss: what's wrong with a photographer writing their name on the back of a photo for a photo credit that they did not take? Talk about the value of the photo credit and taking pride in one's work. Consider doing periodic displays around the school of the work photographers have done. Even consider displaying some pictures at local businesses carefully mounted with the photographer's name prominently displayed on the outside.

Assessment: • Evaluate captions based on whether or not the include the answers to the 5W's and H, identify all recognizable people, include additional information, a kicker and a photo credit.

¶74§(110.65)(3)(B) Illustrate news events with appropriate photos and captions

- Activities: Discuss what is 'appropriate.'
 - Discuss ethics and law: what is legal and what is ethical.
 - Using examples of photos of questionable ethics (including examples of war photos, disasters, suicides, murders, etc.) discuss why these photos were used. Given the situation, who would use them? Why?
 - Pick a photograph out of a magazine and explain what it means to you in depth. Look at the technical quality and composition, of course, but also look beyond that. Look at what the image means to you.
 - Go through a series of magazines, newspapers and other publications and cut out 10-15 images that tell the rest of the class something about you. Each image should give everyone some insight into your character. This is a good assignment to do at the beginning of the semester. Make sure each student orally presents the clippings, mounted on construction paper (or whatever) to the rest of the class and explains what they mean.
- Assessment: Given an ethical dilemma, what is students' solution? Is it adequate?
 - Given a legal dilemma, what is student's reasoning for the legality or illegality of the situation?
 - Have students write a persuasive paper trying to persuade an editor to use a questionable photo.

Darkroom management:

- management:
- Keep it clean
- Keep it dry
 Limit the number of students allowed to mix chemicals
- Make sure the bottles are labeled clearly
- Color code the chemistry bottles
- Inventory monthly
- Keep MSDS (Material Safety Data Sheets) copies available in case of emergency. You can get these from your local photo chemical dealer.

They should take the position of being the photographer.

• Given a topic, students come up with five photo ideas that illustrate it.

¶74§(110.65)(3)(C) Plan photographs in relation to assignment

- Activities: Put a topic on the board and have students come up with (on their own, at first) different ways to cover this subject going beyond the obvious. Then discuss these ideas, noting the time frame in which they can be accomplished.
 - Have students list what types of photos they would like to see in the yearbook. Have them be specific, listing people, angles, time of day, location, etc.
 - Have students locate a staff box in a relatively small newspaper or magazine, preferably one which lists more than just the editor. Discuss the roles and responsibilities of each person on that staff with students speculating at first. Have students write a job description for a staff photographer. Then, have them refer to their manual for the responsibilities of each member on their staff, including photographers.
 - Have students complete a photo assignment form.
- Assessment: Evaluate ideas for coverage given by students.
 - Evaluate job descriptions written by photographer.
 - Evaluate completed photo assignment form.

$\P{74}{(110.65)(3)(C)}$

Set up an assignment system

- Activities: After discussing the role of the photographer on a staff, have the photojournalism students develop an assignment system that they believe will work. Discuss its weaknesses, how they can be circumvented, and its strengths.
- Assessment: Evaluate the students' ability to follow the assignment system devised for each assignment.

¶74§(110.65)(3)(D)

Set up a system of keeping track of negatives and contact sheets

- Activities: Have photojournalism students file their negatives, contact sheets and prints appropriately. Their name should be on the contact sheet and written on each print.
- Assessment: Have students complete the appropriate forms and file negatives. Include the appropriate filing as part of the grade for an assignment.

¶74§(110.65)(3)(F)

Evaluate photographs for technical quality and composition

Activities: • Have students complete a photo evaluation form for a classmate for each assignment. Before using the form for the first time, teach the students how to use it. Go over every line and do some sample evaluations.

- Have students find five photos that they consider to be good and five that they consider to be bad. Have them explain why. Use exchange publications for this exercise.
- Give students a contact sheet and have them pick the best print for the newspaper or yearbook and explain why. This is fun to do as a class exercise with the same contact sheet.
- Assessment: Check evaluations that students complete to make sure they are thorough and accurate.

