

GRAMBO

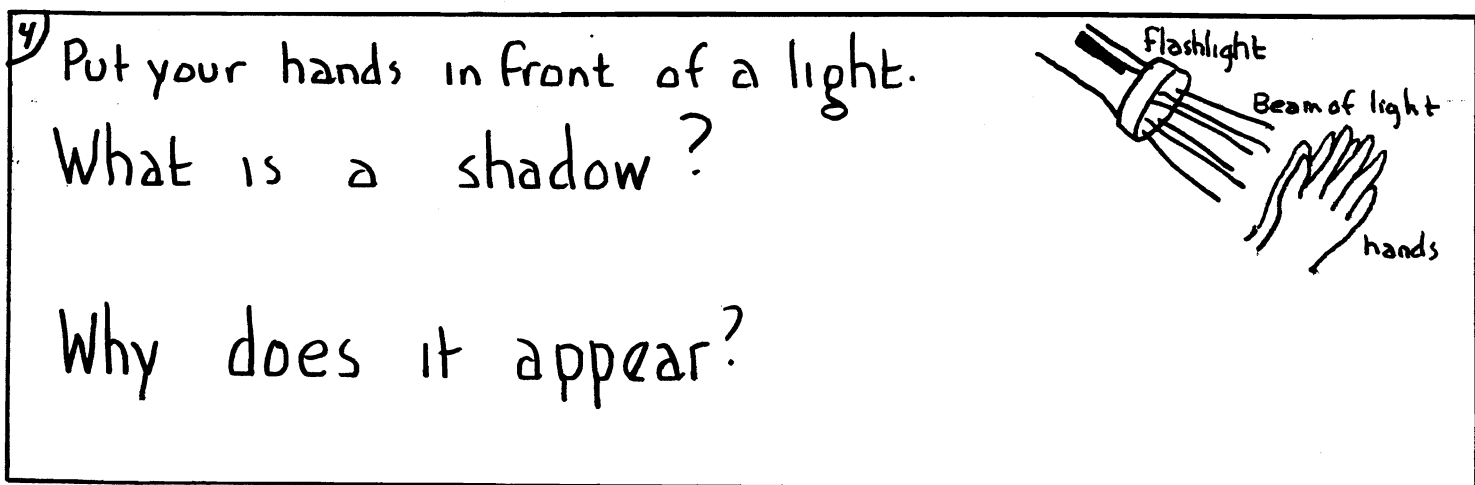
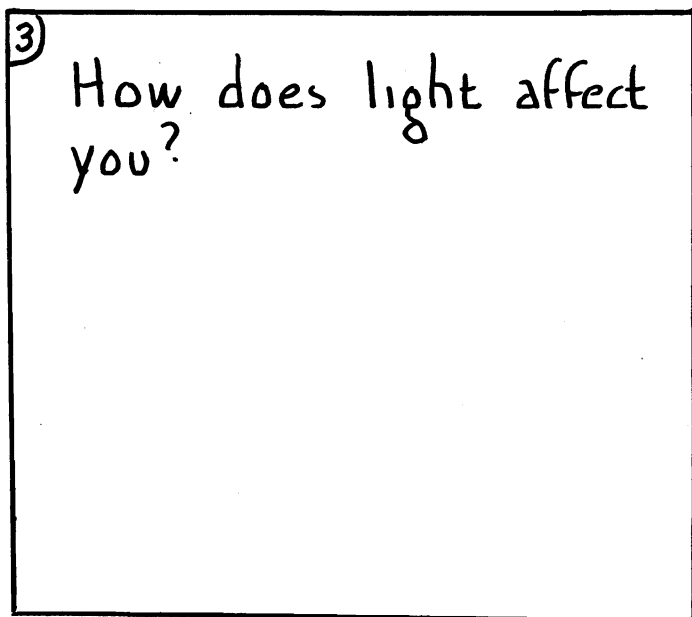
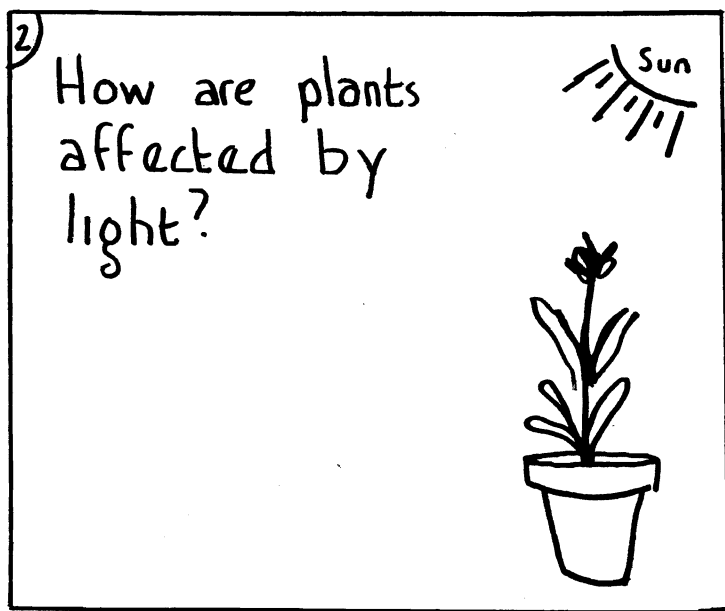
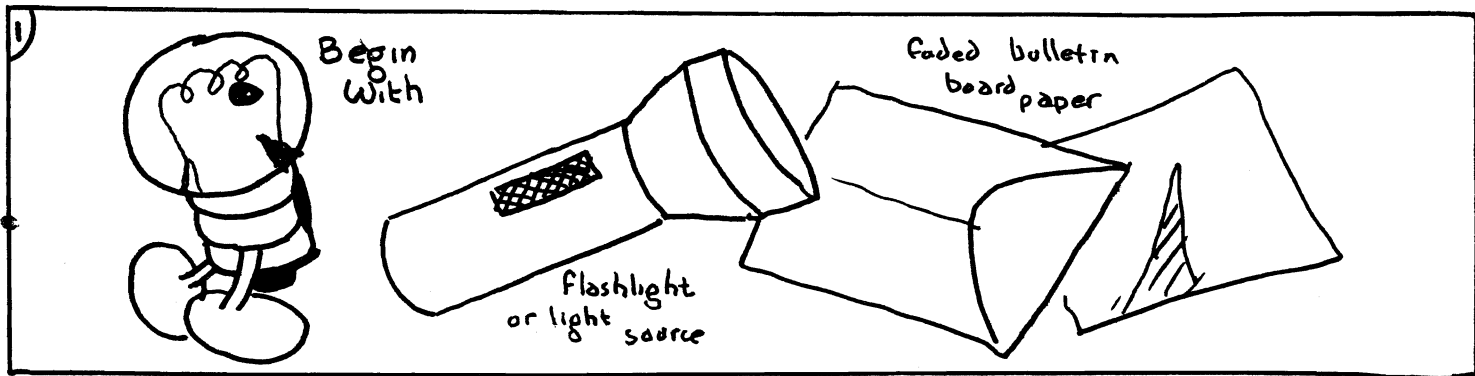
photogrammetry

