



DANIEL J. McLAIN

U.S. Naval Academy Graduation and Commissioning Ceremony, Annapolis, Maryland, 2005

How do you photograph a graduation—or a building, or a tree, or anything else? Is the picture black and white or color, horizontal or vertical, straight-on or looking up? There are as many ways as there are photographers. In this photograph, from graduation at the U.S. Naval Academy, Photographer's Mate 2nd Class Daniel McLain used a very low point of view to include both the newly commissioned officers and the symbolically thrown hats.

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The eye
and the camera
see more
than the mind
knows.

...*Nathan Lyons*

Getting started

In this chapter you'll...

...learn the names of your camera's main controls and their functions.

...walk through the first steps of getting your camera ready, focusing an image sharply, adjusting the camera settings so your photographs won't be too light or too dark, and making your first exposures. (You can go directly to Chapter 2 if you prefer more detailed coverage right away.)

...consider how to select a subject and compose your photograph so that it effectively conveys what you see.

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The steps in this chapter are a basic checklist. Modern cameras vary greatly in design, so read your model's instruction manual or talk to someone who is familiar with your camera. We introduce two kinds of cameras: those that use film and those that record a digital image. To print pictures from a digital camera, you will use a digital printer. If you record your images on film, you can print them in a darkroom, or convert them to digital images by scanning them.

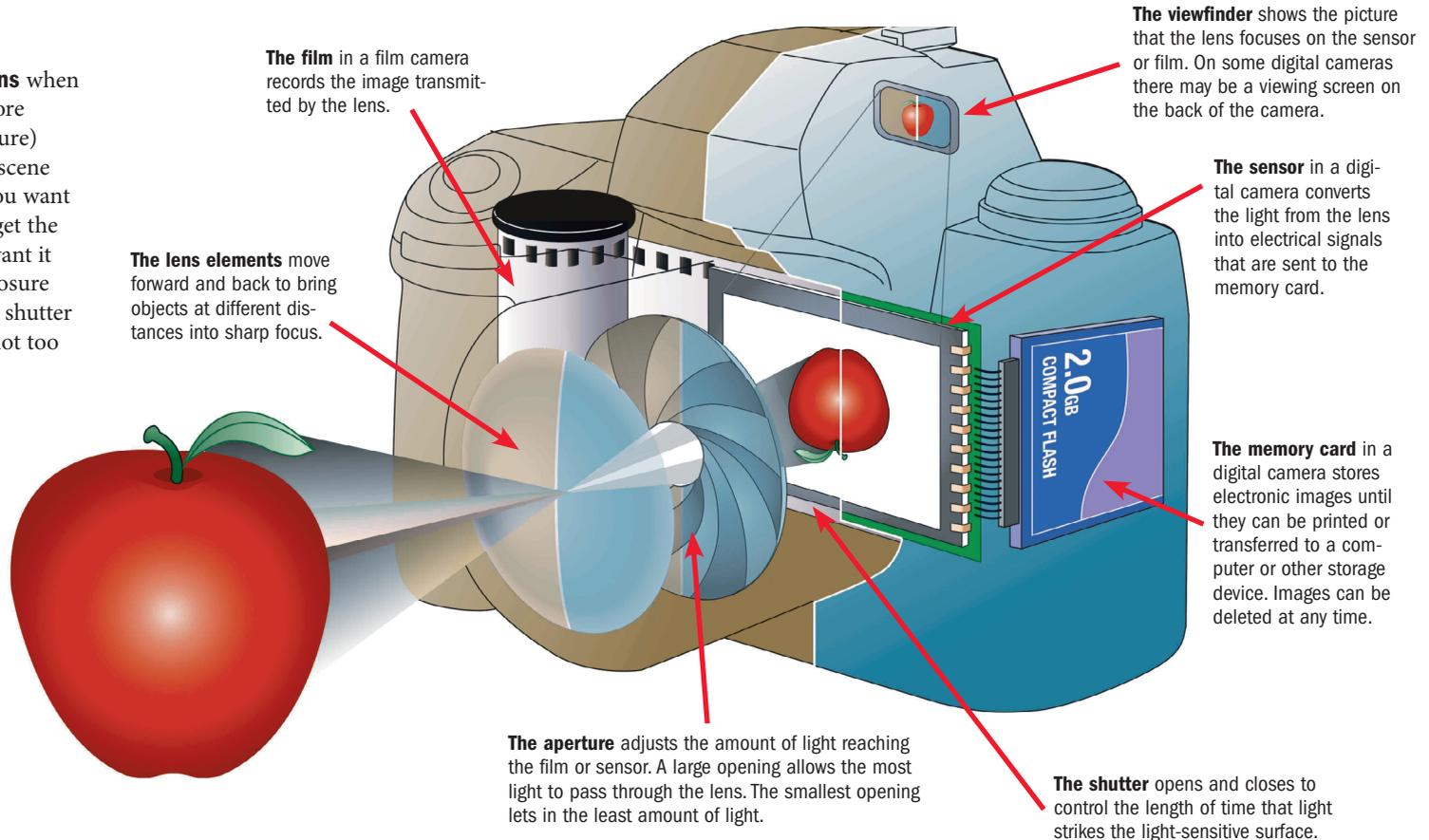
Modern cameras can adjust themselves automatically, including the choices of exposure and focus. Nevertheless, many photographers prefer to use manual operation to make their own exposure and focusing decisions. If you are in a photography class, your instructor may ask you to operate the camera manually for your first exposures to help you learn basic camera controls. The following pages cover both manual and automatic operation.

