

# Studio Photography

## Introduction

Photography is a field of graphic communications that offers an extremely wide range of career opportunities, as well as providing a rewarding leisure activity for you. Photographers work in a variety of environments that include commercial, advertising, industrial, medical, technical, and most all other fields of human endeavor. Many photographers specialize in a particular type of photography. There are landscape or scenic photographers, underwater, aerospace and sports photographers, and countless other professionals who use the medium of photography to explore, investigate, and illustrate the world they live and work in.

This activity package deals with **studio photography**. Studio photography is a specialized field in which photographers work under very controlled conditions, usually in indoor environments. Most of the experiences you have had with photography so far have probably been with the more informal "snapshot" type of photography, where you have taken pictures of your friends, family, and vacation trips. However, if you have had your portrait taken at school, you have experienced the world of the studio photographer.

In your study of photography, you have had an opportunity to use your camera outdoors, and have developed and produced your own photographs. Now you are ready to experience the controlled environment of the studio. Instead of using **natural light** for your light source, you will be using **artificial light**. Unlike natural light, you have a great deal of control over this form of lighting.

In this activity, you will learn some of the basics of **portraiture photography**, including how to control

your lighting. In a studio, the lights are arranged to provide illumination on the subject and the background. The lights near the camera are referred to as **main lights**, a light placed behind a subject that illuminates the backdrop is referred to as a **bounce light**, and a small light, used during the posing of the subject, is called a "**modeling**" light.

A photography studio will often have sophisticated equipment such as **umbrellas** that diffuse or spread out the light, **strobe lights** that flash when making an exposure, and **reflectors** to direct or control the light. However, the effects of these expensive and technical lighting systems can be duplicated with simple incandescent lamps and reflectors. Also, if strobes are not available, your exposure time will be need to be longer.

## Job Description

You are going to experience the environment of the studio. You will expose a roll of film under controlled conditions, and then be able to evaluate the effect of light on your subject. Like a studio photographer, you are going to work with a model as your subject. The object of the activity is to produce a set of photographs that will allow you to evaluate the effect of artificial light placement on your subject, and enhance your ability to "pose" your subject in a "flattering" composition.

After you have completed your exposures, you will produce a **contact sheet** from your negatives, and then one **enlargement** for each of the twelve exposures. After you have evaluated your results, you will make one enlargement on **portraiture paper** and use one of several darkroom techniques to improve the quality of your print.

## Materials and Supplies

roll of black & white film, ASA 400

35mm camera, with an adjustable focus, shutter speed and aperture

tripod

cable release

three studio lights

modeling light

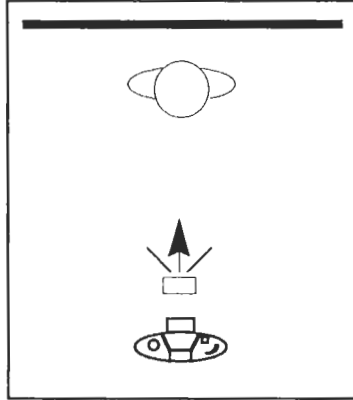
backdrop

light meter (preferably hand held)

darkroom supplies for processing roll film, contact sheets, and enlargements

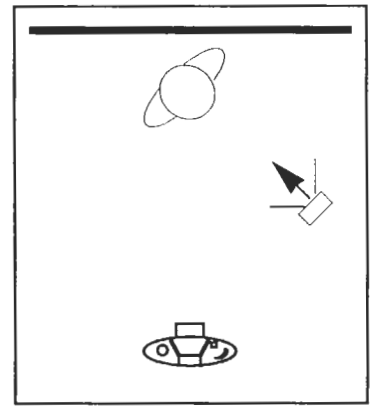
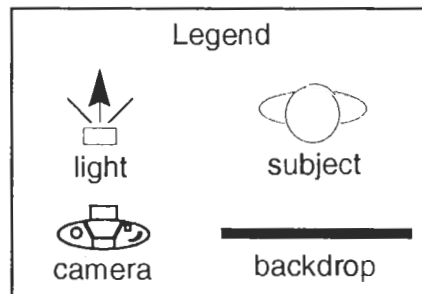
## Procedure

1. You will need a suitable place, such as the corner of your lab, in which to work. You will need to clear a floor space about 12 feet x 12 feet. You should be able to control the light in this environment, so do not select a space with windows. A backdrop at least 8 feet high will also be required. The **backdrop** can be most any color; however, gray or blue will work best.
2. You will also need three studio lights, a small "modeling" light, a tripod, and your camera. A "subject" for your portraiture assignment will also be required.
3. Study the diagrams included in this package. Notice that each diagram shows the subject, the camera, the backdrop, and the light(s) for each exposure.
4. Load your camera with a fresh roll of 400 speed film. Set the exposure index on your camera for ASA 400.
5. Place your camera on the tripod and attach a cable release to your shutter release.
6. Place the camera about six feet from your subject, with the subject about three feet away from the backdrop. You might want to allow your subject to sit on a stool during this activity.



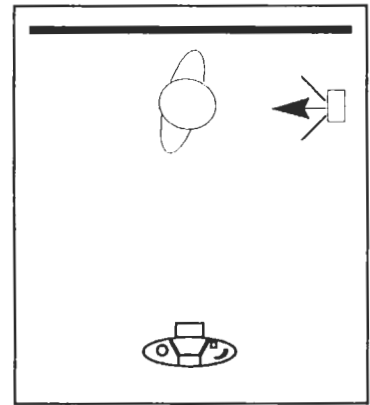
**Diagram 1**

7. Refer to Diagram 1. Notice that in this frame the subject is placed directly in front of the camera, with a single light placed just above the camera. The subject's shoulders are placed square with the camera. Set up your subject, light, and camera in this configuration.
8. Turn on the light. Use your **exposure meter** to determine your exposure values (shutter speed & **aperture**).
9. View your subject through the viewfinder; frame your composition; and then focus the camera on the subject.
10. Direct your subject. Have the subject look into the camera, and select the appropriate time to release your shutter.



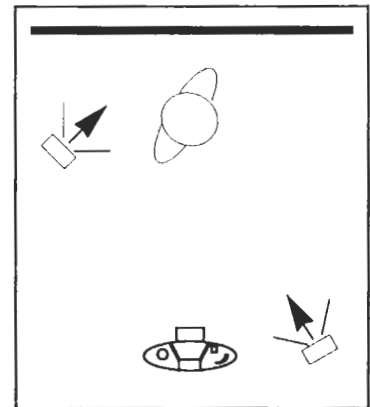
**Diagram 2**

- Place subject with right shoulder at a 45 degree angle to camera.
- Use single light 45 degrees from camera, facing the subject.



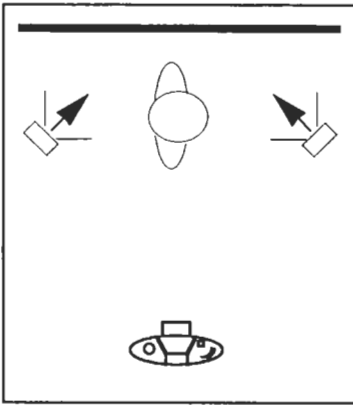
**Diagram 3**

- Place subject with right shoulder at an 80 degree angle to camera.
- Use single light 90 degrees from camera, about 3 feet from subject.



