

PolarTREC Online Course For Educators
Capstone Lesson
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Photography I – Lesson Plan
Mapping A Photographic Investigation

Organizing Questions:

- 1) Why is it important to collect large quantities of research data?
- 2) How can photographing a subject be similar to scientific observation?
- 3) How can one plot photographic data on a map?

Introduction:

This lesson was written for a Photography I course, to be taught in a lab with access to either a darkroom or computers/printers. The class has already spent ample time getting used to the basics of photography, learning to use their cameras as a creative tool, just as a painter might use a brush. *(However, this lesson could easily be modified to work in a non-photography class, by removing the photography aspect and focusing on the observations, data collection, and mapping.)*

In this lesson students will learn how to thoroughly document a single subject by shooting numerous photos of that subject from many different perspectives. By studying the work of seismographic research taking place in Antarctica to study the formation of the Transantarctic Mountains, students will prepare for their own photographic data collection process.

Objectives:

By the end of this lesson, the students will be able to (1) take photographs as a tool for scientific observation, (2) explain why it is important to collect a large sample set of data, (3) study a single subject by taking photographs from a variety of locations/perspectives, and (4) use a map to plot collected data.

CA State Standards:

Nine Through Twelve-Proficient

Visual and Performing Arts: Visual Arts Content Standards

Develop Perceptual Skills and Visual Arts Vocabulary

- 1.1 Identify and use the principles of design to discuss, analyze, and write about visual aspects in the environment and in works of art, including their own.
- 1.2 Describe the principles of design as used in works of art, focusing on dominance and subordination.

Impact of Media Choice

- 1.4 Analyze and describe how the composition of a work of art is affected by the use of a particular principle of design.

Skills, Processes, Materials, and Tools

- 2.1 Solve a visual arts problem that involves the effective use of the elements of art and the principles of design.
- 2.2 Prepare a portfolio of original two- and three-dimensional works of art that reflects refined craftsmanship and technical skills.

Make Informed Judgments

- 4.4 Articulate the process and rationale for refining and reworking one of their own works of art.
- 4.5 Employ the conventions of art criticism in writing and speaking about works of art.

Materials:

- camera (1 per student)
- map of the city (1 per student)
- marker/pen (1 per student)
- printing materials (darkroom or computer/software/printer)
- computer/handheld digital device & access to the Internet (1 per student)

Technology:

Students will need to take and print photographs for this lesson. Thus, students will need at least one camera per student and a means by which to print their photographs. If students are using analog cameras, they will need access to a darkroom and all of the technology/chemistry that is involved in the development/printing process. If students are using digital cameras, they will need access a computer lab with photo-editing software, and a printer.

Preparation:

This lesson assumes prior instruction in basic-intermediate use of cameras and a printing process. If students do not yet have the ability to use these tools, comfortably, the foundational instruction could potentially be embedded into this lesson; but an instructor should expect such a lesson to take at least twice as long.

The instructor needs to prepare a slideshow to show the students a scientific process of data collection. Particular emphasis should be placed on a slide, which shows a map of plotted data locations. Any research with data collection from various locations could be used for this example. However, this lesson will be taught using the example of work that is being done in the Transantarctic Mountains to collect seismographic data.

Timeframe:

This lesson was designed to be taught in class periods of 80 minutes over 4 class periods (the number of days would vary, depending on the method of printing photos). Some groups of students will be able to work at this pace, but only if they are comfortable with their cameras and the printing process. If not, allowing for 7-10 class periods might be more realistic. Additionally, these 4 class periods do not necessarily have to occur consecutively, but rather could overlap other assignments. This might be a good idea in order to allow students enough time to take quality photographs. This lesson could also be built into a larger unit on photography as it is related to polar sciences.

Procedure:

<i>Day/Time:</i>	<i>Agenda:</i>	<i>Purpose:</i>
Day 1		
10 min.	Photo Of The Day	Paul Nicklen photo, "Polar Bear Reflection" (http://oi39.tinypic.com/2a4xopl.jpg). As part of a daily routine students will analyze the aesthetics of this photograph. Then, during the follow-up discussion they will be asked to speak to the importance of photography in raising awareness about human impact on wildlife. This photo was chosen to emphasize the idea that the best view of a subject might not be the first or

		most obvious view.
20 min.	Discuss Perspective	Talk to the students about “perspective” using a slideshow of various photos of the same subject taken from different angles and in different places. A good example would be to choose a popular celebrity. Then show many photos taken professionally, and others take by the paparazzi. This would show a wide range of perspectives on the same subject. Emphasize the idea that one of the photos is better than the others, but that if there were many photos taken of the same subject the “best” one might be one of the “worst.” Etymology: <i>perspective</i> = <i>through</i> + <i>look at</i> .
20 min.	Share Dr. Hansens’s Research	Use the archived video of Dr. Hansen’s presentation (http://www.youtube.com/watch?feature=player_embedded&v=dJEwkuWx2sM), about her research of the Transantarctic Mountains through seismographic data collection. Emphasize the slide that depicts a map of Antarctica showing plotted points of the locations where the seismographs were buried.
10 min.	Introduce Mapping Assignment	Explain to the class how they will each be partnering with a classmate who will serve as their subject to focus on for their photographs, and then shooting that classmate from a variety of different settings. Ultimately they will only be making 3 prints of their three best photos, but in preparation for this, they must shoot photos of the subject in 10 locations over at least three days. They will be writing down each location/time, and plotting these locations on a map, to be showcase with their final printed photographs during a critique with their peers. If beginner students choose to shoot all over campus, then they should use a map of the campus. For more advanced students, they can choose a different subject and shoot all over the city, in which case they should use a city map.
20 min.	Production Time	The students will be given time to work on producing photographs. They should go out around campus with their partner and begin taking photos.
Day 2		
10 min.	Photo Of The Day	Paul Nicklen, photo of a Weddell seal in a breathing hole “Vanishing Sea Ice,” (http://farm5.staticflickr.com/4062/4716466630_abd9479642_b.jpg). As part of a daily routine students will analyze the aesthetics