Pinhole Camera

Activity: • Supplies needed: light-tight box; 1" square of smooth aluminum foil; straight pin or needle; flat black paint; paint brush; masking tape; photographic paper

• How to make a pinhole camera:

 $1. \,$ paint inside of both box and lid; allow to dry (this may take up to 24 hours)

2. make lens with aluminum foil... lay it flat on smooth surface and press only the point of the needle or pin through the foil... IMPORTANT... do not push it all the way through the foil... the hole should be perfectly round and free from ridges

3. when box has dried, cut hole (dime or penny size) in either one side or one end of the box

4. next, *carefully*, tape the aluminum foil over the hole in the box... use masking or electrical tape... IMPORTANT... make sure that the pinhole is in the center

5. use another piece of tape to cover the pinhole... this acts as the shutter of your camera

6. under safelight conditions, load one piece of photographic paper in the center of the inside of the box opposite the pinhole... make sure the emulsion is facing the hole... you may need to tape it in place

Taking the pinhole photo:

1. place the box on a firm, level surface and aim it toward your subject

2. place object to weight down box during exposure to prevent blurring

- 3. *carefully* remove tape covering pinhole
- 4. expose to bright sunny light for about 2
- minutes, cloudy bright about 8 minutes 5. replace tape over pinhole
 - 6. take camera to darkroom and remove pa-
- per under safelight conditions
 - 7. process as a normal print
- Tips:

the image you see will be negative
 it is best to shoot landscapes, buildings---

non-moving things

3. the pinhole camera cannot produce as a sharp, clear picture as a camera and lens

4. the closer the paper to the pinhole the more of a wide angle effect is produced

5. the greater distance the paper from the pinhole, the more of a telephoto effect is produced Good luck!

Causes of grain in film:

- Fast film ISO
- Overexposure Overdevelop-
- ment
- Long wet time
- High temperatures
- Concentrated developers
- Degree of enlargement
- Impure water
- Rapid

development

- Temperature shift
- Contrast

OTHER IDEAS

As the semester or year progresses, you may need other photo assignments to give your photojournalism students.

- **The best of times... the worst of times:** Take pictures of compare/contrast places, situations, things, people. This can double as an English teaming project.
- **Plain & Fancy**: The object is to depict something plain and fancy in one picture. This is particularly challenging if the picture can't be posed.
- **America**: Photograph something that is typically American.
- **Pick a letter of the alphabet**: Photograph abstract objects that suggest letters of the alphabet. The center of visual interest cannot be any writing, but must be abstract.
- **One Day**: Pick one day out of the school year and have students portray that one day.
- **Get ready**: Take pictures of other students, getting ready to do something (to go to work, to go to school, to go the prom, to go on a date, etc.).
- **In season**: Photograph something that portrays the current season, winter, summer, fall, or spring. This must involve other students. For example, shoveling snow, raking leaves, washing cars, swimming, etc.
- **Technology away from home**: Photograph students using modern technology away from home.
- **My place**: Take pictures of students wherever they appear the most "at home." This may be in their bedroom, watching television, or riding a bike.
- **All in the family**: Take pictures of students interacting with their families, washing dishes, on vacation, etc.

RESEARCH PAPER TOPICS

You may need alternative assignments for whatever reason. Short or in-depth research papers can solve these problems. Here are some topics for research papers.

- Jacob Riis, Ansel Adams and some of the other famous historical figures in photography make good research papers.
- Research the impact that photos have on the news. A student survey might prove useful. Question: Do photos impact the news? Pick a leading news event

and see which one has more impact, a story alone or a story with a photo. Why?

- Do professional photographers have a sense of ethics? How can you tell? Look up the various codes of ethics that exist from organizations such as the National Press Photographers Association and the Society of Professional Journalists. How do they limit photographers? How do they protect society?
- Are photographers subject to the same first amendment freedoms as writers? How can you prove or disprove this?
- When, where and why was the first camera developed?
- Photography is basically chemistry. Research the basic chemical processes used in exposing and developing an image. What chemical structures are in use? What changes do they undergo?
- Many careers involve photography. Pick one. Research the impact photography has had on this career.
- Wildlife photography is a specific field of photography. What equipment is required? Why might documenting wildlife be useful for society?

PHOTO ETHICS

As journalists, we believe the guiding principle of our profession is accuracy. Therefore, we believe it is wrong to alter the content of a photograph in any way that deceive the public.

As photojournalists, we have the responsibility to document society and to preserve its images as a matter of historical record. It is clear the emerging electronic technologies provide new challenges to the integrity of photographic images. This technology enables the manipulation of the content of an image in such a way that the change is virtually undetectable. In light of this, we, the National Press Photographers Association, reaffirm the basis of our ethics: accurate representation is the benchmark of our profession.