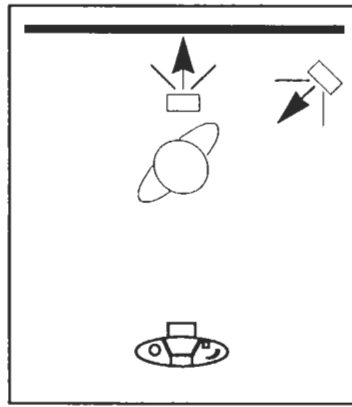
**Diagram 4**

- Place subject with right shoulder at a 60 degree angle to camera.
- Use two lights: place first light just to the right of the camera; the second light behind the subject facing the backdrop.



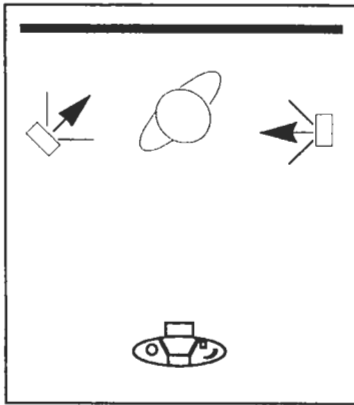
**Diagram 5**

- Place subject at a 90 degree angle to camera.
- Use two lights, both equally spaced on opposite sides of the subject, facing the backdrop.



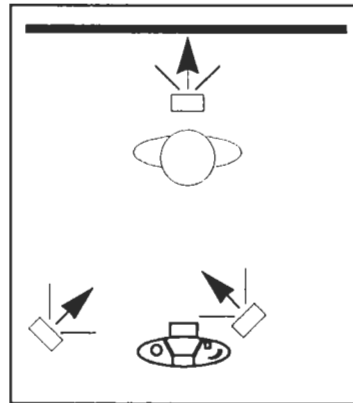
**Diagram 8**

- Place subject with right shoulder at a 45 degree angle to camera.
- Use two lights: right light is 45 degrees from camera, with light illuminating subject from off the left shoulder; second light is behind subject illuminating backdrop.



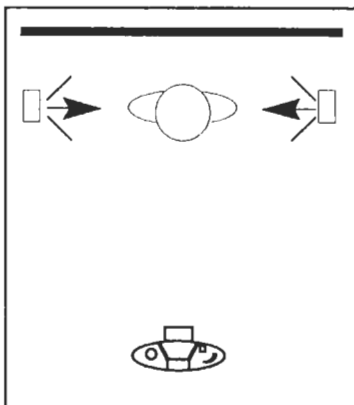
**Diagram 6**

- Place subject at a 45 degree angle to camera.
- Use two lights: right light faces on to subject; left light is behind subject facing the backdrop.



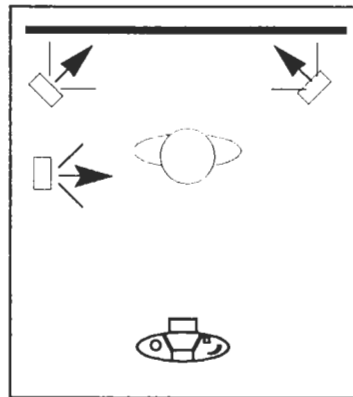
**Diagram 9**

- Subject faces camera, with shoulders square with camera.
- Use three lights: first light is placed to right and above camera; second light, to left of camera, is at a 45 degree angle to camera; third light is behind subject illuminating backdrop.



**Diagram 7**

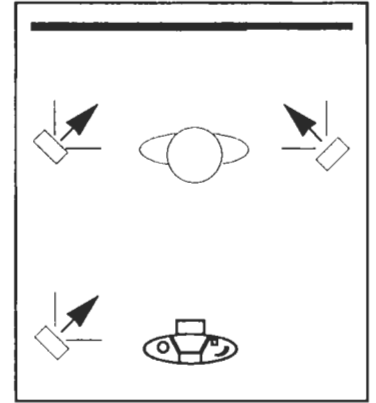
- Place subject face onto camera; shoulders square with camera.
- Use two lights equally distant from subject at 90 degree angles to the camera.



**Diagram 10**

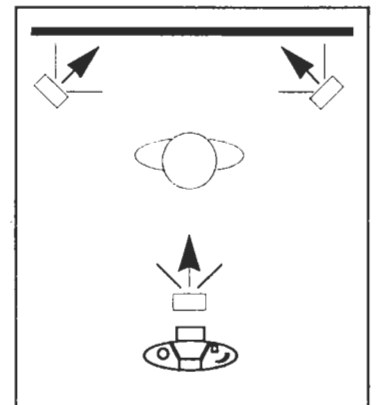
- Subjects faces camera, shoulders square to camera.

- Use three lights: first light is placed to right of camera, to the right of and behind subject illuminating backdrop; second light is left of camera and in front of subject, illuminating subject with sidelight; third light is placed behind second light and illuminates backdrop.



**Diagram 11**

- Subject faces camera, shoulders square to camera.
- Use three lights: first light to left of camera at a 45 degree angle to subject; second light left of subject, even with shoulders, and 45 degrees toward backdrop; third light to right of subject, at a 45 degree angle to backdrop, illuminating the backdrop.



**Diagram 12**

- Subject faces camera, shoulders square to camera.
- Use three lights: first light in front of and just below camera, illuminating subject face on; second light behind and to right of subject, at a 45 degree angle to backdrop; third light on opposite side with the same configuration.

## Developing Your Film and Making Prints

1. Refer to the activity package on developing roll film to process your roll of film.
2. Make a contact sheet from your completed negatives. If you have exposures that are unsatisfactory, you might want to reshoot portions of the assignment.
3. Refer to the activity package on making enlargements. Make at least one good quality 3" x 5" print for each of the 12 diagrams in this activity.

## Mounting Prints and Evaluating the Results

1. Dry mount a finished print for each of the 12 diagrams in this assignment on sheets provided by your instructor.
2. Study the effects the placement of lights had on the subject in each of your prints.
3. Which configuration do you feel gave satisfactory results. Why?
4. Which configuration gave results you feel were not satisfactory? Why?
5. Submit the prints to your instructor for evaluation.

## Darkroom Procedure for Portraiture

1. Select what you feel is your best print. Make an 8" x 10" print of this exposure.
2. Make a second print on Panalure Portraiture Paper, and compare the results.
3. Make another enlargement using a **vignetting tool**.

## Vocabulary

|                |               |
|----------------|---------------|
| studio         | strobe lights |
| modeling light | umbrella      |
| exposure meter | diffusion     |
| portraiture    | backdrop      |
| main light     | reflector     |
| bounce light   |               |

## On Your Own

1. Visit a photography studio and ask to see the studio and lighting set-up. You might also ask to watch the photographer during a session.
2. Visit the library and research famous portrait photographers like Joseph Karsch or Annie Leibovitz.
3. Visit the library and find books on photography that show additional studio techniques, such as bounce flash, filters, and background techniques.
4. Make a collection of "family portraits" of members of your family, using the techniques you have learned in this assignment.
5. Examine darkroom techniques used by portraiture photographers and experiment with some of these techniques.

## Safety

When working in a studio environment, be careful of wires, stands, tripods, and other fixtures that will be around you. Only one person should direct the model and the placement of lights. More than one person in the shooting area could lead to accidents.

Lights get hot; never handle a light by its shade. Instead, move lights by holding the light stand.