		of this photograph. During the follow-up class discussion, make a point to discuss the importance of patience. In the case of the Weddell seal, Nicklen may have stood in the cold for hours just waiting for the moment that the seal would come up for air. Through patience and multiple perspectives, a photographer is far more likely to capture the ideal view of their subject.
20 min.	Intro Photo Research Assignment	Each student will be choosing a subject to research. This could be a celebrity (like the example given in the previous class), or an animal, or a car, or any thing that could be photographed in various locations. Once the subject is chosen, the students will look for 10 photographs of their chosen subject on the Internet (this could be done in a computer lab or via access through handheld devices). The idea is that the student will find a collection of different perspectives of that single subject, and then choose the “strongest” photo (individual opinion). Emphasize the fact that this is the equivalent of a scientist collecting data out in the field. The larger their sample size, the more likely they are to find ideal results. They will then write a 500 word essay describing all the reasons why that single perspective is a better view of the subject than all of the others. As an example, the instructor should show the students a collection of “Boo: The Cutest Dog In The World,” who has been photographed in every possible manner from the day he was born (http://www.boothedog.net/). Discuss how the large sample set of photographs of this single subject (Boo), allows for the most ideal results.
20 min.	Begin Photo Research & Essay	This time will be provided for students to begin looking for photos of their selected subject and if possible, to begin writing their 500 word essay (to be email to the instructor before the next class period). If necessary, students will finish this research assignment at home.
30 min.	Production Time	Partnered students will go out and spend time around the campus shooting photos of one another. For each shot that they take, they should write down the setting information in the sketchbook to use as data later for plotting on the map.
Day 3		
20 min	Photo of the Day	Paul Nicklen photo of leopard seal, mouth agape (

		01/1327350809_1037852.jpg). As part of a daily routine students will analyze the aesthetics of this photograph. Show the video of Nicklen talking about his encounter with the leopard seal (http://www.youtube.com/watch?v=UmVWGvO8Yhk). Emphasize his dedication to the experience, going back every day, day after day to shoot the exact same animal in in order to capture every possible perspective.
40 min	Research Presentations	Each students will be asked to show a slide show of the 10 photos that they found of their chosen subject. Then they will be asked to point out the strongest photograph of the collection and state their argument to the class why this one photo depicts a more successful perspective than the others. (5 min. for each student, only half the class today.)
20 min.	Production Time	Students should be given this final chunk of time to either go out with their partners about campus and shoot more photos, or they could use this time to work on printing their final chosen 3 photos.
Day 4 +		
For any traditional photography class that uses a darkroom, far more production time will be needed in order to properly develop film and make quality prints in the darkroom. Additionally, more time will be needed to give all students an opportunity to showcase their Photography Research slideshows and to present their Arguments for the “strongest” found perspective of their chosen subject.		
Final Day		
10 min.	Photo of the Day	
15 min.	Photo Reflection & Hanging	During this time the students will be asked to write a reflection on the photographs that they printed for this assignment. They are to answer a set of six standardize questions that are used regularly in the class, which cover a range of topics, focusing on various artistic/technical strengths and weaknesses that the students perceive in their own work. As they finish their reflection they are to use the remaining time to hang their work on the wall for all to see. In this case, they will hang the three prints AND their map of plotted photo locations.
55 min.	Peer-to-peer Photo Critique	For the remainder of the period the class will sit in close proximity to the wall of photographs. The instructor will choose a photo at random. Then the respective photographer will stand in front of the class, while their peers first provide positive feedback and then some constructive criticism. The instructor should then follow this discussion to cover any key elements that were

		<p>not touched upon by the group before providing the artist with an opportunity to share their experiences/story about the photograph. Participation by all students should be mandatory, though no grades should come from this portion.</p>
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Assessment:

The primary summative assessment asks each student to (1) photograph a single subject in a minimum of 10 different settings, (2) document their perspective data through a list of journalled notes, written in their sketchbook, about the location and time of each exposure, (3) print the 3 most successful photographs of their chosen subject. Following the production of these photographs, students will also evaluate their work based on the aesthetic characteristics we have studied throughout the semester. Formative evaluation will take place, first, through a peer-to-peer critique, and later the instructor will have an opportunity to read through a written reflection about successes and struggles of the concept and process and assess the students more summatively. Students will also be asked to plot the locations of their photographic data on a map, and share their map with the class as a tool for describing how they found the ideal perspective of their subject. Additionally, students will be asked to demonstrate their understanding of data collection and sample sets through their 500-word essay, which describes a single found photograph as a stronger example depiction than 9 other perspectives of the same subject. Formative assessment will take place through the production process, as the instructor has individual conversations with the students about the photos they are taking and printing, and how these artistic products could be improved upon by taking more photos from different perspectives.