

## **LOOKING THROUGH A KEYHOLE**

**ONE DAY WORKSHOP IN PINHOLE  
PHOTOGRAPHY COMBINED WITH  
DRAWING TECHNIQUES**



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## LOOKING THROUGH A KEYHOLE

**OVERVIEW:** Students create environment themed images using a combination of methods:

- realistic drawing techniques
- pinhole photography

**THEME:** THE ENVIRONMENT AND ME

**MATERIALS:**

1. pinhole cameras (8 supplied by myself)
2. ILFORD Multigrade IV RC DELUXE (17,8x24cm / 7x9½in) glossy photographic paper, (or equivalent). (approx 2 sheets per student)
3. roll gaffa tape
4. dark room with equipment and chemicals for printing
5. handouts (see appendix)
  1. Background Essentials
  2. Pinhole Photography
  3. Making a Positive
6. Each pair must have at least one watch with a second hand.
7. Drawing paper
8. Charcoal of varying thickness
9. Putty gum
10. Computer/Internet access
11. Related books

**OBJECTIVES:**

1. Students will explore and learn about the basic principles of photography
2. Students will experiment with the fundamentals of light sensitivity and simple printing techniques.
3. Students will create photographic images based on the theme **'the environment and me.'**

4. Students will familiarize themselves with an overview of the history of photography and photographers. (See Appendix: Historical Overview: Teachers Notes/Reference).

eg. **Discovery:** Fox Talbot, Daguerre.  
**Development:** Nadar, Cameron, Muybridge.  
**Experimentation:** Man Ray, Rodchenko, Heartfield.  
**Identity + Application:** Prince, Sherman, Gilbert & George.

5. Students will research topics via the internet.

**Possible links:** (See Appendix for brief description of site photos)

- <http://users.rcn.com/stewoody/photo.htm>
- <http://www.pinholeresource.com/gallery1.html>
- [http://www.mercadopersa.com/estenopo/galeria de fotos.htm](http://www.mercadopersa.com/estenopo/galeria_de_fotos.htm)
- <http://homepages.tesco.net/~newart/new-artiv.html#index>
- [http://www3.baylor.edu/~Kenneth\\_Ransom/PINHOLE/pinhole.html](http://www3.baylor.edu/~Kenneth_Ransom/PINHOLE/pinhole.html)

6. Students will compose realistic charcoal drawings of the environment and objects they intend to photograph. The composition should be approached as if you were taking a photograph and therefore creating a "snapshot" like image. Reference Degas and the influence of painting on the photography. (See Appendix: Historical Overview: Teachers Notes/Reference).

**PROCEDURE:**

1. Familiarise the students with the basic principles of photography and printing (see handout 1)
2. Discuss the plans and procedure for the day. Distribute other handout sheets (2 and 3).
3. Class splits into groups of 10 or 12. One group will work with charcoal/pencil drawings of the environment. (approx 2 hour session), while the others complete objective 4.

**NB. These objectives can be easily adopted to suit facilities or school curriculum requirements**

4. Pinhole group will split into pairs. Each pair follow handouts 1, 2 & 3  
PINHOLE PHOTOGRAPHY  
MAKING A POSITIVE
  5. After one and a half to two hours the groups swap activities
  6. Teachers and students gather in the last half hour of the day for group discussion over the day's activities.
- Each pair has a turn to share and exchange photos and comment on the day's activities, (success stories, failures, difficulties or good luck).
  - Teachers and students invited to give comment on the images they found the most striking, thought provoking, innovative use of objects, best depiction of theme etc.
  - Compare and contrast the realistic snapshot drawings with the photographic images of the same environment, (depth, tone vision, composition, perspective).
  - Discuss the results of researching and gathering information, (via internet and books), before undertaking the practical task of pinhole photography. Compare with Group 1, (since they began immediately with pinhole camera work).
  - Open discussion, (time permitting).