the use of light

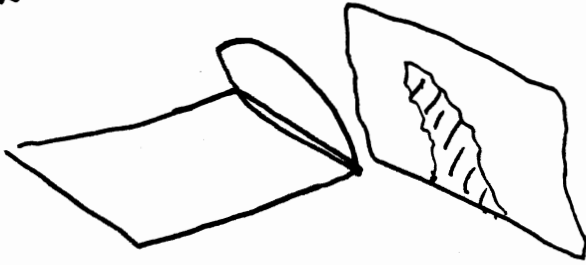
How does light affect things?

Experiment 1

parents signature _____



5) Look at the used bulletin board paper in your box

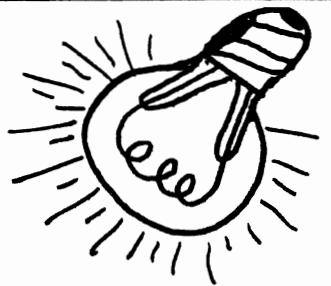


6) Describe how it looks.

7) Why is it faded or discolored?

8) How did it get that way?

9) Try To Find Out
Why does light make things (with color) fade?



Homework -

Define -

Fade -

Shadow -

light -

Photography - The Use of Light

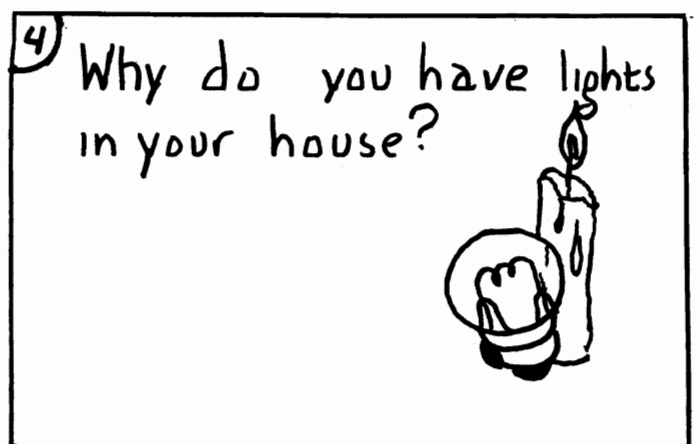
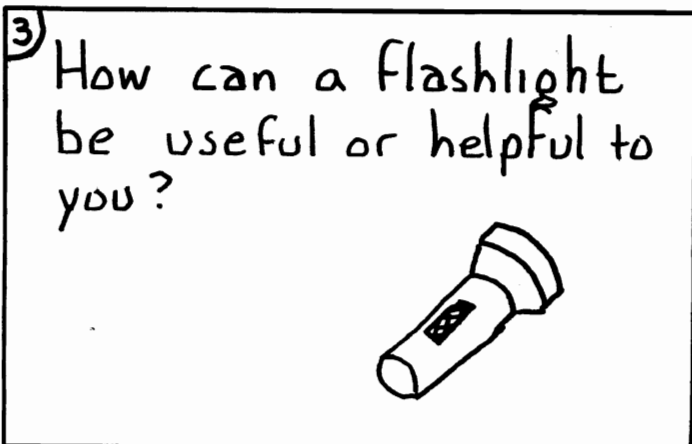
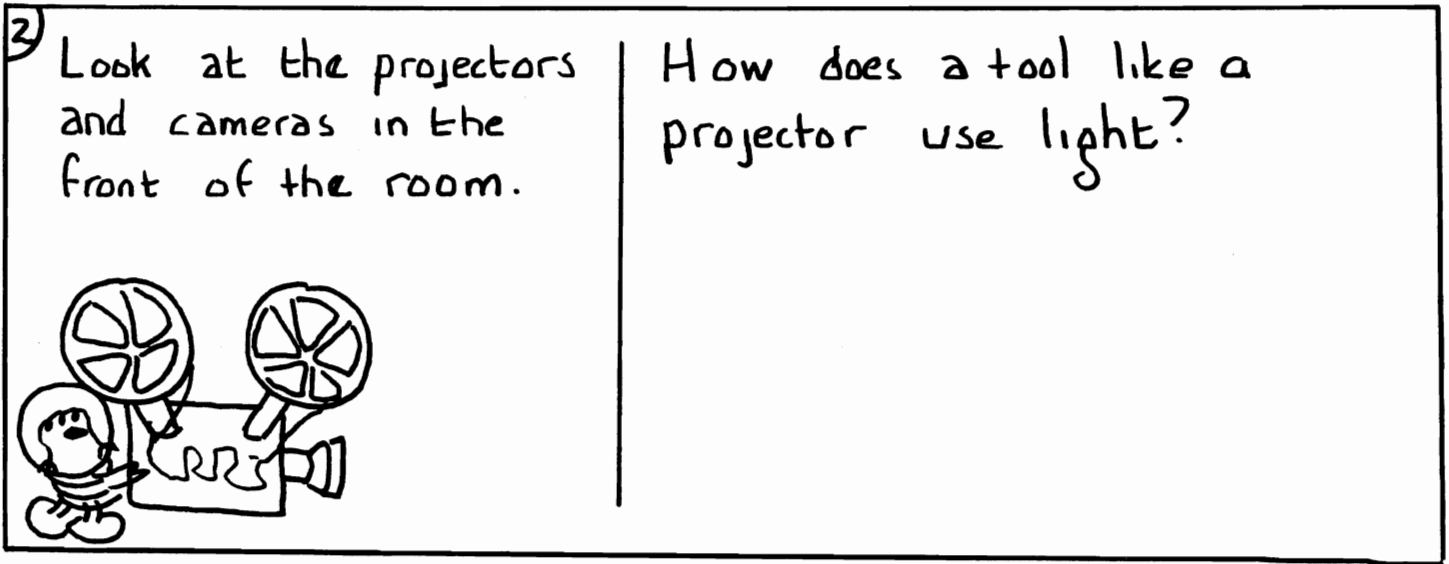
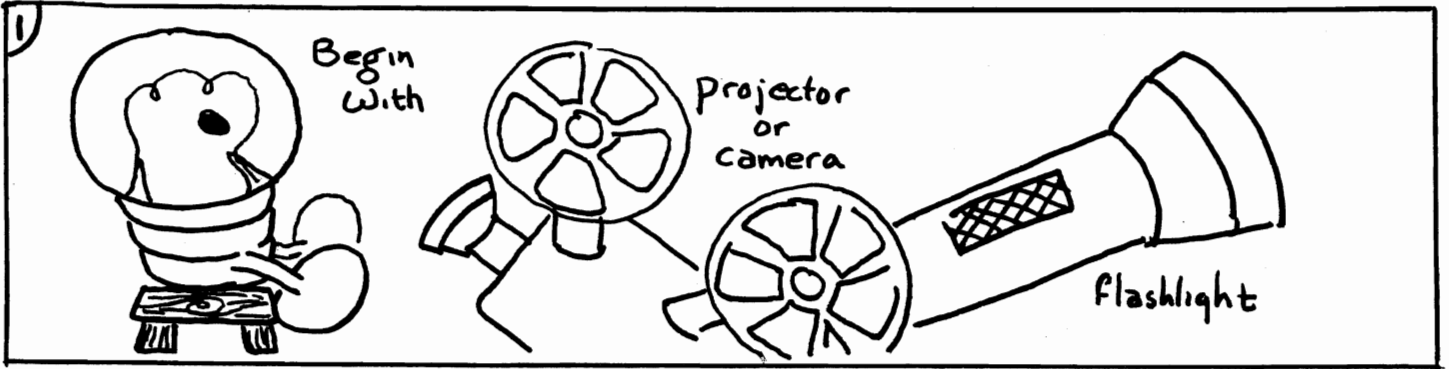
Name