Office of Vocational, Adult, Career, and Community Education  
Technology Education  
Dade County Public Schools • Miami, Florida

## **TEACHER GUIDE STUDIO PHOTOGRAPHY**

**Objectives:** Upon completion of this assignment, students will be able to:

- Experience the environment of a photography studio.
- Use artificial lighting techniques to capture a portraiture.
- Pose and shoot a model in a studio environment.
- Process and evaluate a series of photographs, that demonstrate the effects of lighting on a subject in a studio setting.

### **Helpful Hints:**

1. Before considering this assignment, you will need to have access to a good quality 35mm camera with an adjustable shutter speed, aperture, and focus. Fixed focus lenses and "fully automatic" cameras are not suitable for this assignment using incandescent lighting.
2. Studio lights can be made very simply. Obtain three reflector flood "clamp" lights from a local hardware store. Place 300 watt bulbs in the reflector floods and mount the clamp lights on tripods.
3. Obtain a modeling light by using a small reflector flood "clamp" light and placing a 100 watt bulb in the light. Mount it on a tripod.
4. A studio backdrop can be a projection screen, mounted on a stand or wall mounted.
5. Use 400 speed film if you are using incandescent light sources. Slower speeds will result in long exposure times which are hard to work with when shooting a live model.
6. Avoid a "studio" with large windows, as it will affect the dramatic effects of the lighting on the subject. A room with no windows is ideal!
7. Another way of creating lighting is to use an electronic strobe with two slave units.
8. Check photographic equipment and supply sources. Inexpensive light systems are available, as well as simple reflector umbrellas and diffusion screens. Students will enjoy experimenting with these devices.
9. Similarly, there are a number of darkroom accessories that can be employed with this assignment, including vignetted templates, texture screens, and dodging and burning in tools.
10. Invest in a box of Panalure Portraiture paper. Allow students to make a print on this textured sepia surface; the results will be striking!

**TEACHER GUIDE**  
**STUDIO PHOTOGRAPHY (Cont'd.)**

11. This assignment can also be accomplished with a Polaroid Pro Pak camera with excellent results, and will require no darkroom.
12. If you have a camera with a 105mm lens, try this neat background. Crumple several large sheets of aluminum foil; then unwrinkle carefully. The sheets will be all "wrinkled". Hang these up behind your subject. When making the exposure, focus carefully on the subject. The background will appear as many out-of-focus points of light.
13. See if you can find someone in your student population who has had some experience at modeling. This makes it easier on your photographers, and the resulting photographs will be much more exciting.
14. You can repeat the assignment using "full body" shots of your model. However this will require a bit more "studio" floor space.
15. You can alter the subject to most anything, from still life, to model aircraft, cars or even stuffed animals, depending on the cameras and lenses you have available.

## LANGUAGE ARTS APPLICATION STUDIO PHOTOGRAPHY

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Student Name

In all types of jobs you will find that you need the ability to communicate your ideas effectively. Writing skills are necessary in all occupations. Here are a few examples of how writing skills are related to this activity.

When you are ready to apply for a job, one of the skills you will need to have is knowing how to complete a **job application**. Remember that the application will represent you to your prospective employer. Just as the neatness of your physical appearance is important, the appearance of your completed application is equally important. The application must be legible, neat, clean, and accurate. One thing to remember when filling out a job application is to never leave blank spaces. If a certain item does not pertain to you, simply write in "not applicable" in the space. This will tell your employer you did not miss the question, but that the question or information does not apply to you at this time.

Always bring with you a list of **references**, with the name, address, position, and phone number of each person on the list. Good references are former employers, teachers, clergy members, leaders of civic organizations, and adults who know you well. Don't use other students or friends as references, for they are not really able to tell your employer what you know or are capable of doing.

Print neatly, using a **single stroke Gothic alphabet**. It is simple, easy to read, and shows you have some skill! Don't write in cursive or long hand.

Answer all the questions honestly. In most cases, if an employer finds out you lied on a job application, you will be terminated.

If you have hobbies or interests that are related to the job, be sure to include that information on your application.

Complete the job application included in this activity package.

**MATH APPLICATION  
STUDIO PHOTOGRAPHY**

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Student Name

In all types of jobs and occupations you need the ability to apply mathematics effectively. Here are a few examples of how math skills are used in relation to this activity.

While some employees work for a salary, many employees are paid a certain amount of money for each hour they work. This amount of money is known as an hourly rate. Most full-time jobs require 40 hours per week, while part-time employees usually work less hours. The example below shows how to calculate weekly wages.

Example: Mary worked 40 hours at an hourly rate of \$4.50. What were her wages?

Multiply \$4.50 by 40

|               |             |
|---------------|-------------|
| \$4.50        | hourly rate |
| <u>  x 40</u> | hours       |
| \$180.00      |             |

Find the weekly wages for these people:

| EMPLOYEE | HOURLY RATE | HOURS WORKED | WEEKLY WAGES |
|----------|-------------|--------------|--------------|
| Nikka    | \$6.25      | 40           | _____        |
| Irma     | \$8.00      | 33           | _____        |
| Bill     | \$7.35      | 37.5         | _____        |
| Cathy    | \$4.50      | 25           | _____        |
| Tom      | \$4.35      | 28           | _____        |
| Mary     | \$5.40      | 32.25        | _____        |
| Charles  | \$6.75      | 40           | _____        |
| Carmen   | \$7.75      | 22.5         | _____        |
| Michael  | \$4.90      | 31.75        | _____        |
| Ana      | \$5.65      | 16.50        | _____        |



**QUIZ**  
**STUDIO PHOTOGRAPHY**

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Student Name

**True or False:**

- \_\_\_\_\_ 1. A studio is a controlled environment where a photographer can control lighting to suit the needs of the subject.
- \_\_\_\_\_ 2. In most studio photography, three light locations are used.
- \_\_\_\_\_ 3. A light used during "posing" is often called a modeling light.
- \_\_\_\_\_ 4. To obtain even illumination, two lights are required, and are to be placed at 45 degree angles from the subject.
- \_\_\_\_\_ 5. Focus is critical in the making of a portrait, as is the depth of field of the lens.
- \_\_\_\_\_ 6. Sidelighting provides some dramatic effects, and often can dramatize a subject.
- \_\_\_\_\_ 7. Turning the subject in a portrait so that the shoulder is angled toward the camera makes the subject seem more natural.
- \_\_\_\_\_ 8. Studio photography is not available as a career field in photography.
- \_\_\_\_\_ 9. The properties of the photographic paper can affect the outcome of a print.
- \_\_\_\_\_ 10. The light behind a subject is often referred to as a bounce light.

# APPLICATION FOR EMPLOYMENT

(PRE-EMPLOYMENT QUESTIONNAIRE) (AN EQUAL OPPORTUNITY EMPLOYER)

## PERSONAL INFORMATION

|                   |                           |        |                        |
|-------------------|---------------------------|--------|------------------------|
|                   |                           |        | DATE _____             |
| NAME              |                           |        | SOCIAL SECURITY NUMBER |
| LAST              | FIRST                     | MIDDLE |                        |
| PRESENT ADDRESS   |                           |        |                        |
| STREET            |                           | CITY   | STATE                  |
| PERMANENT ADDRESS |                           |        |                        |
| STREET            |                           | CITY   | STATE                  |
| PHONE NO.         | ARE YOU 18 YEARS OR OLDER |        | Yes No                 |

## SPECIAL QUESTIONS

DO NOT ANSWER ANY OF THE QUESTIONS IN THIS FRAMED AREA UNLESS THE EMPLOYER HAS CHECKED A BOX PRECEDING A QUESTION, THEREBY INDICATING THAT THE INFORMATION IS REQUIRED FOR A BONA FIDE OCCUPATIONAL QUALIFICATION, OR DICTATED BY NATIONAL SECURITY LAWS, OR IS NEEDED FOR OTHER LEGALLY PERMISSIBLE REASONS.

