



Troop 61

Self-Teaching Guide to

Photography

Merit Badge

Scout Name: _____

Date: _____

Adapted from: Kodak Self-Teaching Guide to Picture-Taking

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Date: _____

Init Date

1. _____ Take and paste pictures into your booklet that demonstrate the following elements of a quality picture:
 - a. Rule of Thirds
 - b. Level Horizon
 - c. Fill the Frame
 - d. Framing
 - e. Quality and Direction of Light: Back light, top light, Sunlight
 - f. Point of View: High / Low
 - g. Leading Lines
 - h. Flash
 - i. Depth of field.
 - j. Stars at night.
 - k. Groups

2. _____ Explain the basic parts and operation of a film camera or digital camera. Explain how an exposure is made when you take a picture

3. _____ Discuss with your counselor the differences between a film camera and a digital camera. List the advantages and disadvantages of using a digital camera versus a film camera.

4. _____ Do the following:
 - a. Explain to your counselor the basic parts common to all cameras using a diagram.
 - b. Explain common photographic terms such as lens, shutter, flash, viewfinder, exposure, and f-number.
 - c. Explain how to use a flash correctly
 - d. Explain how back light affects a camera
 - e. Explain three techniques for getting people to pose for pictures

5. _____ Discuss with your counselor the career opportunities in photography. Pick one that interests you and explain how to prepare for such a career. Discuss with your counselor the education and training such a career would require.

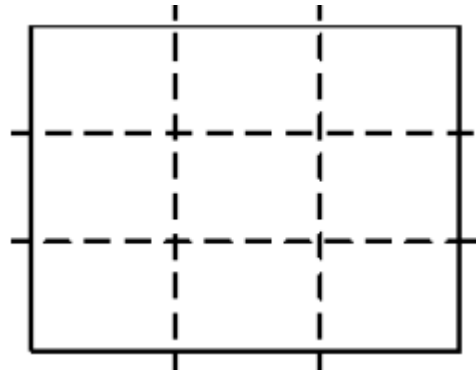
Requirement 1
Rule of Thirds

Task: In your mind, divide the picture area into thirds, both horizontally and vertically.

Place the most important part of your picture at one of the four places where the lines cross.

A person who is the center of interest should look or appear to be moving toward the center of the picture.

Try to place horizon lines on one of the dotted horizontal dividing lines. If you are taking a picture of a house and yard, place the house on the center third.



(Put your Rule of Thirds example here.)

Requirement 1 **Level Horizon**

Task: Keep the horizon level!



This example shows what can happen if you don't. Take a few pictures that have a strong horizon line (sunset, open field, lake) and practice keeping it level with the top and bottom of the viewfinder.

Place the horizon line 1/3 from the top or 1/3 from the bottom.

When taking pictures indoors. Floors, walls, and ceilings shouldn't tilt.

(Put your Level Horizon example here.)

Requirement 1 **Fill the Frame**

Task: Compose pictures of people so that they fill all of the picture.

Don't put the subject's head in the center of the picture. Put the head at the top! Take a picture using this technique.

Take a picture of people in which the whole picture is filled with just the head and shoulders of your subject.



(Put your Fill the Frame – Whole example here.)

(Put your Fill the Frame – Head and Shoulders example here.)

Requirement 1 **Framing**

Task: This simple trick will make people think you're a professional. It's called framing. Use tree branches, bushes, part of a building, or a person to frame your subject.

Tree branches give added interest and depth to the picture. Some professionals have been known to cut a branch of leaves from a bush and hold it in front of the camera to achieve the framed composition they wanted. Framing is particularly important on those overcast days when the sky is all white or gray and just plain uninteresting. Position yourself so that a branch or something else fills most of the sky.

Indoor pictures can benefit from this too.



(Put your first Framing example here.)

(Put your second Framing example here.)

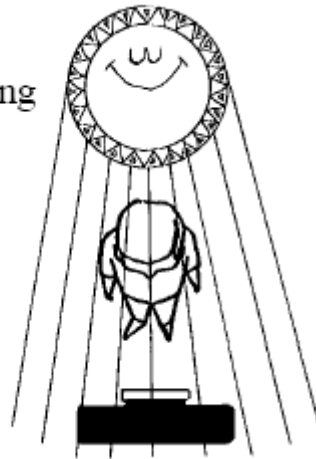
Requirement 1
Direction of Light

Backlighting

In this case, the light is in back of the subject. probably won't get much detail in the subject, backlighting will provide a strong silhouette sometimes a sort of halo effect. Backlight can be dramatic especially in early morning or late in when the sun is low. Indoors, silhouettes in window can be interesting.