Class Group No

How can you use light?

Experiment 2

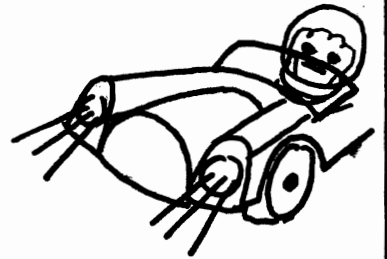
parent's signature _____



5) Why do you need light?

How do you use light?

6) Why are there lights on your car?



7) Make a list of 10 things that need light in order to work.

1-

2-

3-

4-

5-

6-

7-

8-

9-

10-

Homework-

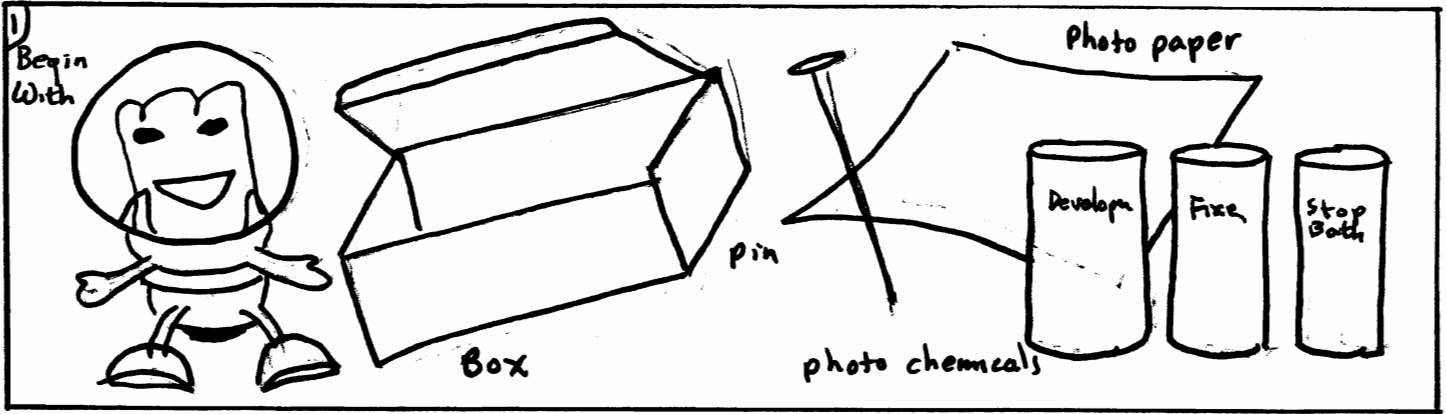
1- How can light be useful or helpful?

2- How can light be harmful?

How can you make a pin-hole camera?

Experiment 4

parent's signature _____



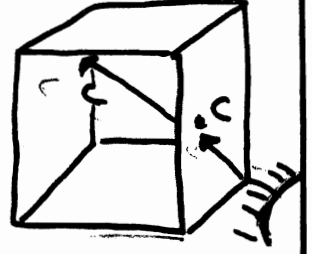
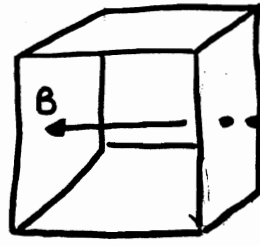
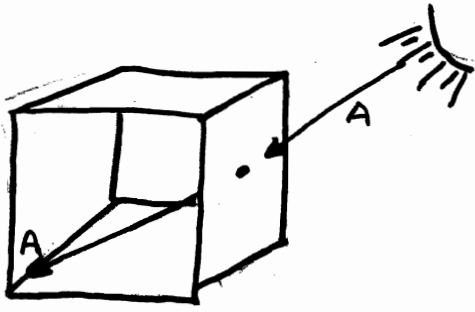
2) How did the light affect the shadow paper?