- Height \_\_\_\_\_ feet \_\_\_\_\_ inches       Citizen of U.S. \_\_\_\_ Yes \_\_\_\_ No
- Weight \_\_\_\_\_ lbs.       Date of Birth\* \_\_\_\_\_
- What Foreign Languages do you speak fluently? \_\_\_\_\_ Read \_\_\_\_\_ Write \_\_\_\_\_

*\*The Age Discrimination in Employment Act of 1967 prohibits discrimination on the basis of age with respect to individuals who are at least 40 but less than 70 years of age.*

## EMPLOYMENT DESIRED

|                                     |  |                |
|-------------------------------------|--|----------------|
| POSITION                            | DATE YOU CAN START                             | SALARY DESIRED |
| ARE YOU EMPLOYED NOW?               | IF SO MAY WE INQUIRE OF YOUR PRESENT EMPLOYER? |                |
| EVER APPLIED TO THIS COMPANY BEFORE | WHERE  | WHEN           |

| EDUCATION                                | NAME AND LOCATION OF SCHOOL | *NO. OF YEARS ATTENDED | *DID YOU GRADUATE? | SUBJECTS STUDIED |
|--|-----------------------------|------------------------|--------------------|------------------|
| GRAMMAR SCHOOL                           |                             |                        |                    |                  |
| HIGH SCHOOL                              |                             |                        |                    |                  |
| COLLEGE                                  |                             |                        |                    |                  |
| TRADE, BUSINESS OR CORRESPONDENCE SCHOOL |                             |                        |                    |                  |

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## GENERAL

SUBJECTS OF SPECIAL STUDY OR RESEARCH WORK

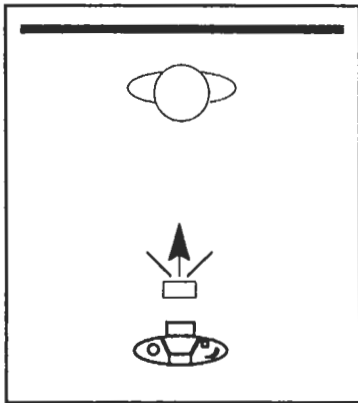
U.S. MILITARY OR NAVAL SERVICE

RANK

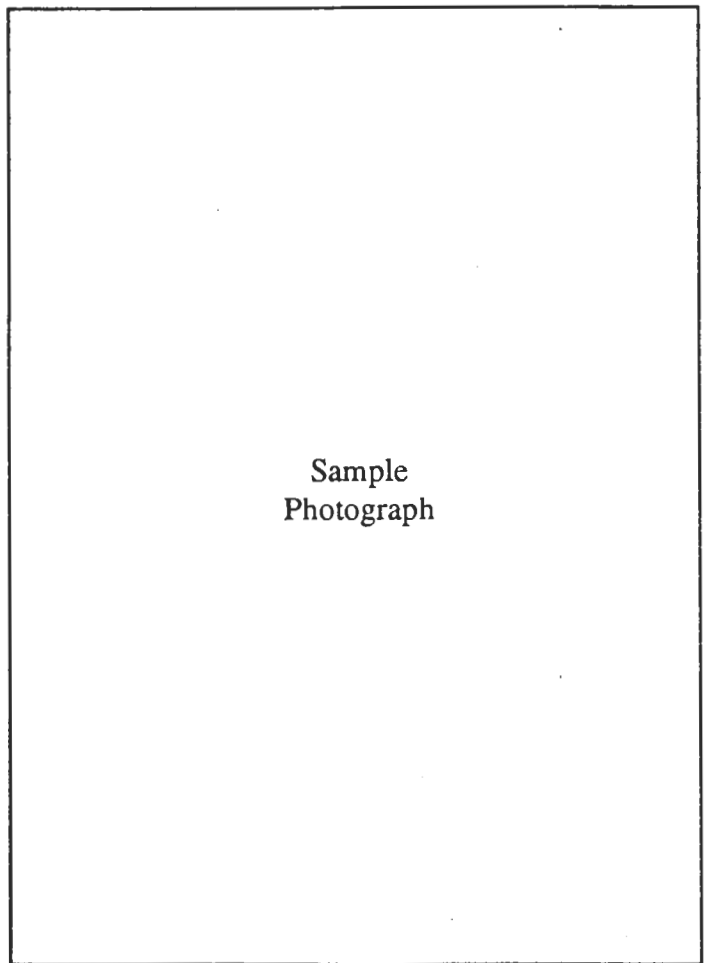
PRESENT MEMBERSHIP IN NATIONAL GUARD OR RESERVES

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 1*

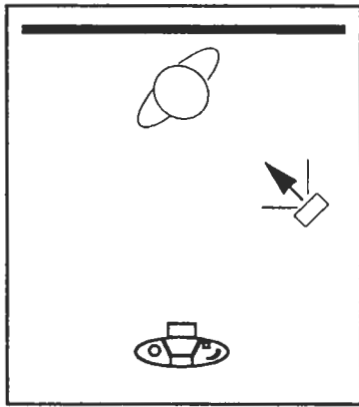


Sample  
Photograph

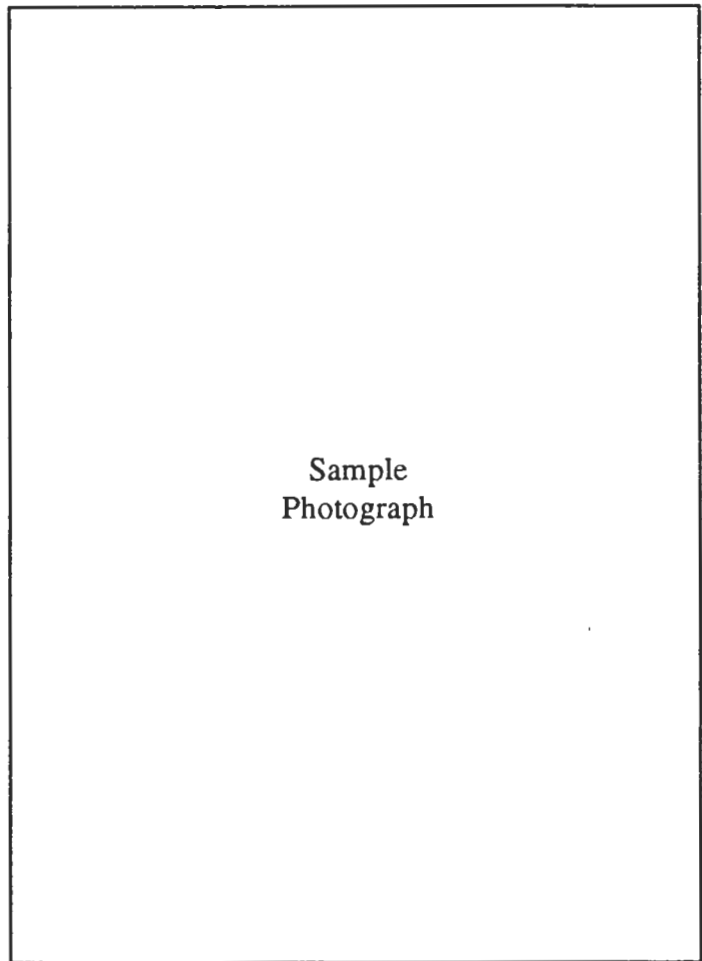
Mount your 3 1/2" x 5" enlargement for Diagram 1 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 2*