Once you have gotten the basics down, how do you get better? Many of the photographers whose work appears in this book were asked that question. Their advice was surprisingly consistent. "Take more pictures." "Shoot, shoot, shoot." "Persevere." "Just keep after it; you can't help but improve if you do." Even if this sounds obvious—no secrets or inside information—it seems to be advice that works. These photographers volunteered such comments often and with feeling. They knew how they had improved their skills, and they knew what you should do to get better, too. Don't forget to have fun.

Introducing the Camera

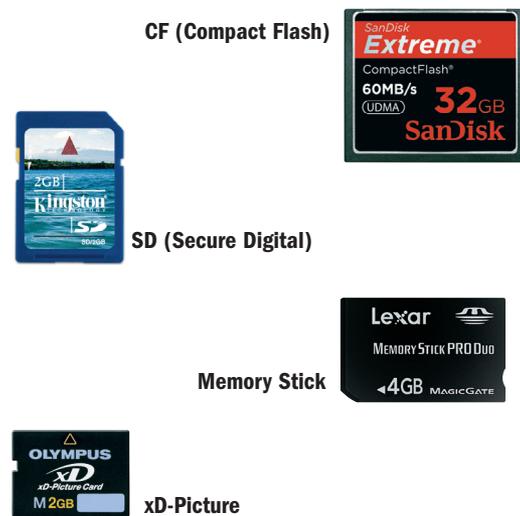
A camera's main functions when you take a picture (or more precisely, make an exposure) are to help you view the scene so you can select what you want to photograph, focus to get the scene sharp where you want it to be, and adjust the exposure (the aperture setting and shutter speed) so the picture is not too light or too dark.

Read your camera's owner's manual. The basic adjustments of all cameras are the same but the way you set them varies considerably.



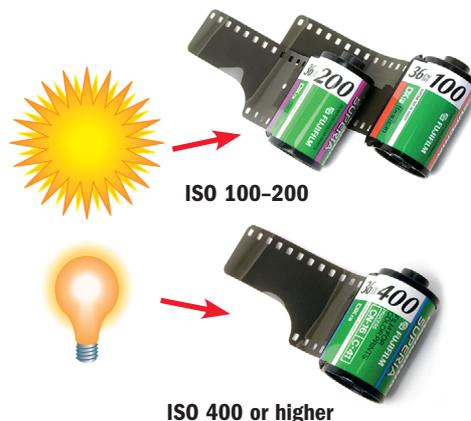
CHOOSE A MEMORY CARD

Digital cameras store pictures on memory cards that vary in capacity and transfer speed. Because there are several types that are not interchangeable, make sure you have one that fits your camera.