3) You are going to use a paper that is even more sensitive to light. It is called photographic paper.

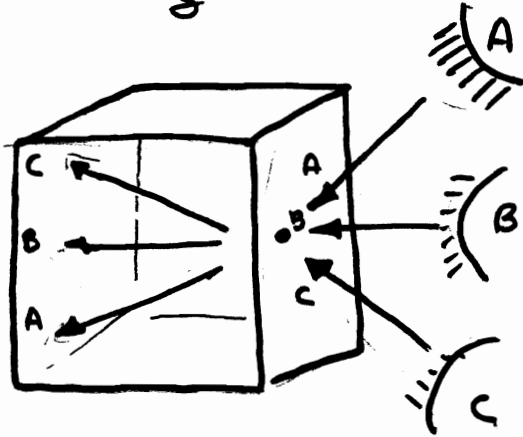
4) To keep the paper from turning black you must work in the dark. You are going to make a pin-hole camera.

- 1- Take a small box (like a half gallon milk container) and put a pin-hole in one side
2. When light goes through the hole, it will travel through the box and will hit the spot marked A.

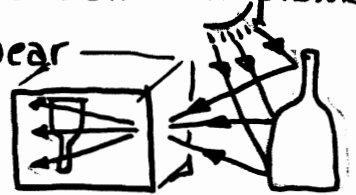
5)



light travels in a straight path as pictured above. When light comes in from many directions as



indicated here, your picture, or light, is focused on the other side of the inside of the box. The picture will also appear upside down.



6) A regular camera works the same way. The hole you made in the box would be your lens. The film in your camera would be placed where the light focuses inside your box.

Homework-

1- What is a pin-hole camera?

7) Why does the picture in your pin-hole camera appear upside down?

2- Find out how a camera works. Draw a poster of a camera. Label the parts and explain how it works.

Photography - The Use of Light

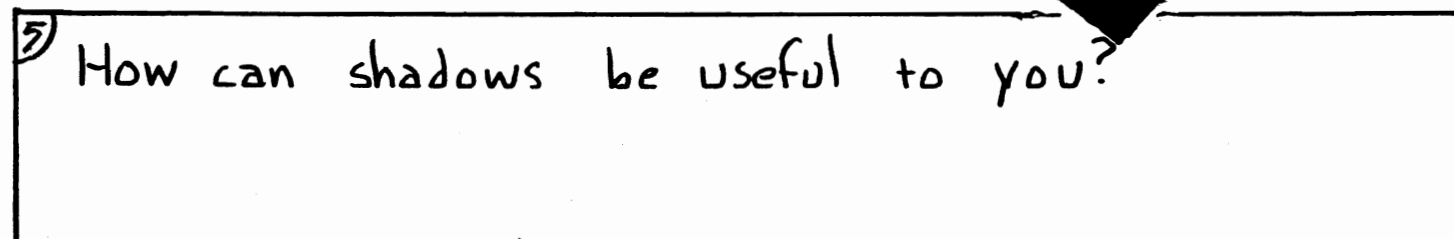
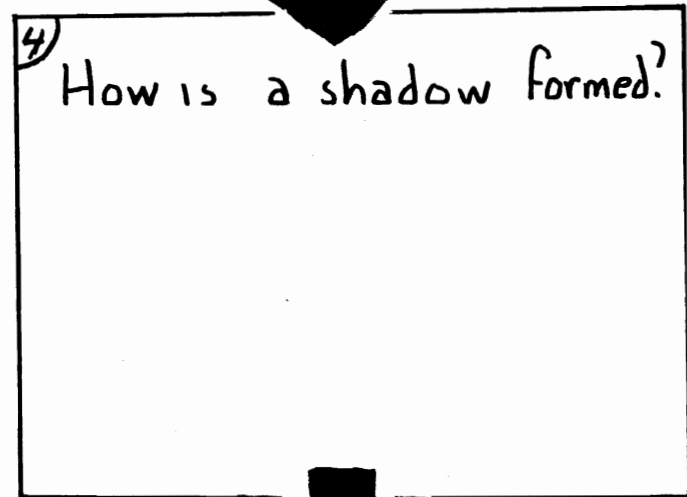
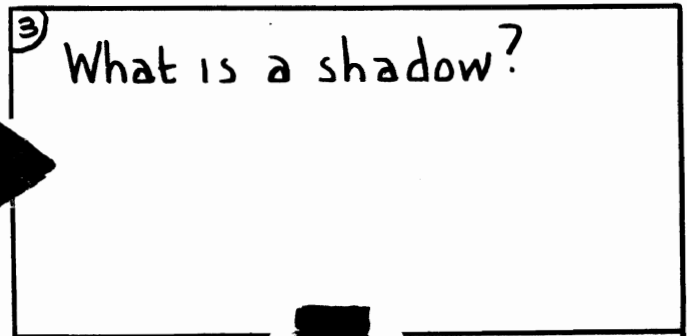
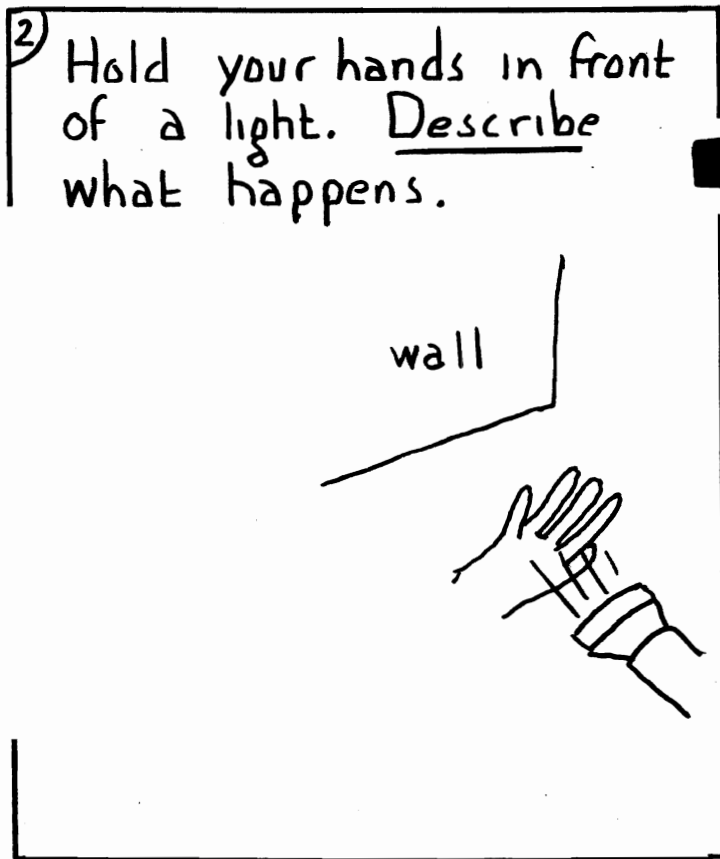
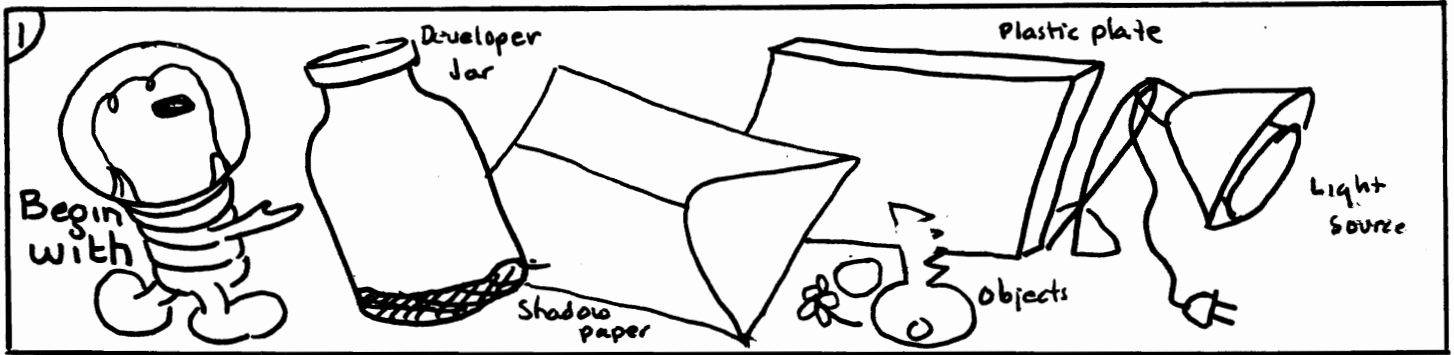
Name