**ASSESSMENT:**

1. Was the theme '*the environment and me*' represented in the work?
2. Was the procedure easily followed and a basic level of photographic and printing techniques reached and understood? Ask questions about light sensitive paper, pinhole methods etc.
3. Did other factors play a role in achieving a good result? eg. luck, chance, mistakes?
4. Were there detectable comparisons and contrasts in the realistic drawings and pinhole images from the same environment/objects?
5. Were the photo images influenced by the historical and internet research carried out by the groups? Were there direct advantages from this? Likewise did drawing the environment first affect or influence the choice of composition of the photograph?

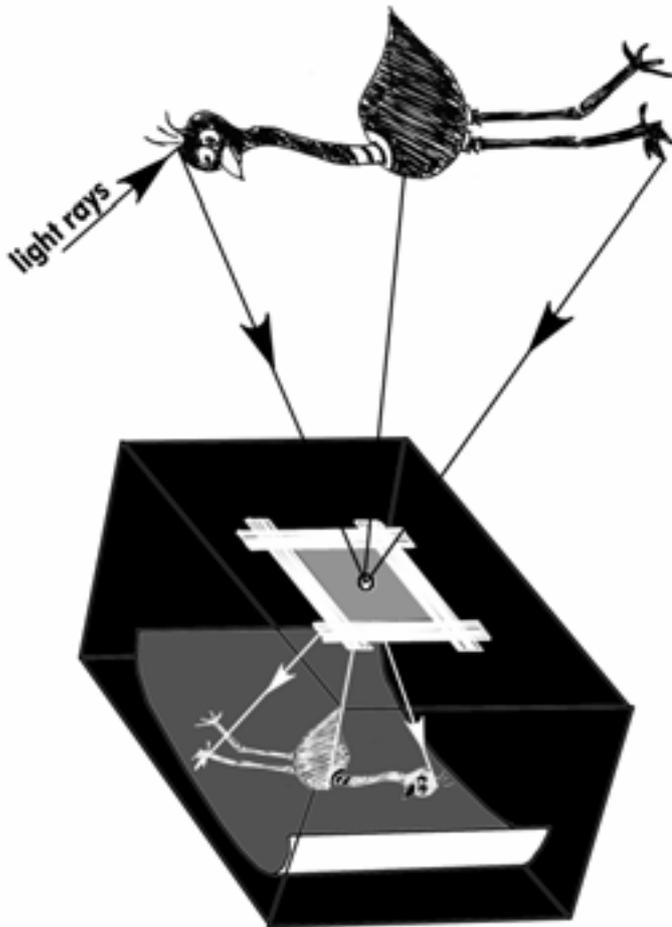
## **APPENDIX**

- 1. Background Essentials**
- 2. Pinhole Photography**
- 3. Making a Positive**
- 4. Historical Overview  
Teachers Notes/Reference)**
- 5. Website Links**

# HANDOUT 1 BACKGROUND ESSENTIALS

## WHAT'S REALLY HAPPENING?

- light bounces off all objects
  - because the pinhole is so small, it only lets in a fraction of the reflected rays
  - Most rays are blocked by the camera body therefore
  - light rays coming from the top of the emu must enter at such an angle that they hit the bottom of the photographic paper
- and
- vice versa for the bottom rays, which hit the paper at the top
  - the same principle applies for left and right
  - this means we get an image that's upside down and also mirrored