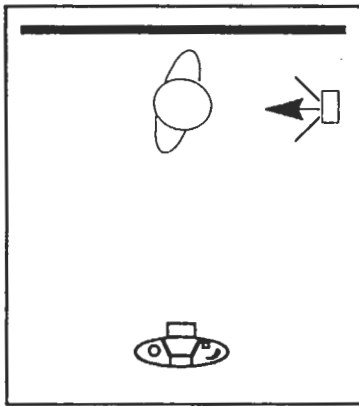


Sample  
Photograph

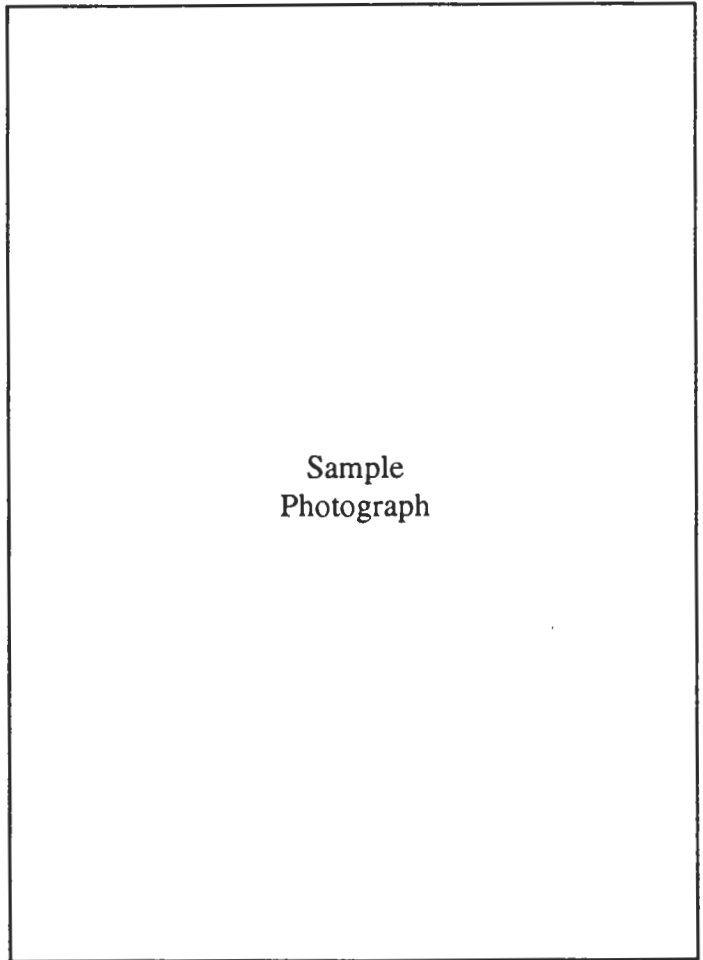
Mount your 3 1/2" x 5" enlargement for Diagram 2 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



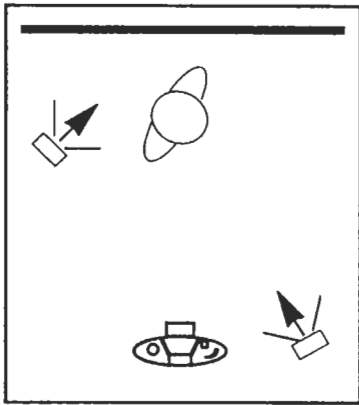
*Diagram 3*



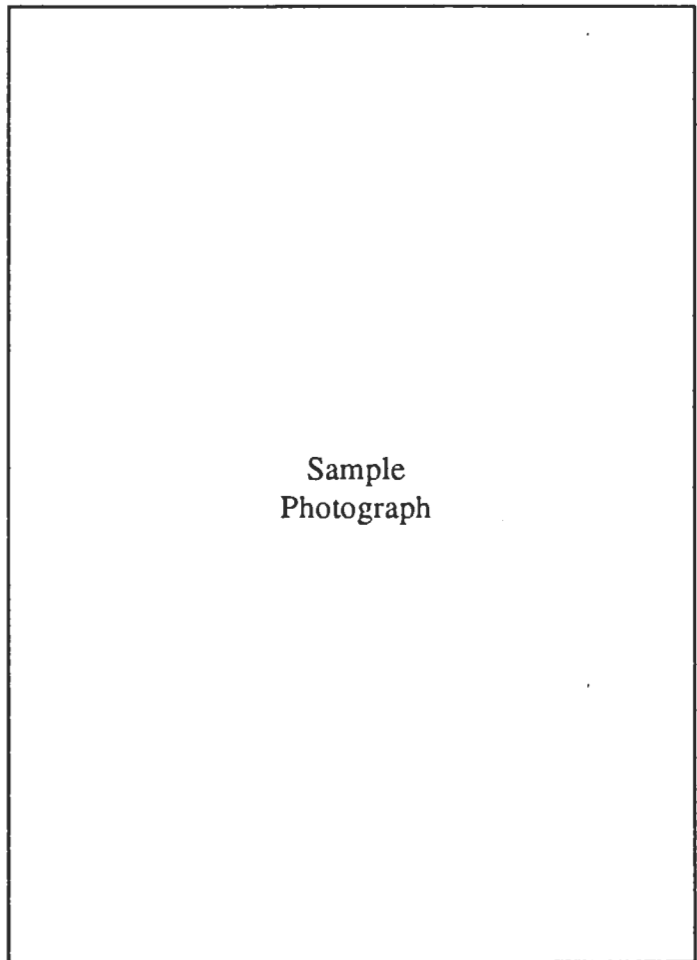
Mount your 3 1/2" x 5" enlargement for Diagram 3 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 4*