Class Group No

How can you use light to make pictures?

Experiment 3

parent's signature _____



6) Look at the blue picture of the leaf. How do you think it was made?

8) Why must you keep unexposed shadow paper out of the light?

9) Describe what happens to the paper.

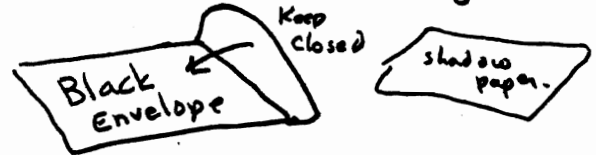
10) Define:
exposed-
unexposed-

Homework-

1- How can light be used to make a picture?

7) You will be making pictures like these.

Step 1: Get a piece of shadow paper from the teacher. Keep it out of the light



Step 2: Place it yellow side up. Put objects on the yellow side.



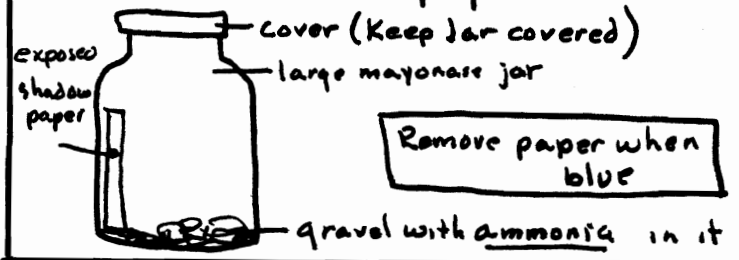
Step 3- Place clear plastic over it.



Step 4: Turn a light on it until the paper turns white.



Step 5: Place it in the developer until the paper turns blue.



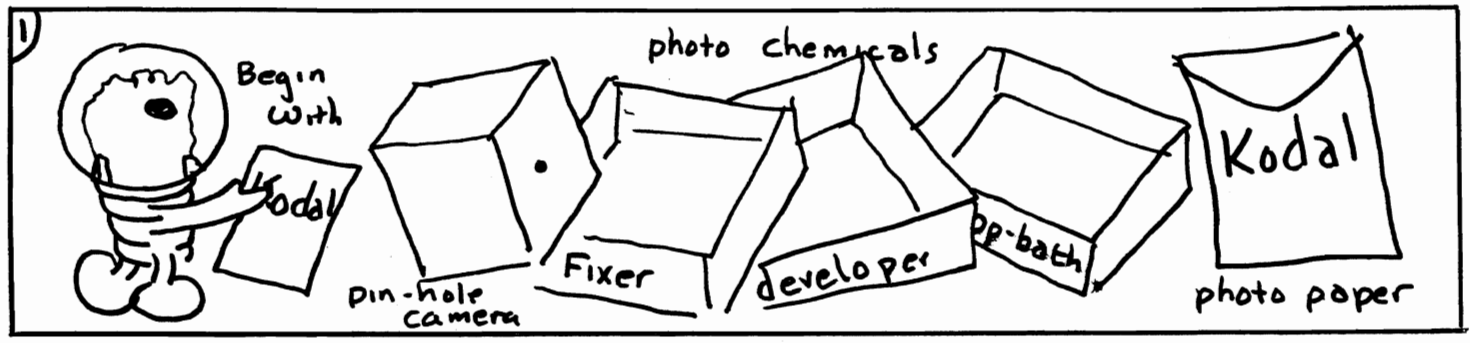
Photography - The Use of Light

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Class Group No

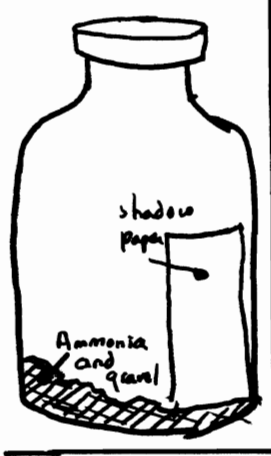
How can you make a picture or print?