We believe photojournalism guide-line for accuracy currently in use should be the criteria for judging what may be done electronically to a photograph. Altering the editorial content of a photograph, in any degrees, is a breach of the ethical standards recognized by the NPPA.

From the National Press Photographers Association

Other historical figures in photography: Richard Avedon

Margaret Bourke-White Mathew Brady Harry Callahan Margaret Cameron **Robert Capa** Henri Cartier-Bresson Louis Daguerre George Eastman Harold Edgerton Alfred Eisenstaedt Lewis Hine Annie Leibowitz Eadweard Muybridge Nadar Joseph Niepce **Irving Penn** Oscar Rejiender Henry Robinson **Eugene Smith Edward Steichen** Alfred Stieglitz William H.F. Talbot William Wegman Edward Weston

GLOSSARY

5 W'S & H

The essentials of any story; who, what ,when, where, why and how.

ABERRATION

Optical defects in a lens that cause distortion.

ACETIC ACID

A component of stop bath that neutralizes the developer; CH₃COOH.

ADAMS, ANSEL

A famous Western landscape photographer who developed the Zone System for exposure, processing and printing control; founded the Friends of Photograph; and, was instrumental in helping photography achieve the status of fine art.

AGITATION

The mixing of chemicals by physically moving the container containing the chemical. One of the three factors (including time and temperature) affecting the rate at which a chemical reaction, such as developing or fixing, occurs.

AIR BUBBLES

Tiny bubbles of air that cling to the surface of an emulsion. If not dissolved, usually by agitation, they may appear as black spots on the print.

ANGLE OF VIEW

The area visible through a lens or by a light meter.

ANTI-GLARE COATING

A substance on a lens designed to prevent glare cause by lighting bouncing off the glass elements of the lens.

APERTURE

The opening of a lens through which light passes.

APERTURE DIAL

The portion of a lens which allows a photographer to choose the f/stop.

APERTURE PRIORITY

A feature of automatic cameras by which the photographer selects the aperture and the camera automatically selects the shutter speed.

ASA

The now outdated speed-rating system for photographic film. The initials did stand for American Standard Association. ASA have been replaced with ISO rating.

AVAILABLE LIGHT

Light, usually of a low level, illuminating a subject; also called existing light.

BACKLIGHTING

Lighting that comes from behind the subject causing the meter to be underexposed.

BALANCE

Arrangement of shapes, colors or areas of light

and dark that complement one another.

BASEBOARD The portion of an enlarger on which light passing through the negative is projected.

BATTERY CHECK The part of the camera which allows a photographer to check how much power is remaining in a battery.

BAYONET MOUNT A type of mount used to attach a lens to a camera.

BELLOWS

A part of a lens or enlarger that is light-tight and made of collapsible cloth or other material used to aide in focusing the image.

BMP/BIT-MAPPED

A graphic made of dots, rather than objects; images are low resolution and should not be used in printing.

BOUNCED LIGHT

Light that is reflected off another surface before reaching the subject; softer than direct light.

BOURKE-WHITE, MARGARET

A photojournalist who was one of the first staff photographers for *Life* magazine. She also photographed the beginnings of WWII in Russia, flew on bombing missions and covered the liberation of Jews at the end of the war. One of her most famous series of photos is of Mahatma Gandhi.

BRACKET

A technique used by photographers to insure that a properly exposed picture is taken. One picture is taken based upon a meter reading, another is taken at an lower exposure and another is taken at a higher exposure.

BULB (B)

A shutter setting that permits a photographer to keep the shutter open indefinitely.

BULK LOADER

A device allowing the transfer of short lengths (20 and 36 exposure frame amounts) of film from a large roll such as 100 feet to a reusable film cassette.

BURNING-IN

The act in print a photo of making a light area of the print darker by exposing it to more light while not permitting it to reach the other areas of the print. *See also dodging*

CAMERA OBSCURA

Latin: dark room; a device used by early painters which was the predecessor to the photographic camera.

CAMERON, JULIA MARGARET

An English woman who was a member of the Pictorialist movement in England during the 1800's. She is best known for her striking portraits of her friends, including Alfred Lord Tennyson and Sir John Herschel.

CANDID

Unposed photographs.

CAPTION

The portion of a layout which explains what is happening in a photograph. Captions are place touching the photograph. Also called cutlines. Often includes a kicker and photo credit.

CARRIER The film holder of an enlarger.

CASSETTE A metal or plastic holder usually for a roll of 35 mm film.

CENTER OF VISUAL INTEREST The element in the photograph that the viewer first notices; CVI.