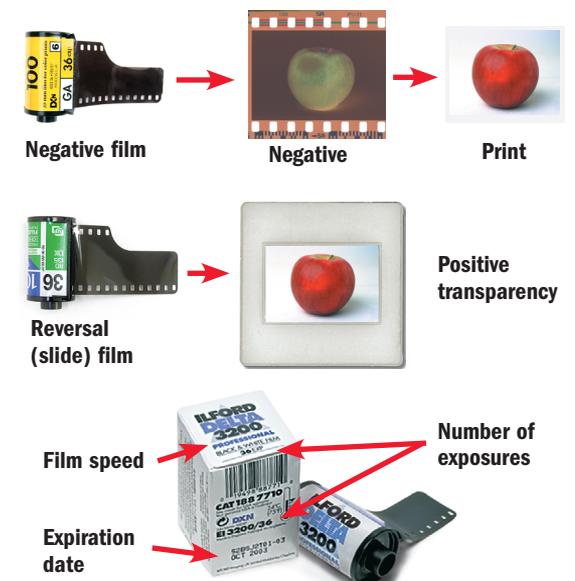


CHOOSE A SPEED

ISO Speed (50, 100, 200, and so on) describes a sensor's or film's sensitivity to light. The higher the number, the more sensitive (or "faster") it is, and the less light it needs for the picture to be neither too light nor too dark. Digital cameras allow the user to select one speed out of several choices and to change it for each picture. Film is made in several speeds; all the pictures on one roll will have the same ISO. For your first exposures, choose a speed of 100 to 200 for shooting outdoors in sunny conditions. In dimmer light, use a speed of 400 or higher.



For a film camera, choose negative film for prints or reversal film for slides. Negative film, either color or black and white, is developed with chemicals to a negative image, then printed onto paper to make a positive one. Reversal films produce a positive image directly on the film that was in the camera.



Getting Your Camera Ready

DIGITAL CAMERA

Check the Batteries

Make sure the batteries are fresh or the power cell is charged. Your camera won't work at all without power, so keep a spare, fully charged power cell or extra batteries handy.



Insert the Memory Card

The camera must be turned off when the memory card is installed or removed. Avoid touching any exposed electrical contacts on the camera or card. Make sure the card is seated properly and close the cover.

Turn the power on and check the display. The number of remaining exposures will be visible. This number varies with the capacity of the card and your camera settings.



Set the Menu Options

Turn the power on and press the menu button. The first time you turn your camera on, correctly set the date and time. The camera's default settings will be fine for your first photographs, but you should read the owner's manual to become familiar with your choices.



AUTOMATIC FILM CAMERA

Open and Load the Camera

A camera that loads film automatically probably will have a release lever to open the camera. First check the film-frame counter to make sure there is no film in the camera. If there is film in the camera, rewind it, then open the camera by sliding the release lever to its open position. Make sure the camera has fresh batteries.



Insert and Thread the Film

Check for dust in the camera. Clean using a small brush or compressed air. Don't touch the fragile shutter curtain at the camera's center.

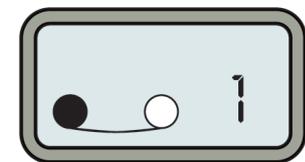
Automatic loading. Insert the film cassette. Pull out the tapered end of the film until it reaches the other side of the camera. Usually a red mark or other indicator shows where the end of the film should be. The film won't advance correctly if the end of the film is in the wrong position. Make sure the sprocket holes are engaged.



Advance Film to the First Frame

Automatic film advance. Depending on your camera, you may simply need to close the camera back and turn on the power switch to advance the film to the first frame. Some cameras also require you to depress the shutter button.

If the film has correctly advanced, the film-frame counter will display the number 1. If it does not, open the camera back and check the loading.