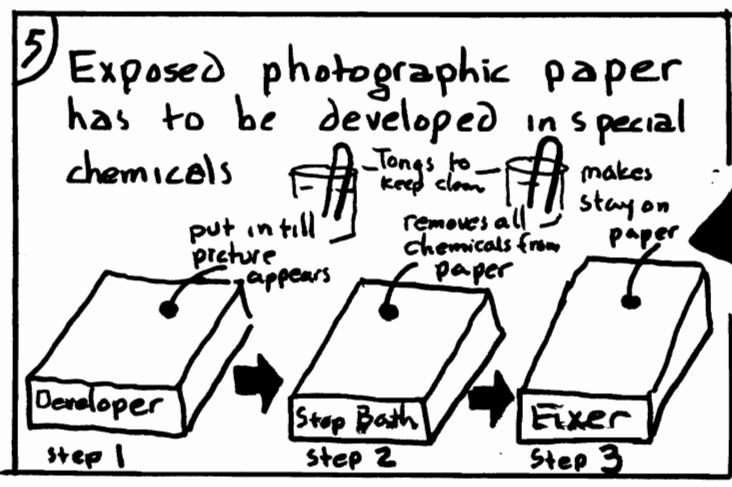
Experiment 5


parents signature _____



2) If you were to put shadow paper in your camera, a picture would appear on the paper. Since the hole is so small, and so little, not a lot of light can get in. Therefore, you have to keep the paper in the camera for a long time.

3) The exposed paper then has to be developed in order to see the picture 



4) There are other papers, such as photographic enlargement paper, which will also work well in pin hole cameras. 

Grambo

6)

This paper is so sensitive to light that you must only take it out of the package in the dark or under a red light.



7)

How can you develop photo paper? (or make a print)

8)

What is the job of :

Developer -

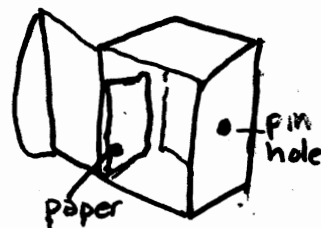
fixer -

stop bath

9)

Place a piece of photo paper in your pin-hole camera and put the camera on a shelf for 2 days.

Then develop the paper



Homework -

1- What is a print?

2- How can you develop a print?

Photography - The Use of Light

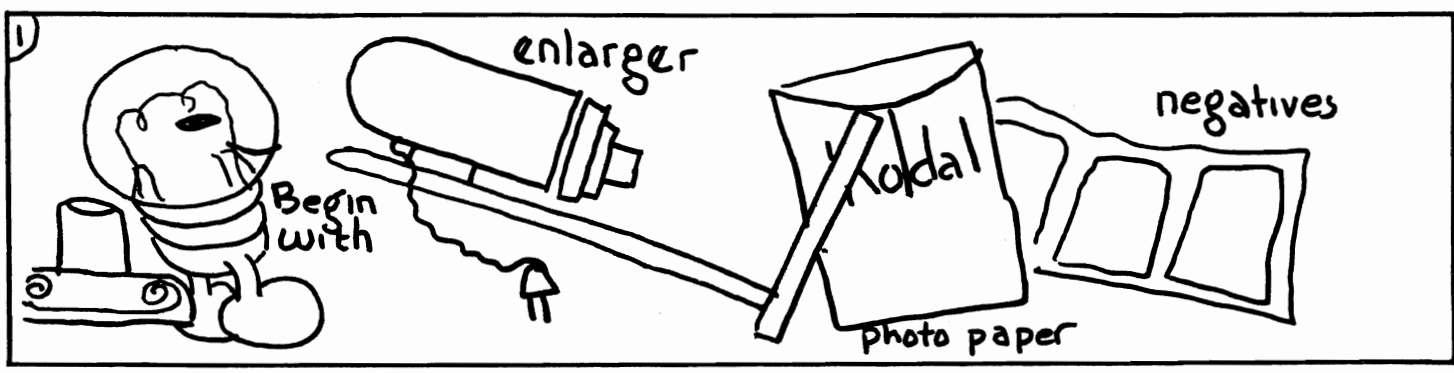
Name

Class Group No

What does an enlarger do?

Experiment 6

parent's signature _____



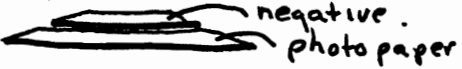
2) Instead of paper being in a camera photographers use a roll of plastic film with special chemicals on it. Where light hits the chemical it will turn the plastic black leaving the untouched areas white or clear

there is a chemical called silver on the film.