C-41 PROCESS

An abbreviation for Kodak color film processing chemistry. It has become an industry standard that is used by many other companies.

CHANGING BAG

A light-tight bag with openings for the hands in which film can be loaded and unloaded in daylight.

CLEARING AGENT

A chemical used to neutralize the hypo, or fixer, on film or paper and reduce washing time.

CLOUDY A type of lighting cause when the majority of light from the sun is blocked by clouds.

COMPOSITION The visual arrangement of elements in a photograph.

CONDENSER ENLARGER

An enlarger with a sharp light source that passes straight through the negative without being diffused. Allows prints of high contrast and definition to be made. Negative imperfections such as dust spots and scratches are more apparent on prints made with this type of enlarger. *See also diffusion enlarger*

CONTACT SHEET OR CONTACT PRINT

A type of print made with the negatives in direct contact with the paper.

CONTRAST

The difference between the blackest black of a print or negative and the whitest white. The greater the difference, the higher the contrast.

CONTRAST GRADE

A number which indicates the relative contrast of photographic paper. The higher the number, the more the image contrast is increased.

CROPPING

The act of selecting just a portion of the original image for publication or enlarging.

CUTLINE See caption

DAGUERRE, LOUIS An early photographer who influenced devel-

Turning in a complete assignment means turning in: 1. properly filed

negatives;

 properly filed contact sheet with student's name on the back:

- print with student's name on the back;
- 4. a complete

caption for some assignment; and

5. two complete

evaluations

by other student photographers.

opment of photography with Daguerreotype. This was the first successful photographic process. In 1839 Daguerre used heated mercury vapors to form an image on an copper plate coated with polished silver.

DAYLIGHT

Existing light provided by the sun.

DEDICATED FLASH

An electronic flash unit designed to operate on a specific model of camera.

DEKTOL

A common paper developer manufactured by Eastman Kodak.

DENSE

Negatives that are overexposed or overdeveloped are said to be 'dense' because they don't transmit as much light as an ideal negative. *See also thin*

DEPTH OF FIELD

The distance between the element in a photo closest to the camera and the element farthest from the camera that appear in acceptable focus. The greater the distance, the greater the depth of field. Wider apertures give lower depth of field.

DEPTH OF FIELD PREVIEW

A device on a camera which allows the photographer to preview which elements will appear in focus at a given aperture.

DEVELOP

The act of converting a latent image into a visible image through a series of chemical reactions.

DEVELOPER

The chemical used to convert the latent image into a visible image. Usually a basic solution that can be neutralized by acid.

DEVELOPING TANK

A lighttight container used for processing film.

DIFFUSION ENLARGER

An enlarger that distributes scattered light across the negative, softening the appearance of the print. *See also condenser enlarger*

DIGITAL CAMERA

Allows a camera to bypass film and record images on a disk built into the camera, or on a floppy.

DIN

Deutsche Industrie Norm; a film speed used in Europe before the development of the ISO system.

DODGING

The act in print a photo of making a dark area of the print lighter by not exposing it to as much light while permitting light to reach the other areas of the print. *See also burning-in*

DOMINANT

The largest photograph on a layout.

DOUBLE EXPOSURE

Recording two or more images on top of one

another on film or on paper.

DPI/DOTS PER INCH

A unit of measurement for measuring the reproduction capability of an output device; the smallest unit of a printer.

DRY MOUNTING

A method of mounting prints on cardboard by using heat, pressure, and tissue impregnated with shellac.

EASEL

A device which rests on the baseboard of the enlarger to hold the photographic paper in place and to assist in cropping of the image.

EASTMAN, GEORGE

Credited with providing common man with equipment to take pictures.

EMULSION

The part of photographic paper or film that contains the light-sensitive silver halides. The emulsion side is the side coated with the emulsion.

ENLARGE

The opposite of reduce; reproducing a picture at a size larger than the original.

ENLARGEMENT

A copy of an image is larger than the original image. Example: 'A 5x7 enlargement.'

ENLARGER

A device used to make an enlargement. See also condenser enlarger and diffusion enlarger

EPS/ ENCAPSULATED POSTSCRIPT

A graphics standard for object-oriented files which includes the Postscript code necessary to tell the printer how to print a file.

EQUIVALENT EXPOSURE

An exposure that, despite a change in aperture or shutter speed, allows the same amount of light to reach the film as another exposure.

EXISTING LIGHT

The amount of light in a scene without the addition of light from artificial sources such as a flash. Also known as available light.