Backlighting



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(Put your Backlighting example here.)

Requirement 1 Quality of Light

Bright Sunlight

On a bright, sunny day, you can still get some soft, flat-lighted pictures in the open shade. But watch the background: If it is bright, you may end up with the background bright and your subject just a dark silhouette. On overcast days, you may end up with underexposed pictures if the light is too dim.



(Put your Bright Sunlight example here.)

Requirement 1
Quality of Light

Time of Day

Take a picture of your home or any other fixed object at the best time of day when the sun lights up the important features or shadows add drama to the picture.

By just taking pictures of a building or a statue or a tree at different times of day, you can get an opportunity to study front lighting, backlighting, side lighting, top lighting, and on an overcast day, flat-lighting.



(Put your Time of Day examples here.)

Requirement 1
Point of View

Low Angle

Lie down on your stomach and take a few pictures. This way you can get bright flowers in the foreground. (They don't even have to be in focus since the color is what is important.) Even some weeds or a curb in the foreground can help set the scene. You also can avoid a cluttered background by looking up at people, with trees or a blue sky as background.



(Put your Low Angle example here.)

Requirement 1 **Point of View**

High Angle

Now, climb up on a few things and look down on the world. A high point of view offers lots of different opportunities. With people looking up at the camera, you'll see just their faces in the viewfinder without having to worry about posing their bodies or having the heads all lined up at one level. From up high you can also use grass or a bed of flowers for a background—it's another way to avoid a cluttered setting.



(Put your High Angle example here.)

Requirement 1 **Use of Leading Lines**

A leading line can be almost anything: a road, path, sidewalk, fence, river, stream, hedge, driveway, or shadow. You won't find strong leading lines in every subject, but you can look for them and if they're there, take advantage of them.

Lines in a picture should lead into, not out of, the picture and they should lead your eye toward the main subject.

The road or fence will always be there; it's just a matter of choosing the right angle to make it lead into the picture.

Starting a leading line from a corner of your picture will often improve the composition. Watch tree lines and tree tops, curbs, paths, or driveways, and have them lead in from the corners of your picture.



(Put your Leading Lines example here.)

Requirement 1h

Flash

Range

The light from your flash gets dimmer as you go away from the camera. At about 10 feet it is just barely bright enough to make a good picture with most cameras. Beyond 10 feet there probably won't be enough light. On the other hand, the closer you get to the flash, the stronger the light is and if you get too close, your subject will be all washed-out and white.

Task: To demonstrate these possibilities and limitations of using flash with your camera, take the following picture outdoors at night in the dark.

Have three people stand in a line in front of the camera, about 5 feet apart, with the first person about 3 feet from the camera and the last person about 13 feet from the camera.

Stand so that you can see all of their faces and take a flash picture of them.

(Put your Range of Flash example here.)

Result: The person closest to the camera should be too light and the person farthest from the camera should be too dark.

Requirement 1

Flash

Reflective Surfaces

Windows, mirrors, shiny walls, and pictures are some of the things that will cause glare in your flash pictures if you're not careful.

To avoid glare, just be sure that you take your picture at an angle to the shiny surface. Try this comparison:

Take a flash shot of someone standing about 7 feet from the camera in front of a window, or shiny wall.

Take a flash shot of a picture in a glass frame.

Point the camera directly at the shiny surface.

(Put your first Reflective Surface Flash examples here.)

Requirement 1

Flash

Reflective Surfaces

Now take the same pictures but move the camera so that it is at an angle to the shiny background.

(Put your second (better) Reflective Surface Flash example here.)

This principle also works when you want to take a picture through glass (for example a window or a display in the museum or zoo). If you take your picture at an angle to the glass surface, you'll be able to see right through it without any glare from your flash.

Requirement 1 Depth of Field

Blur the background or foreground

Take a pictures which show either the foreground or background out of focus, but the subject in focus.



(Depth of Field example here.)

You will need to adjust the F-stop of your camera to a low setting e.g. F/2.8 so the aperture is wide open.

Requirement 1
Group Picture

Take a picture of a group so that everyone's head is visible and no one is hidden.



Requirement 4
Parts of a Camera

Point out the following parts on your camera and explain how they are used and what they do:

Lens

Manual Focus / Auto Focus

ISO

Memory Card

Flash On/Off

Shutter Speed

Zoom

Shutter

Aperture

Timer

White Balance