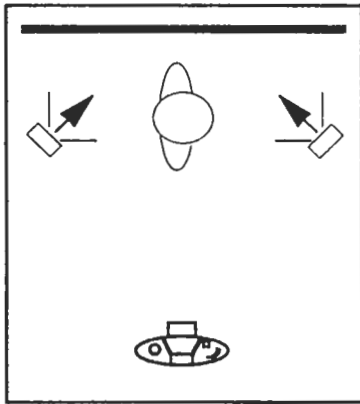


Sample  
Photograph

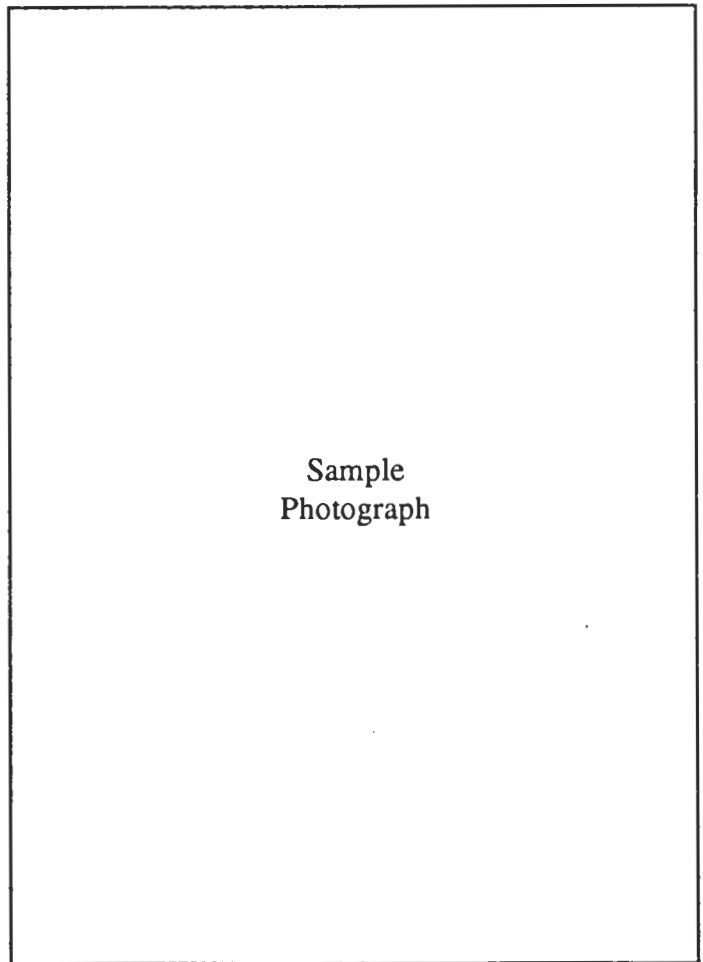
Mount your 3 1/2" x 5" enlargement for Diagram 4 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 5*

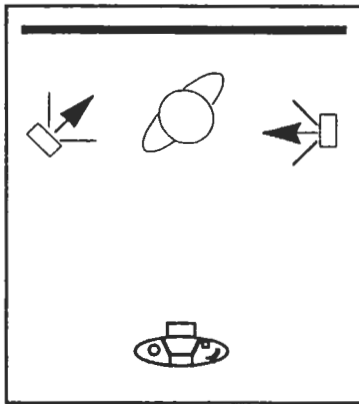


Sample  
Photograph

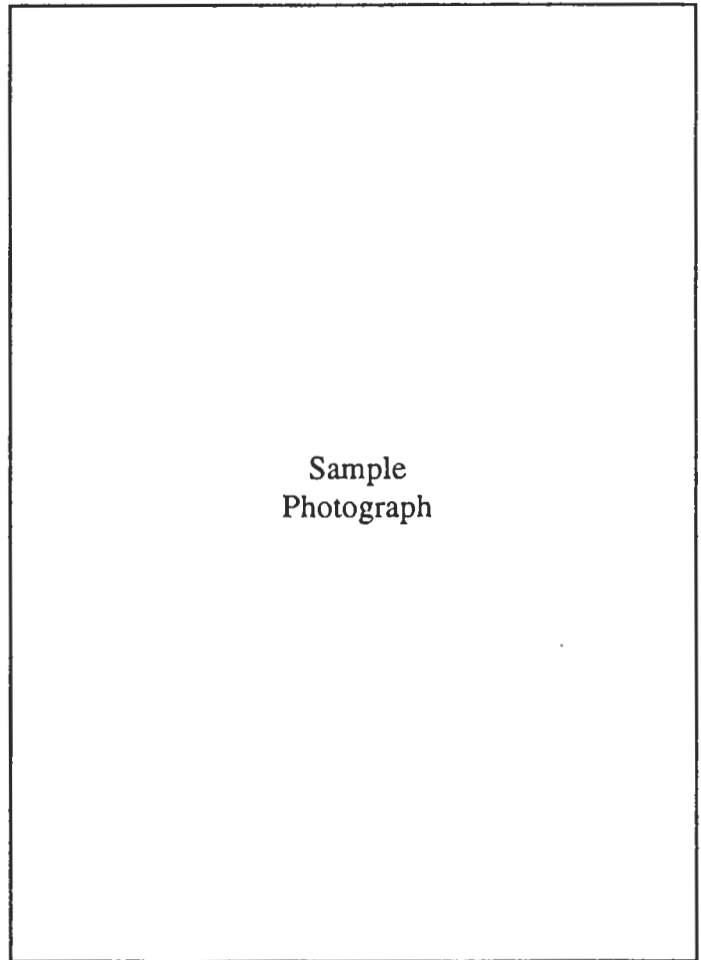
Mount your 3 1/2" x 5" enlargement for Diagram 5 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 6*



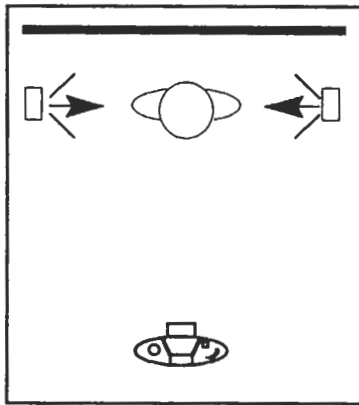
Sample  
Photograph

Mount your 3 1/2" x 5" enlargement for Diagram 6 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