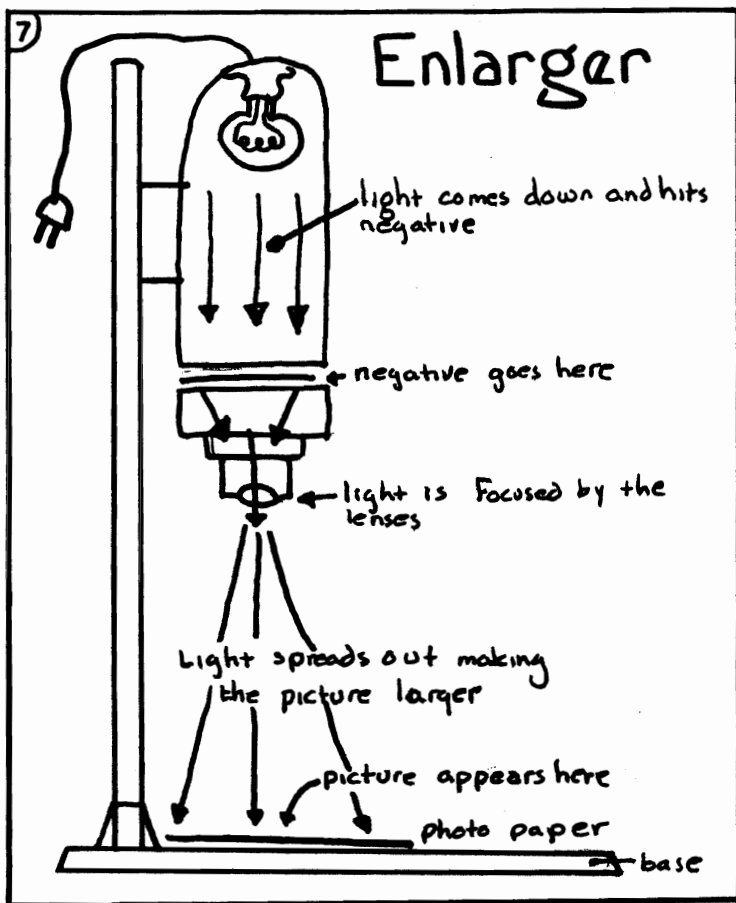
3) The film is called a negative. look at the negatives in your box. Describe how they look.

4) Why do the colors look backwards?

5) These plastic pictures or negatives can be put over photo paper and a print can be made just like when you used the shadow paper.

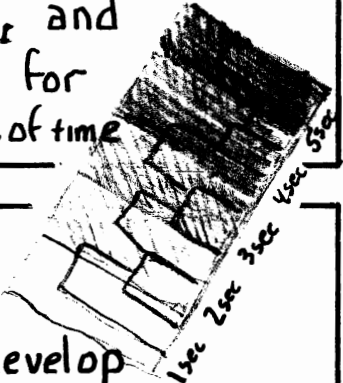


6) You can also make a larger print or picture with a special projector called an enlarger.



8) You must test to see how long you have to leave the enlarger on. You use test strips, photo paper cut into strips, and expose them for different amts. of time

9) You then have to develop the test strips



10) How can you enlarge a picture?

Homework -

Define -

expose -

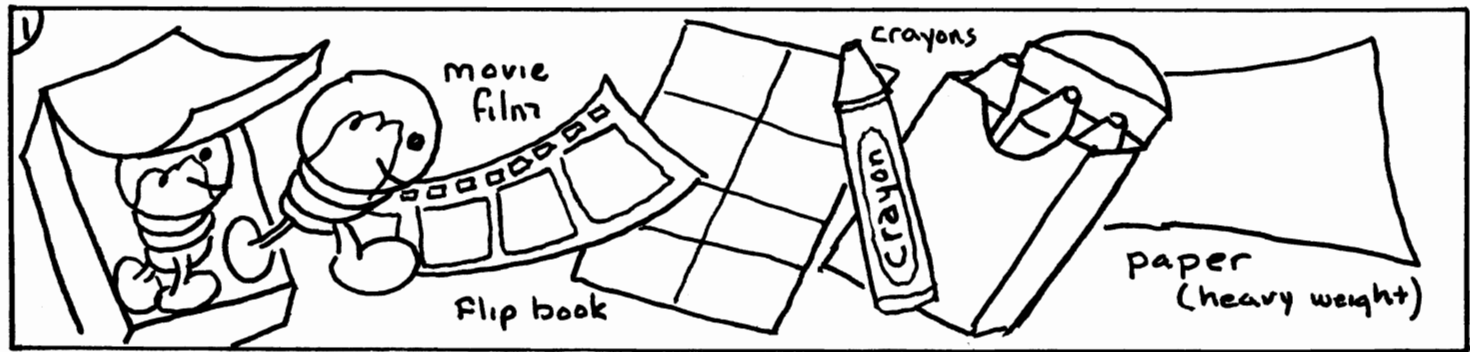
negative -

positive -

How can you make a moving picture from single prints?

Experiment 7

parent's signature.




2) Look at a piece of movie film. Describe how it looks.

A hand-drawn illustration of a movie film reel and a strip of film with a character.

3) The single pictures are called frames.

4) How can the single frames become a moving picture or movie?

5) Thousands of pictures are taken of the same thing while it is moving. The pictures look slightly different from each other. When the single pictures are shown very fast the eye can't focus on one picture. Instead the eye blurs them together. You see a movie

6) Assemble the **flip book** as the instructions tell you 

7) Examine the pictures. How are they different?

8) How are the pictures similar?

9) Flip the book very fast.



10) Why do the images or pictures appear to move?

11) How can you make your own flip book?

You will now make your flip book

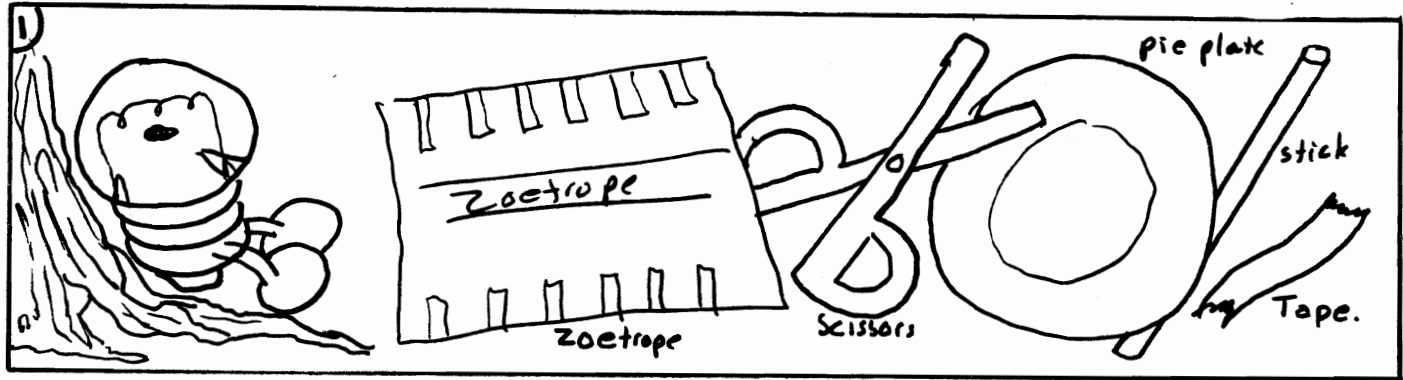
Homework -

1- How can you make a moving picture?