EXPOSURE

A combination of aperture and shutter speed that determines how much light reaches the light-sensitive emulsion.

EXPOSURE COMPENSATION

A change in exposure based on an atypical lighting situation. For example: the typical compensation for backlighting is to increase the exposure four times.

EXPOSURE SETTING

The lens opening and shutter speed selected to expose film.

F/16 RULE

In bright sunlight with the camera set at f/16, the shutter speed is approximately equivalent to 1/ISO of the film being used.

F/STOP

A number used to indicate the relative size of

the aperture. The larger the number, the smaller the lens opening. The numbers increase by multiples of the square root of 2. Typical f/stops for a lens begin at f/1.4 and increase to f/22 in the following order: f/1.4, f/2, f/2.8, f/4, f/ 5.6, f/8, f/11, f/16 and f/22. A difference in one f/stop indicates that half or twice as much lighting is reaching the film. For example: f/8 lets in twice as much light as f/11.

FAST FILM

Film with a high ISO that has a high relative sensitivity to light. Example: 3200 T-Max.

FILL FLASH

A technique using both available light and supplementary artificial light. The light from the flash is used to 'fill-in' the shadows made by the existing light.

'FILL THE FRAME' A phrase used to remind photographers there should be no wasted space in a picture.

FILM

A sheet or roll of flexible, light-sensitive material used to record an image in a camera.

FILM CLEANER A solution composed primarily of alcohol used to clean dust off of film.

FILM CLIP Slow devices made of plastic or metal used to

hang film for drying. FILM REWIND KNOB

The part of the camera which is turned to rewind the film back into the light-tight canister.

FILM SPEED

Relative sensitivity of film to light, as measured by standard ratings; currently, film speeds are rated in ISO values. The higher the film speed, the less light required.

FILM SPROCKETS

The rectangular holes on both edges of film such as 35 mm that are used to accurately advance the film through the camera.

FILTER

A piece of colored glass or plastic used to affect the color of the light reaching the lightsensitive emulsion. Filters are used on a camera and in the printing process. *See polycontrast filters and Polarizing Filter*

FISHEYE

A type of lens that distorts the image but encompasses an extremely wide angle of view (near $180\frac{1}{2}$), usually greater than 20mm in focal length.

FIX

The act of removing the unexposed silver halides from paper or film with fixer rendering the material insensitive to light.

FIXER

An acidic solution used to fix film or paper by converting unexposed silver halides into a for that is not sensitive to light and which can be removed by rinsing; the primary component of most fixers is sodium thiosulphate

$(Na_2S_2O_3 \bullet 5H_2O).$

FLASH SYNCH

The fastest speed at which the flash can be used to illuminate the entire frame with the shutter completely open.

FLAT

A term used to describe a print or negative of low contrast.

F-NUMBER

The numerical expression of the amount of light admitted by a lens, derived from dividing the focal length by the optical diameter of a lens opening. Low f-numbers, such a f/1.4, allow large amounts of light to pass through a lens; high f-numbers, such as f/16, allow little light to pass through.

FOCAL LENGTH

A measurement of the size of a lens; the distance between the film plane of the camera and the optical center of the lens focused at infinity.

FOCAL PLANE SHUTTER

A type of shutter located just in front of the film that opens either horizontally or vertically.

FOCUS

Adjustment of the subject distance on a lens to render the subject sharp.

FOCUS RING

The part of the lens which enables the photographer to focus the subject.

FOG

The portion of an image which has been converted into a visible image although it was not intentionally exposed. There are two types of fog: chemical fog and fog caused by accidental exposure to light.

FOREGROUND

The area between the camera and the main subject.

FORMAL BALANCE Symmetrical.

FRAMING

A composition technique which the center of visual interest in a photo is framed by objects in the foreground that are usually out of focus; lends depth.

FRONTLIGHTING

Lighting that illuminates the front of the subject which has a source behind the photographer.

F-STOP NUMBERS

Numbers representing fractions that relate to a mathematical ratio of the aperture to the focal length of the lens.

GELATIN

The portion of the film in which light-sensitive silver halides are suspended.

GIF/GRAPHIC INTERCHANGE FORMAT

Format used by to assist users in utilizing graphic

files independent of machine type and best used for transmitting images with large areas of solid color.

GLARE

An unwanted reflection off a shiny surface; sometimes refers to unwanted light bouncing off the glass elements inside a lens.