MANUAL FILM CAMERA

Open and Load the Camera

A camera that loads film manually will have a rewind knob on the top. This type of camera usually opens by pulling up on the rewind knob. If not, you will find a release lever on the side.



Insert and Thread the Film

Manual loading. Push down the rewind knob. Pull out the tapered end of the film until you can insert it into the slot of the take-up spool on the other side of the camera. Alternately press the shutter-release button and rotate the film-advance lever until the teeth that advance the film securely engage the sprocket holes at the top and bottom of the film and any slack in the film is reeled up by the take-up spool.



Advance Film to the First Frame

Manual film advance. With the camera back closed, alternately press the shutter-release button and rotate the film-advance lever. Repeat two times.

If the film is advancing correctly, the film-rewind knob will rotate counterclockwise as you move the film-advance lever. If it does not, open the camera and check the loading. Don't rely on the film-frame counter; it may advance even though the film does not move.



Focusing and Setting the Exposure

SET THE ISO SPEED

Set your camera to an **ISO speed**, a measure of how sensitive the sensor or film is to light. Film is made in different speeds; the ISO number is marked on the box and on the cassette. Digital cameras can be set to one of several speeds that may be changed for each picture. See page 84.



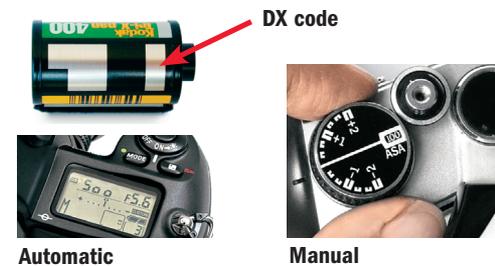
DIGITAL CAMERAS

A digital camera lets you choose an **ISO** within a specific range. Some cameras allow settings from 50 to 400, others 100 to 3200. Consult the owner's manual to find the range of ISO settings for your camera and how to adjust it.



FILM CAMERAS

DX codes can set the film speed automatically. Some cameras detect the film speed from the code of polished squares on the film cassette and show it on a display. On other cameras you must set the film speed manually. Turn the film-speed dial (marked ISO or sometimes ASA) to the speed of your film.



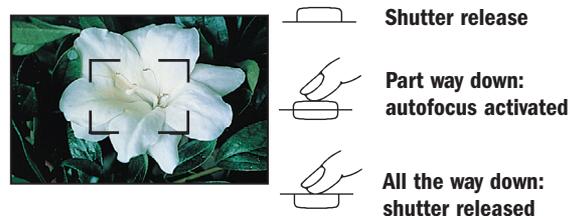
FOCUS

Focus on the most important part of your scene to make sure it will be sharp in the photograph. When photographing a person, this is usually the eye. Practice focusing on objects at different distances as you look through the viewfinder so that you become familiar with the way the camera focuses.



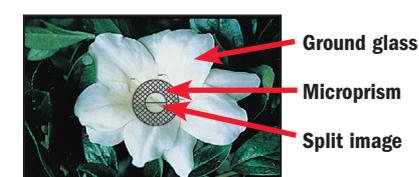
AUTOMATIC FOCUS

Automatic focusing. Usually this is done by centering the focusing brackets (visible in the middle of the viewfinder) on your subject as you depress the shutter release part way. The camera moves the lens for you, bringing the bracketed object into focus. Don't push the shutter release all the way down until you are ready to make an exposure.



MANUAL FOCUS

While looking through the viewfinder, rotate the focusing ring on the lens until the scene appears sharp. The viewfinder of a single-lens reflex camera has a ground-glass screen that displays a scene sharply when it is in focus. Some viewfinders also have a microprism, a small ring in which an object appears coarsely dotted until focused. Others have split-image focusing in which part of an object is offset when it is out of focus.