What is a
zoetrope?

Experiment 8

parent's signature _____



2) How can you make a moving picture from single prints?

Three small square pictures of a person in different poses, numbered 1, 2, and 3, arranged in a sequence to illustrate the concept of a moving picture.

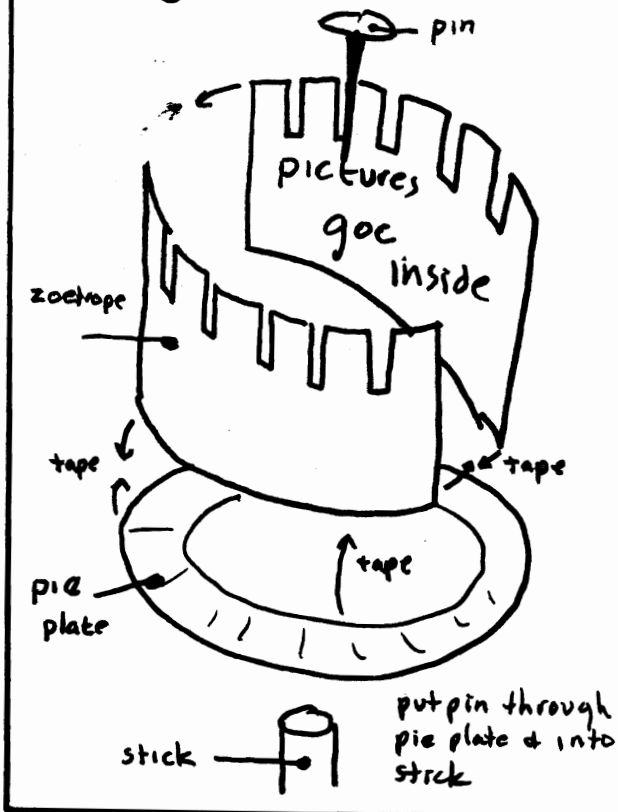
3) Describe how a flip-book works.

4) Think of another way of doing something with single prints in order to make a moving picture
Describe what to do

5) Get a Zoetrope sheet from your teacher

6) Zoetropes were first used in 1860.

7) Arrange as follows



8) Slots are arranged at the top of the zoetrope which is a rotating (spinning) cylinder. The pictures are arranged around the inside of the cylinder, near the bottom.

9) Spin your zoetrope
Describe what you see

10) Why do the pictures appear to be in motion?

Homework-

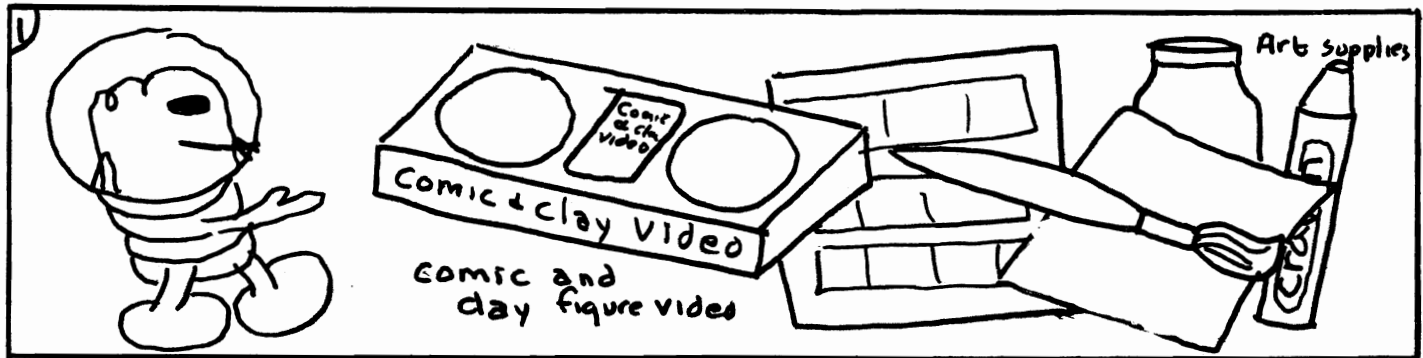
1- How does a zoetrope work?

2- Make your own zoetrope with your own drawings

Let's make a movie.

Experiment 9

parents signature. _____



2) How can you make single frame pictures appear to move?

3) How does a flip book work?

4) Explain a Zoetrope

5) There are many ways that animated cartoons and movies are made. All, however, are eventually put on film, where single frames are shown at great speeds to confuse the eye. In this manner, your eye sees one moving picture.

5) After watching the video of a cartoon:

How is a cartoon show different from comic strip?

6) Thousands of cartoons are drawn and photographed. The single pictures are then put on film.



7) After watching the Gumby show:

How do you think artists make Gumby move?

8) Gumby, Mr Bill, Davy and Gollisath are all clay animations. Clay figures are moved and photographed. The single pictures are then put on film.

Gumby is an animation that uses clay as well as puppets.



It is now your turn to make a cartoon or animated movie. If you need any art supplies please see your teacher.

Homework-

- 1- How is an animated cartoon made?
- 2- What is clay animation?

Photography - The Use of Light

Name

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Score.

Quiz on Experiments 6-10

1- How does an enlarger work?

2- What are test strips?

3- How does a flip book work?

4- Define

Animations -

Frame -

5- How are 3-D images made?

Photography - The Use of Light

Name

Class

Group No

Score

Quiz on Experiments 1-5

1- How are plants affected by light?

2- Define

Fade-

Developer-

Shadow-

Stop Bath-

3- Why do you need light?

4- How do you use and develop shadow paper?

5- How do you develop photo paper?