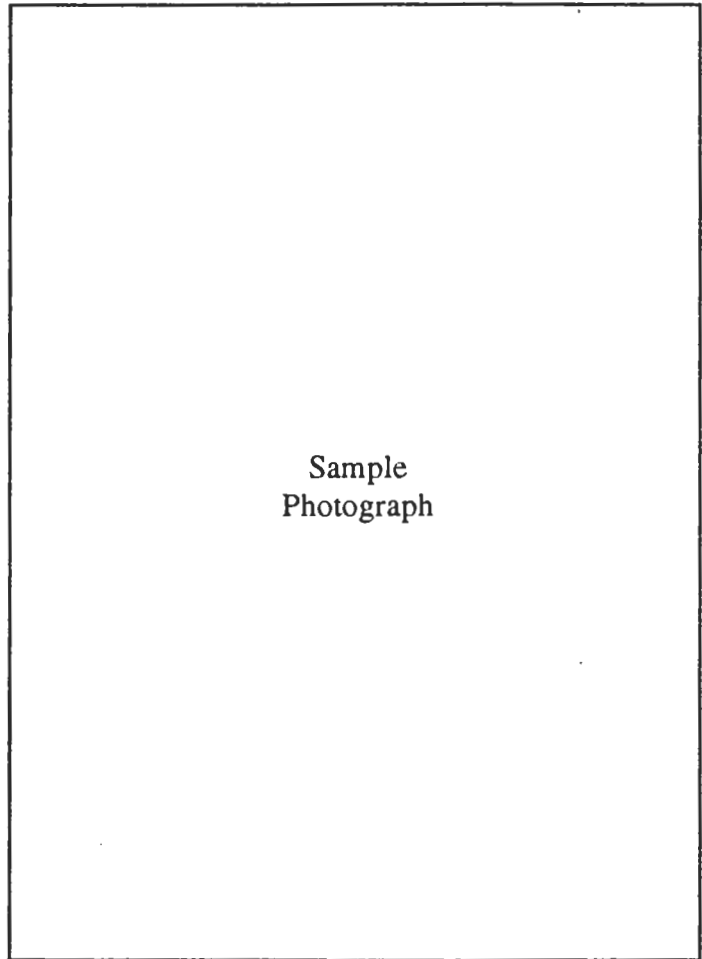


Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 7*

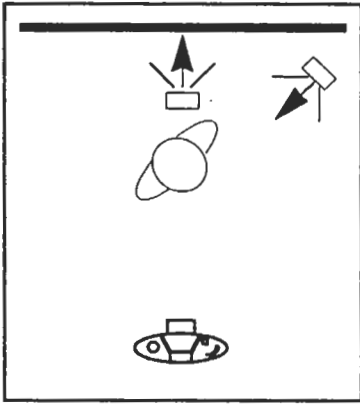


Sample  
Photograph

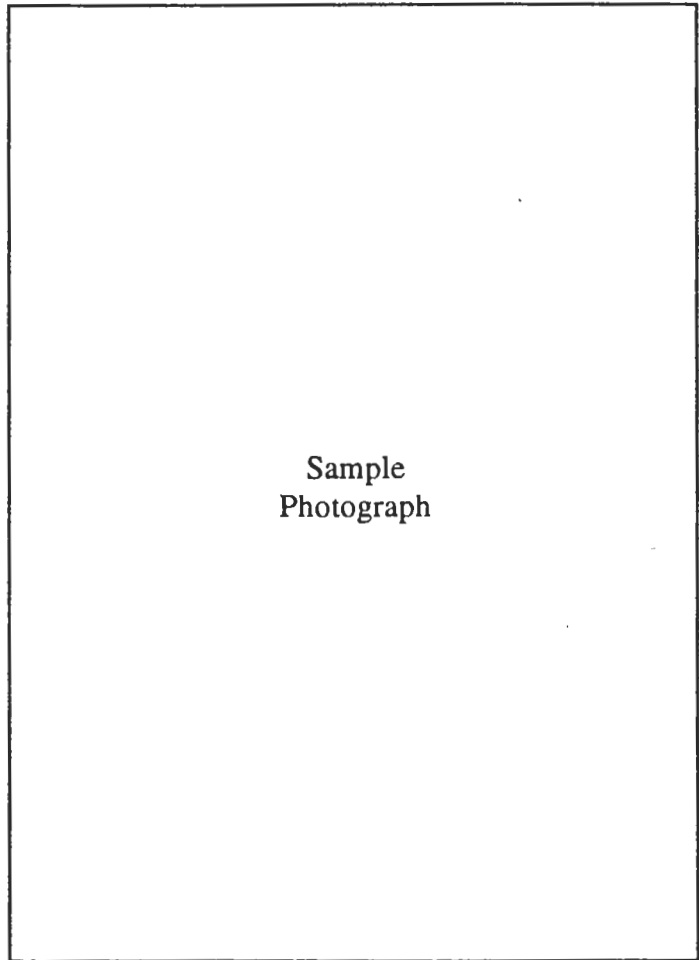
Mount your 3 1/2" x 5" enlargement for Diagram 7 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



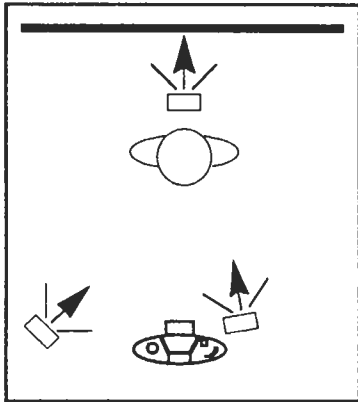
*Diagram 8*



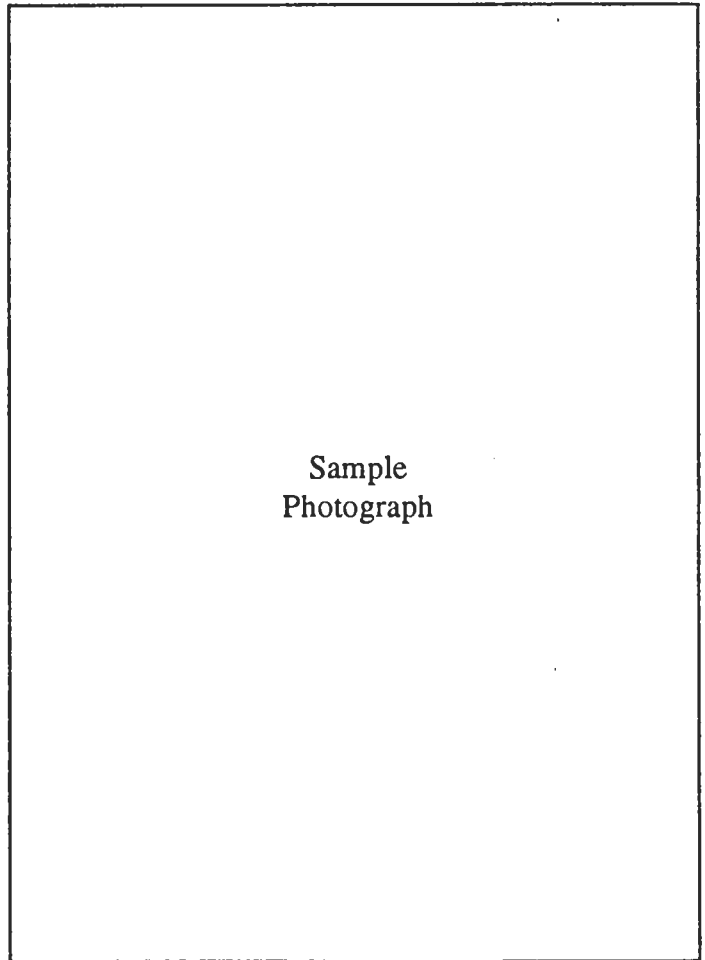
Sample  
Photograph

Mount your 3 1/2" x 5" enlargement for Diagram 8 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