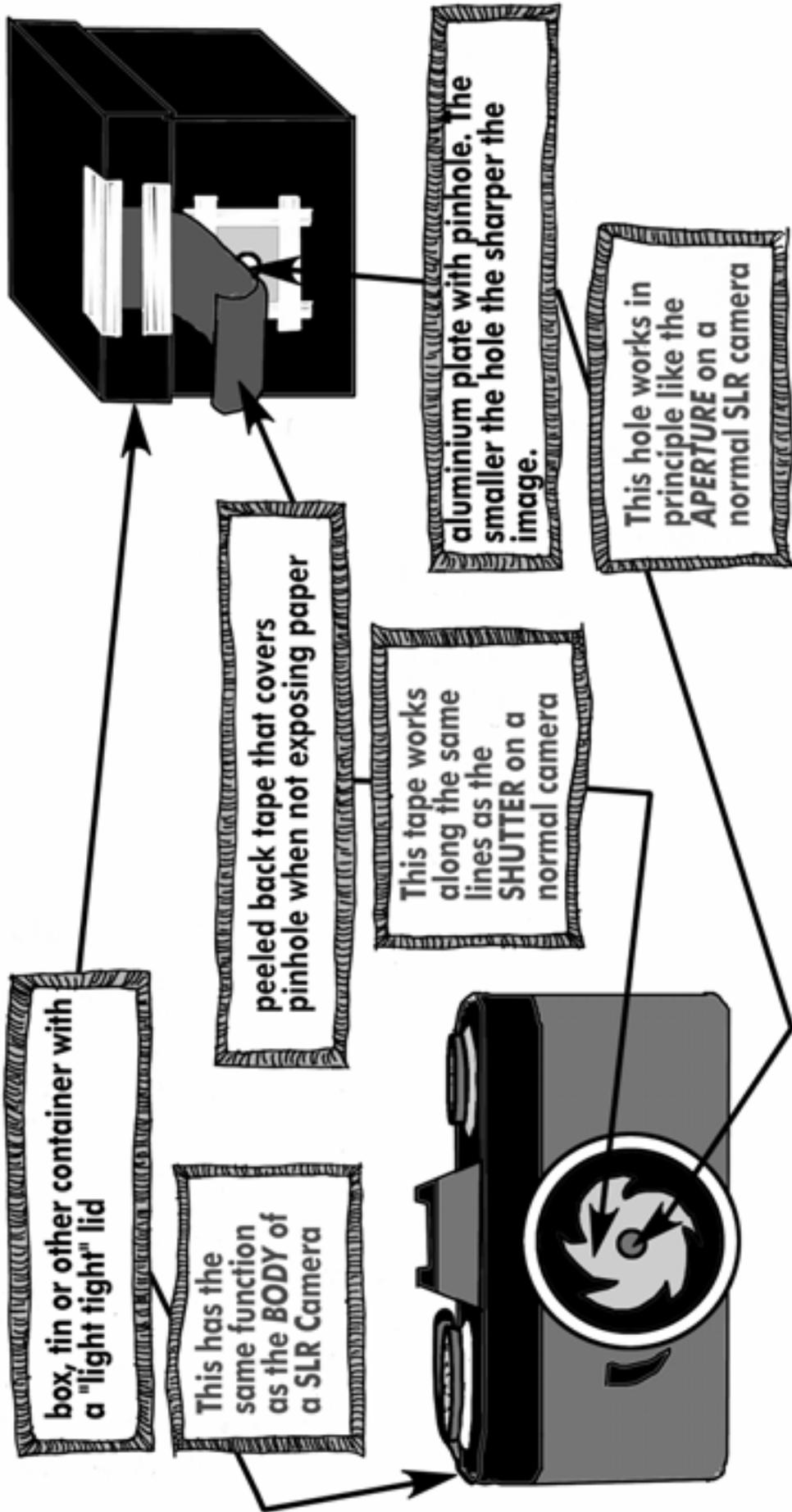


**LIGHT SENSITIVE PAPER**  
remains white with lots of light  
(object originally black)

**LIGHT SENSITIVE PAPER**  
turns black with lots of light  
(object originally white)

**LIGHT OBJECTS**  
absorb little light  
reflect lots of light

**DARK OBJECTS**  
absorb lots of light  
reflect little light



## HANDOUT 2

# PINHOLE PHOTOGRAPHY

1. Choose a partner. (you must have at least one watch with a second hand between you).
2. Take your camera to the dark room and cut a piece of photographic paper to the size of your camera. Place inside and securely close camera. Make sure that it is **light tight** before leaving darkroom.
3. Go to your place of choice

Remember think about two things

- theme: '**the environment and me**'
- composition of photo: **make use of the foreground in your photo.**