GLOSSY PAPER

A paper with a highly reflective emulsion. See also matte paper

GRADUATE

A container marker off in ounces or milliliters and used for measuring photographic solutions.

GRAIN

The small silver crystals in a print or negative. When these crystals become visible, the image is said to be 'grainy.' Graininess becomes pronounced with pushed processing and fast films.

GUIDE NUMBER

A measurement of the intensity of light produced by a flash used to figure the appropriate exposure.

HALFTONE

An image composed only of dots used for reproduction on a printed page giving the illusion of a continuous tone.

HOT SHOE

The part of a camera which allows an electronic flash to be fired at the same time as the shutter is released based on electrical contact with the camera.

HYPO

A synonym for fixer.

HYPO CHECK

A chemical used to check whether or not the fixer is still capable of making the silver halide crystals insensitive to light.

HYPO-CLEARING AGENT

A chemical used to help remove fixer from the emulsion.

INCANDESCENT

Light that results when a substance is heated with electricity such as in a tungsten light bulb. *See also florescent*

INFINITY

As far as the eye can see; the maximum distance on which a lens can focus.

INFORMAL BALANCE Not symmetrical.

INTERCHANGEABLE LENS

A lens which can be removed from a camera body.

ISO

An abbreviation for International Standards Organization. A number assigned to film indicating its relative sensitivity to light. The higher the number, the more sensitive the film is to light.

ISO DIAL

The part of the camera which allows the photographer to set the appropriate ISO.

JPEG/ JOINT PHOTOGRAPHERS EXPERTS GROUP

The best format for photographs or graphics that have many colors and shades and very few, if any, areas of flat color.

LANGE, DOROTHEA

Hired by the Farm Security Administration to document the Great Depression in the 1930's.

LATENT IMAGE

An invisible image formed when light strikes the silver halides in the film prior to development.

LEADER

A strip at the beginning of a roll of film used to thread it into the camera.

LEADING LINES

A technique which uses one part of the photograph to lead the viewer into another part of the subject.

LED

Letters that serve as an abbreviation for "light emitting diode." For example, these are used to provide exposure data around the edges of the viewfinder in an SLR camera.

LENS

A device designed to focus light on a given area such as a piece of film.

LENS HOOD

An accessory that attaches to the front of a lens to prevent lens glare; also called a lens shade.

LENS MOUNT

The part of the camera to which the lens is secured.

LENS RELEASE

A button which allows the lens to be taken off certain cameras.

LENS SPEED

A 'fast' lens has wider maximum aperture and transmits more light than a 'slow' lens. For example, a lens with a widest f/stop of f/2 is 'slower' than a lens with a maximum aperture of f/1.4. Lens speed is a common way of measuring lenses. Faster lenses tend to be more expensive and can be used in lower light situations.

LENS TISSUE A soft, lintless tissue used to clean glass surfaces such as lenses.

LIGHT METER Another name for an exposure meter.

LONG LENS

Term used to describe a telephoto lens; a lens whose focal length is longer than the diagonal of the film with which it is used.

LPI (LINES PER INCH)

A traditional printing term that refers to rows of dots in half tones or the frequency of the screen.

MANUAL OVERRIDE

A feature on some electronic cameras that allows a photographer to select either the shutter speed, the aperture, or both independently of the exposure system.

MATTE

A paper with an emulsion that does not reflect much light. *See also glossy paper*

MEMO HOLDER

A bracket on the camera back where the film box lid can be held in place.

MERGER

The part of a photo that merges with another part (or the border) unintentionally often generating distracting results.

MOTOR DRIVE

An electronic motor that speeds up the film advance. Also called a power winder.

NEGATIVE

Developed film; an image where dark areas of the actual scene appear light and light areas appear dark.

NEGATIVE CARRIER

The part of the enlarger which holds the negative in place during the enlarging procedure.

NEGATIVE SHEET

Several negatives contained in a carrier, usually made of transparent plastic, designed to assist in making contact sheets and filing.

NIEPCE, NICEPHORE

Father of photography; took the first picture in 1826.

NORMAL LENS

A lens that records an image with approximately the same angle of view as the human eye; a 50 mm lens is considered 'normal' for most 35mm camera.

OVER DEVELOPMENT

Development longer than the recommended time at a given temperature and agitation rate; causes increased contrast, graininess and chemical fog; commonly caused by hot developer. *See pushed processing*

OVER EXPOSURE

An exposure which allows more than the required amount of light to reach the emulsion; causes a loss of detail in the highlight areas.