# Studio Photography Assignment



*Diagram 9*

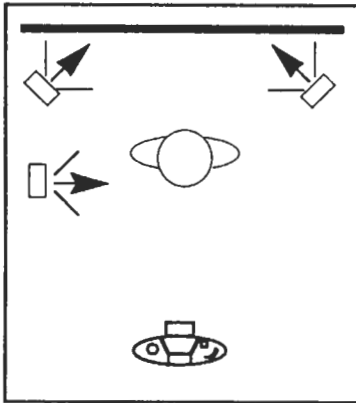


Sample  
Photograph

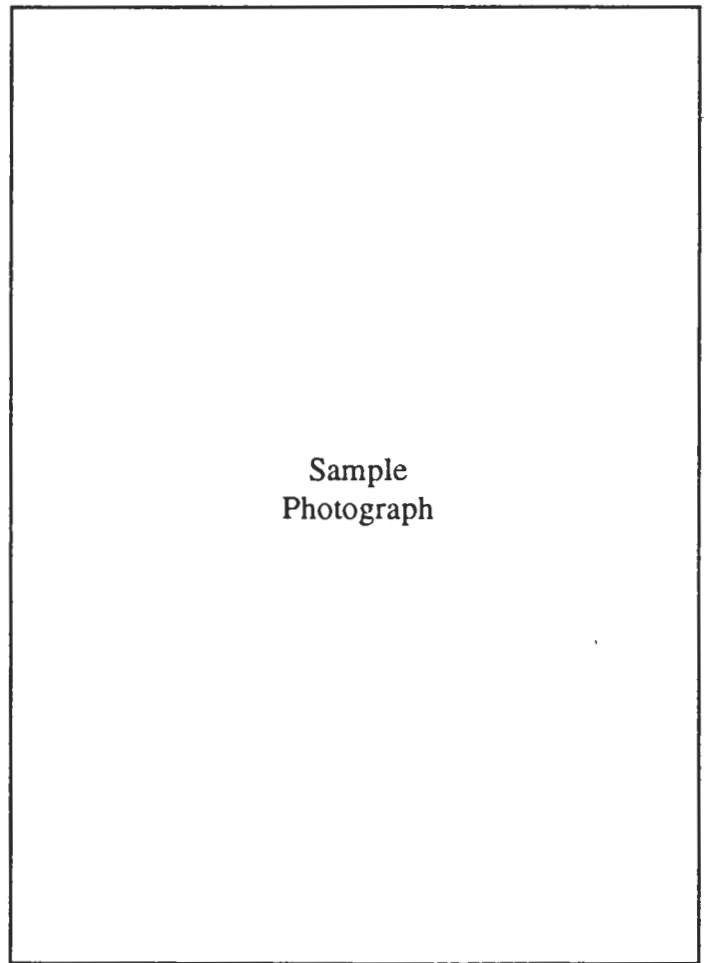
Mount your 3 1/2" x 5" enlargement for Diagram 9 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 10*

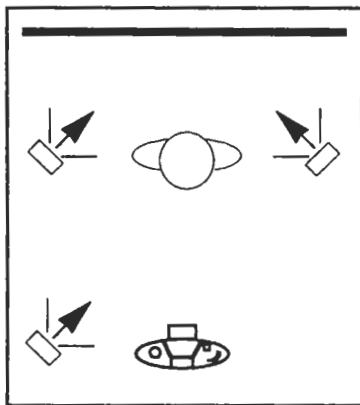


Sample  
Photograph

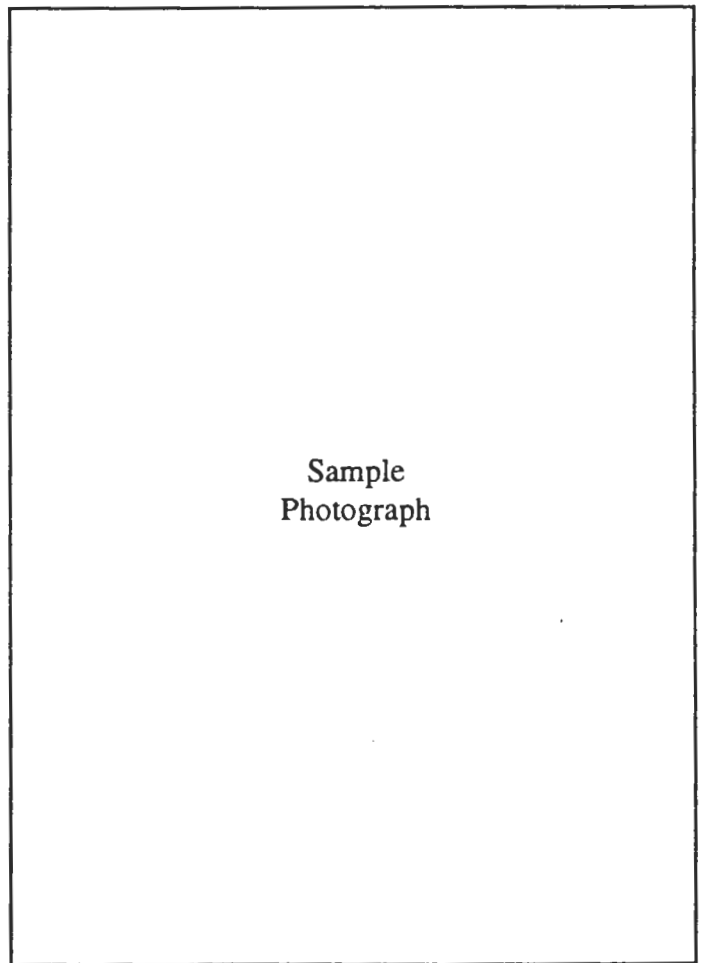
Mount your 3 1/2" x 5" enlargement for Diagram 10 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 11*

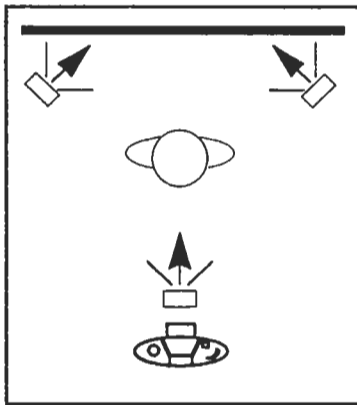


Sample  
Photograph

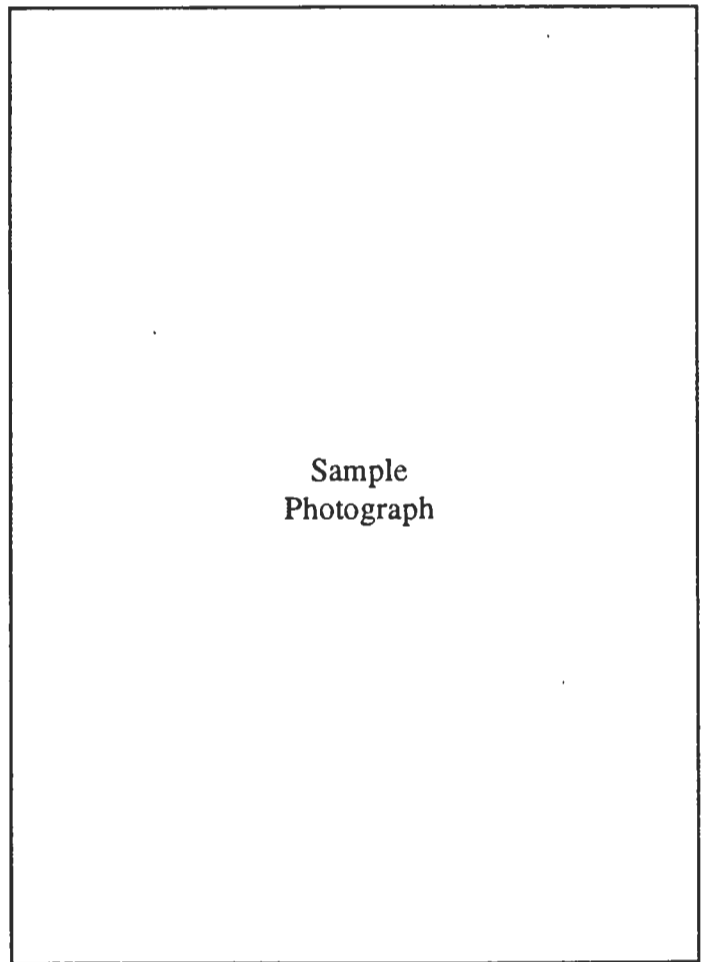
Mount your 3 1/2" x 5" enlargement for Diagram 11 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?

Name \_\_\_\_\_

# Studio Photography Assignment



*Diagram 12*



Sample  
Photograph

Mount your 3 1/2" x 5" enlargement for Diagram 12 on this sheet. Study the effects the placement of lights had on the subject in this print. Are the results satisfactory? Why or why not?