### POINTERS

- maybe one of you or part of your body can be in the photo. If so stay **very very** still.
- Another option is to find something lying around to be in the photo. By placing it close to the camera in the foreground you will achieve a dramatic sense of depth in your image.
- Maybe a combination of the two above pointers
- **Have a look at the following websites:**
  - <http://users.rcn.com/stewoody/photo.htm>
  - <http://www.pinholeressource.com/gallery1.html>
  - <http://www.mercadopersa.com/estenopo/galeria de fotos.htm>
  - <http://homepages.tesco.net/~newart/new-artiv.html#index>
  - <http://www3.baylor.edu/~Kenneth Ransom/PINHOLE/pinhole.html>
- Try a strange perspective (eg. from high up looking down). Remember your camera can rest in all sorts of nooks and crannies. Above all be imaginative.

4. Set the camera in a secure position and point the pinhole at your object/s of choice. **Rely on gravity to keep the camera steady and not your hands!** Place on the ground, a steady object, fence, window sill etc.
5. Pull the tape away from the pinhole being extremely careful not to move the camera. As soon as the pinhole is exposed then your exposure time starts. Time this accurately.  
For the first attempt begin with the following guidelines

<b>Cloudy</b>	<b>10 secs</b>
<b>Sunny</b>	<b>5 secs</b>
<b>Indoors</b>	<b>1+ mins</b>

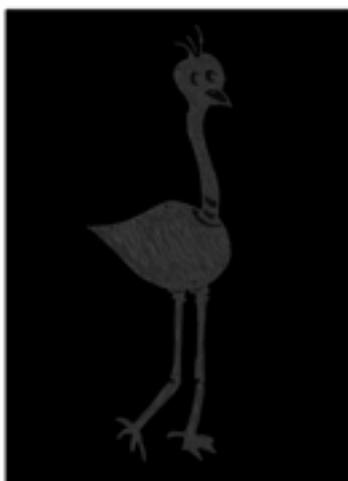
6. Quickly replace the tape over the pinhole as soon as the exposure time is up. Write the exposure time down in a notebook. It is too easy to forget. And you may need to use it as a reference later.
  - **If your camera is in an awkward position it is sometimes easier to place your finger over the pinhole at the beginning and end of the exposure times. Always be careful replacing and removing the tape with your finger and try not to allow any light in during this exchange.**
7. Return to the darkroom and remove photographic paper. Develop, stop, fix, wash and dry.
8. If there is enough contrast in the negative, i.e. black is a true black and the white is clean and not gray, then it is satisfactory to make a positive print. (proceed with **MAKING A POSITIVE PRINT**. (See handout 3).

***If unsure then show it to your teacher.***

If it isn't satisfactory then repeat steps 2 to 7 adjusting your exposure time accordingly.

<b>RESULT</b>	<b>SOLUTION</b>
<b>Too light</b>	<b>Longer exposure time needed</b>
<b>Too dark</b>	<b>Shorter exposure time needed</b>
<b>Strange light, white spots</b>	<b>Pinhole camera body not light tight</b>
<b>Blurred image</b>	<b>Camera not held steady enough</b>

## PINHOLE NEGATIVES



No white and too dark overall

use a *'shorter'* exposure time



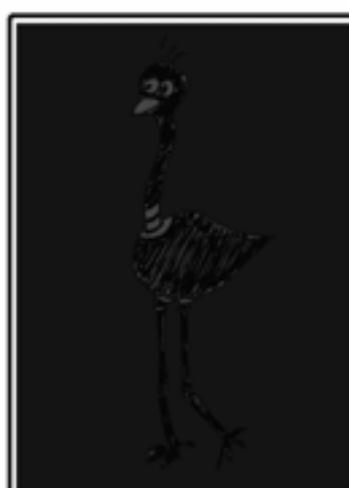
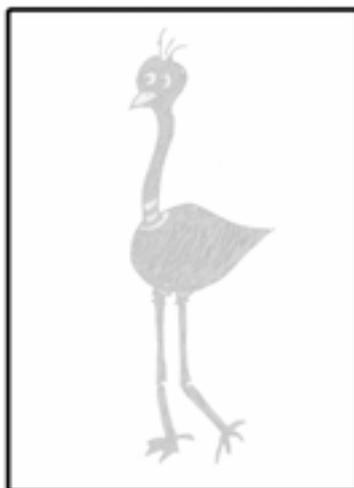
both black and white to be seen and enough details to print a positive photo