PANCHROMATIC FILM

Film that is sensitive to all visible colors of light and renders them tones similar to those visible with the human eye. *See also orthochromatic film*

PANNING

A photographic technique where the camera is moved at the same speed and direction as the subject allowing the subject to remain sharp but blurring the rest of the picture.

PARALLAX

The difference between what is seen in the viewfinder and what is recorded on the film; a

common problem with rangefinder or twin lens reflex cameras.

PC CORD

An electrical, wired connection between a flash and camera that allows the flash to be fired at the appropriate time after the shutter release is pressed.

PHOTO CREDIT

Part of the photo caption which states the name of the photographer or the organization responsible for the photograph.

PHOTOGRAM

A print made without a negative by positioning objects between a light source and the photographic paper.

PHOTOJOURNALISM

A genre of photography which includes photographing people involved in news events.

PICT/PICTURE

A graphics standard for object oriented files (from picture).

PIXEL/PICTURE + ELEMENT

The smallest unit that makes up an image on a computer screen; the smallest unit of a digitized photo.

POLARIZING FILTER

A type of filter used when taking pictures to block out the reflections off non-metallic surfaces. Also useful for blocking reflections off water in the atmosphere, darkening blue skies.

POLYCONTRAST FILTER

A type of filter used in enlarging that, together with polycontrast paper, allows the user to alter the contrast of the image without having to use a different type of emulsion. Also known as multigrade filters.

POSED SHOT

A photograph that is set up by the photographer. *See also candid*

POSTSCRIPT

A page-description language developed by Adobe Systems for use in laser printers and other high-quality output devices.

PPI/PIXELS PER INCH

A type of measurement of resolution for display purposes.

PRINT

A reproduction of an image made with tones corresponding to those in the actual image. Also termed a 'positive.' *See also negative*

PRINT DRYER

An electrical device used to dry prints using warm, forced air.

PRINT TONGS

Devices used in the printing process which permit a person to move prints from one tray to the next without having to get chemicals on the skin.

PUSHED PROCESSING

A technique used when developing film to in-

crease the actual effective speed of the film by over developing it. Usually used for pictures shot in extremely low light situations without artificial lighting. Increases contrast and grain.

REEL

A device used in film developing to allow chemicals to reach all areas of the film evenly; made of stainless steel or plastic.

REFLECTED

Refers to light that bounces off a subject.

RESIN-COATED PAPER (RC)

Photographic paper coated with clear plastic. RC papers require shorter processing times than fiber-based papers.

RESOLUTION

The term used to describe the amount of data, or color information, in a scan, a stored image file, a screen display, or a printed image.

RETICULATION

Cracks in the emulsion caused by temperature variations during processing.

REWIND BUTTON

A small button in the base of an adjustable camera that releases the take-up spool so that the film can be rewound into the film cassette.

RINSE

A procedure in the development of paper or film designed to remove one chemical before immersion in another or before drying.

RULE OF THIRDS

A technique used to determine the placement of the subject. When the viewfinder is divided into thirds both horizontally and vertically, the subject goes at the intersection of any two lines.

S-CURVES

A technique which uses elements in a photo shaped in curves to grab the reader's attention.

SAFELIGHT

A device which emits light of a wavelength to which photographic materials are not sensitive, often amber.

SCANNER The

SCRATCH-RESISTANT COATING The portion of film designed to make it less sensitive to scratches.

SCREW MOUNT

A threaded mounting for attaching a lens to a camera body; most modern cameras and lenses have bayonet mounts.

SELECTIVE FOCUS

A technique which renders only certain elements in a photograph to appear in focus by using wide f/stops which give low depth of field.

SELF TIMER A part of a camera a delays the opening of the shutter after the shutter release has been pressed. TAJE Photojournalism Curriculum Guide 14

SHUTTER

The part of the camera that opens, allowing light coming through the lens to reach the film.

SHUTTER RELEASE

The portion of the camera that when pressed opens the shutter and exposes the film to light.

SHUTTER SPEED

A measurement of how long the shutter will remain open allowing the light-sensitive emulsion to be exposed to light. Measured in fraction of a second.

SHUTTER SPEED DIAL

The portion of the camera which allows the photographer to set the appropriate shutter speed.

SIDELIGHTING

Lighting that illuminates one side of a subject more than another.

SILVER HALIDE

The light-sensitive part of film or paper. Chemically, a silver halide is a compound of silver and either fluorine, chlorine, bromine or iodine.