No black and too light overall

use a *'longer'* exposure time

## POSITIVES FROM THE ABOVE NEGATIVE EXAMPLES

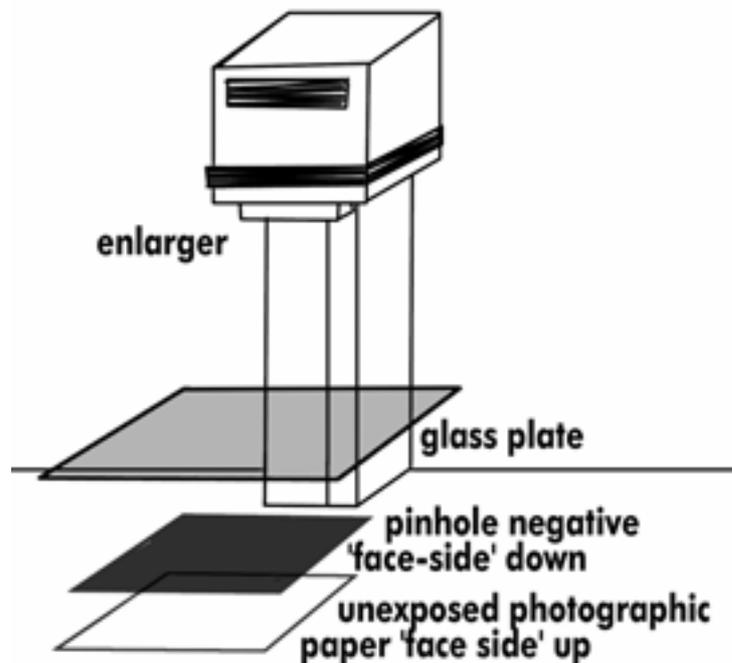


These are the results you would get from printing the above pinhole negatives. The best result is by far the middle photo.

## HANDOUT 3

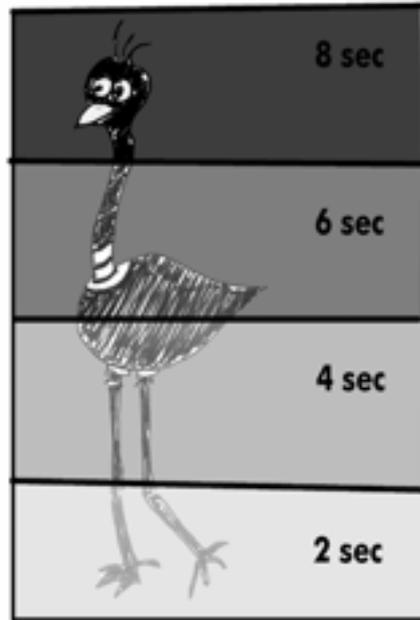
### MAKING A POSITIVE PRINT

1. Take a piece of unexposed photographic paper that is the same size or slightly bigger than your pinhole negative.
2. Place unexposed paper **face side up** under the enlarger.
3. Place pinhole negative **face side down** on top of photo paper.
4. Secure in place by setting a glass plate on top.



5. **Make a test strip as follows**
  - Set the enlarger timer to 2 secs.
  - Cover  $\frac{3}{4}$  of the photo paper with an opaque piece of board. Expose for 2 secs
  - Move the board to now cover  $\frac{1}{2}$  of the paper and make a second (2 secs) exposure.
  - Repeat covering  $\frac{1}{4}$  of the paper.
  - Remove the board completely for the last exposure.
  - You now have a test strip with exposures for 2, 4, 6 and 8 secs.