SINGLE-LENS REFLEX (SLR)

A type of camera which allows a photographer to see the subject through the same lens as light will pass when the film is exposed. *See also twin lens reflex camera and rangefinder*

SLOW

A term that refers to a long shutter speed. Also a relatively insensitive film.

STEICHEN, EDWARD

Together with Alfred Stieglitz, founded the Photo-Secessionists in America in 1902. During his lifetime, he helped America discover, through Stieglitz's galleries, such artists and photographers as Picasso, Monet, and Rodin. He later became staff photographer for Conde Nast, creating new and unique fashion photographers. During WWI and WWII, he was a photographer for the U.S. Armed Forces. During WWII, he was director of photography in the Pacific theatre. He later became the director of photography at the Museum of Modern Art in New York City where he organized one of its most famous exhibitions: 'The Family of Man.'

STEIGLITZ, ALFRED

One of the most influential photographers who ever lived. He brought the impressionistic style of photography from Europe to America through the organization of the Photo-Secessionists. He would later lead the way to straight photography by recognizing and promoting the work of such photographers as Paul Strand, Edward Weston and Ansel Adams. He opened the first photography gallery in New York City and helped to establish the first department of photography at an American museum. During his entire lifetime, he fought for photography's acceptance as an art form. He was married to the artist, Georgia O'Keeffe.

STOP BATH

An acidic solution used to stop the action of the developer.

STOPPED ACTION

Moving subjects photographed with fast shut-

ter speeds so they appear stopped.

STRAND, PAUL

An American photographer who began working in the early 1900's on a style of photography that became known as 'straight' photography. His early photographers of candid street scenes would influence photographers for the next 30 years.

SUBORDINATE ELEMENTS

Elements which a viewer sees after viewing the dominant element.

TALBOT, WILLIAM HENRY FOX

Credited with creating the negative/positive process

TANK

A light-tight device made of metal or plastic into which film or paper is placed for development.

TECHNICAL QUALITY

Refers to the qualities in a photo which result from things other than composition, including exposure and proper development.

TELEPHOTO

A lens with a narrow angle of view allowing distant objects to fill the frame.

TEST STRIP

A small piece of photographic paper exposed to light for various intervals to determine the proper exposure time.

TEXTURE

The quality of a photograph's composition which makes it appear as though it will feel like another material.

THIN

Negatives that are underexposed or underdeveloped are said to be 'thin' because they transmit more light than an ideal negative. *See also dense*

TIFF/TAG IMAGE FILE FORMAT

The most common format for saving scanned images; a graphics standard for high-resolution.

TIMED EXPOSURE

An exposure of unusually long duration often timed by the photographer rather than the camera.

TIMER

A device used to aid a photograph in getting accurate exposures or development times.

TONE

An quality of composition produced by the combination of light, shade and color.

TRAYS

Containers used in the darkroom used to contain chemicals and into which prints (or film) are placed so they can be in full contact with the chemical.

TRIPOD

A three-legged stand on which a camera can be mounted.

TWIN-LENS REFLEX

A type of camera which has two lenses, one for viewing the subject in preparation for taking the picture and one through light passes before reaching the film.

UNDER DEVELOPMENT

Development shorter than the recommended time at a given temperature and agitation rate; commonly caused by cold developer or exhausted chemicals.

UNDER EXPOSURE

An exposure which allows less than the required amount of light to reach the emulsion; causes a loss of detail in the shadow areas.

WESTON, EDWARD

Began as a successful portrait photographer in Hollywood, he destroyed all of his negatives and moved to Mexico for four years to rethink his photographic style. Together with Ansel Adams, Imogene Cunningham and others, he helped found Group f/64. The first photographer to receive a Guggenheim Fellowship, he is best known for his landscapes, nudes and still lifes of peppers. He photographed for complete sharpness and detail in his images, insisting on extreme depth of field, contact printing his 8x10 negatives, mounting on white board and not retouching or manipulating the image at all.

WETTING AGENT

A chemical used to reduce surface tension of a film and promote even drying.

WIDE-ANGLE

A lens with a wide angle of view allowing more nearby objects to fill the frame.

WORKING SOLUTION

A mixture of a chemical in water that is ready to be used.

ZOOM

A type of lens with multiple focal lengths as opposed to a fixed lens.

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Kodak 1-800-242-2424 Ilford 1-800-535-9205

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NOTES

Photojournalism is one of the most fun and challenging courses a teacher can ever teach. There is no greater reward than teaching students to see the world around them. Bradley Wilson

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