6. Once developed, stopped, fixed, washed and dried, your result should look like this:



7. If one of the exposures is to your satisfaction then proceed with steps 1 to 4 and expose the whole piece of paper with the exposure time of choice. If one exposure on your test strip is slightly too dark but the exposure next to it too light then the chosen the time should be somewhere in between.

***Check with your teacher if unsure of your choice.***

Don't forget to write the differing exposure times on the test strip (in pen). If unsatisfactory, make a new test strip adjusting your exposure times as follows.

**REMEMBER: THIS IS THE OPPOSITE OF MAKING A NEGATIVE**

RESULT	SOLUTION
Too dark	Shorter exposure time
Too light	Longer exposure time

8. Once you are satisfied remember to make a second copy so you both have something to show from your days work.

***If there is time, you can create another negative by using exactly the same procedure and exposure time with your positive photo.***

#### 4. HISTORICAL OVERVIEW (Teachers Notes/ Reference)

- Camera obscura was already discovered (Aristoteles, Leonardo)
- In 18th Century Heinrich Schuze discovered chemical process
- However, took until 1826 for Niepce to fix the first light image. (Took 8 hours for exposure time)
- **QUESTION: Why did it take so long before someone combined the principles of the camera obscura with the chemical process?**
- **ANSWER: In the 18th Century there was little desire for such a form of realism. That however began to change around the turn of the 1800's. There was a definite movement in the painting world for the use of an "open scene" (Goya, Gericault, Delacroix, Corot).**
- Daguerre (France) and Fox Talbot (England) worked simultaneously, but with different methods, towards improving the photograph in the mid 19th century.



**Daguerre** Photoplate 1838  
Boulevard du Temple Paris



**Fox Talbot** Open Door 1843  
Paper print from negative

- The work from painters, in the latter half of the 1800's, showed a trend towards an authentic and naturalistic view of life often from a distant observation point. They preferred the topic of the "here and now" and no one so beautifully captured the moment than Degas.

**QUESTION: Study the three works from Degas and those from 3 photographers of the same era. What are the comparisons and contrasts? It is sometimes said that Degas borrowed his compositions and observation from the photograph. Do you think this is true?**



Ballet rehearsal 1874



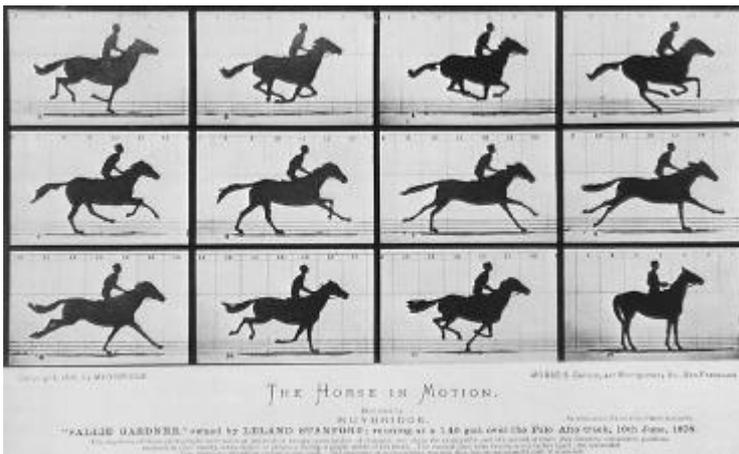
Ironing women 1884



Women outside cafe 1877



The Echo 1868



Gallopimg Horses 1878

Muybridge



Photographers Wife  
1853 Nadar

**ANSWERS:**

- All images of reality, 'what is actually happening at that moment', especially Muybridge, (almost scientific).
  - Portrait Photography a little composed, fabricated in comparison with others.
  - Photography is simple composition and focus is on a single element (generally taking central position) whereas
  - Degas work is much more complex and tells a whole story from a captured moment from out of the keyhole perspective.
  - You can therefore not agree that Degas was influenced by photography. In fact it is the daring development, with new compositions and observations, of the painting in the late 19th Century that spurred on the advancement of the photograph.
- Further technical developments allowed new possibilities and more freedom
    - choice of subject
    - lighting conditions
    - sharpness of photo

1826:	8 hour exposure time
1840:	5 minutes
1880:	fraction of a second

- This discovery of a "new realism" was, in the beginning, extremely impressive. However, after a period the following questions were raised:

- Did the photograph simply serve as a way of reproducing reality?

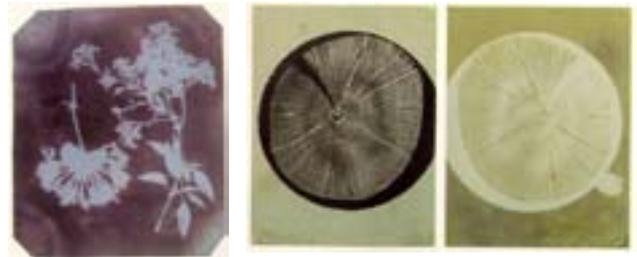
OR

- Was the photograph a medium whereby the "here and now" could be used as another art form?
- Naturally the artistic side of photography developed and with its status firmly embedded, the early 1900's saw a growing distinction between reportage and more experimental photography.



**May Ray:** Photograms  
He called them Rayographs and claimed that he had discovered them first. We know that isn't true as Fox Talbot was already doing this a bit less than a century before but certainly not as experimental as Man Ray. Man Ray even entered into the world of advertising.

The images on the right are the photograms made by Fox Talbot. This process was used in the scientific world to record images of plant life. Coupled with drawing this gave an incredible degree of accuracy as to what the sample looked like.



**RODTSJENKO:** He was renowned for choosing an unusual viewpoint or perspective. He also had a great flair for capturing unusual light situations, especially shadows.



**HEARTFIELD:** His photomontages were a common feature in the anti-fascist magazine, AIZ during the second World War. His work is best known for its single-minded devotion to anti-Nazi political activism. His early montages were collaborative efforts and resembled that of the Dada movement.

- **The photograph continued to find its own place as an art form:**
  - The reportage photo not only relays the truth of the moment but confronts the viewer with social/ moral/ political or timeless issues. (see Dorothea Lange)
  - A consciousness of the concept of "**the decisive moment**" (see Henri-Cartier Bresson).
- **In the last decades of the 20th Century we see the photograph taking on a whole new identity:**
  - There was the ability to manipulate or fabricate an image.
  - Artists who used existing images or image conventions were trying to make the public aware of the fact that images are a representation of, and play a great part, in our society and ideology. (See Richard Prince and Cindy Sherman)



**Dorothea Lange**  
Migrant Mother 1936



**Henri-Cartier Bresson**  
(Alicante), Spain 1932



**Cindy Sherman**  
Untitled film still 1980



**Richard Prince:** Made famous for his Marlboro Man photographs. He simply used the original images and removed any logos or advertising. The pop icon cowboys, riding into the sunset with deadpan determination, became somewhat ridiculous symbols of American heroic mythologies.

## 5. WEBSITE LINKS

- <http://users.rcn.com/stewoody/photo.htm>  
Good source for overall viewing of different compositions and subjects, from landscape and architecture to portraits.
- <http://www.pinholeresource.com/gallery1.html>  
Extremely diverse range from numerous modern pinhole artists.
- [http://www.mercadopersa.com/estenopo/galeria\\_de\\_fotos.htm](http://www.mercadopersa.com/estenopo/galeria_de_fotos.htm)  
Not in English but the pictures are good.
- <http://homepages.tesco.net/~newart/new-artiv.html#index>  
Fun photos with extremely good use of foreground. See:
  - *Composition with Duck and Foot (Underwater)*
  - *The Brooklyn Bridge*
  - *The Royal Crescent, Bath*
- <http://www.masters-of-photography.com>  
great site with essential famous photographers and their photos. Also good resources page and additional articles
- [http://www3.baylor.edu/~Kenneth\\_Ransom/PINHOLE/pinhole.html](http://www3.baylor.edu/~Kenneth_Ransom/PINHOLE/pinhole.html)  
All about boats for those who are interested. Good photo compositions.