FACTORS THAT CONTROL EXPOSURE

To get a correctly exposed picture, one that is not too light (overexposed) or too dark (underexposed), you—or the camera—set the lens opening (aperture) and shutter speed depending on the ISO speed you have selected for your digital camera or the film you have loaded, and on how light or dark your subject is. The aperture size determines how much light passes through the lens; the shutter speed determines the length of time that the light strikes the light-sensitive surface inside your camera.



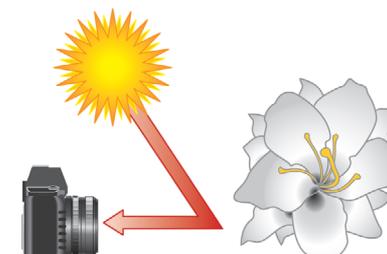
Aperture size



Shutter speed



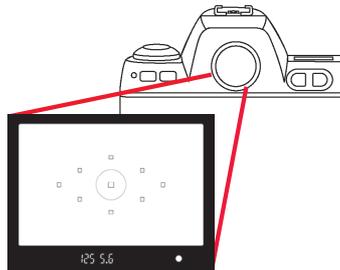
ISO setting or film speed



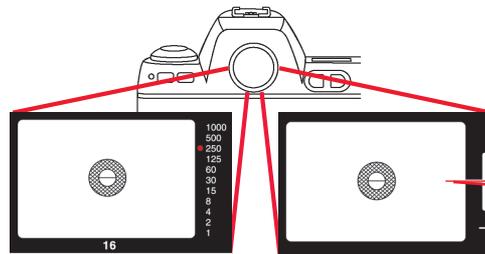
Brightness of subject

EXPOSURE READOUT

Exposure readout about the shutter speed and aperture appears in the viewfinder of most cameras, often along with other information. Here, the viewfinder of a digital camera displays 1/125 sec shutter speed, f/5.6 aperture.



Some older film cameras use a needle-centering display (below right) instead of showing aperture and shutter speed (below left). You change the shutter speed and/or the aperture until the needle centers between + (overexposure) and - (underexposure).

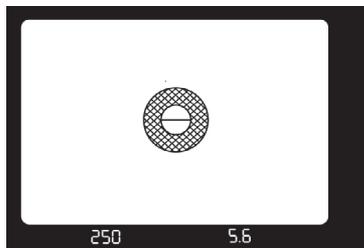


An LCD data panel appears on many cameras, displaying shutter speed and aperture settings (here, 1/500 sec shutter speed, f/5.6 aperture), plus other information. On digital cameras, there is usually also a larger color display for menus and pictures. Make sure you know where the essential exposure information is shown on your camera.

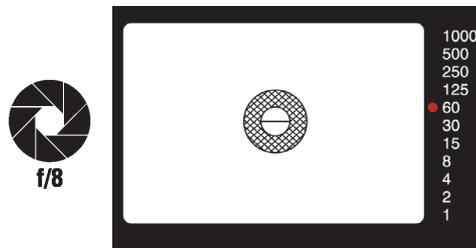


SET THE EXPOSURE-AUTOMATIC

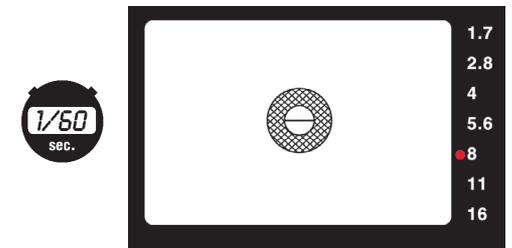
With automatic exposure or programmed automatic exposure, each time you press the shutter-release button, the camera automatically meters the light, then sets what it determines is the best shutter speed and aperture combination.



With aperture-priority automatic exposure, you set the aperture (the f-stop) and the camera sets the shutter speed. To keep the picture sharp if you are hand holding the camera (it is not on a tripod) the shutter speed should be 1/60 sec or faster with a 50mm lens. If the shutter speed is slower than 1/60 sec, set the aperture to a larger opening. (The larger the opening, the smaller its f-number. For example, f/8 is larger than f/11.)



With shutter-priority automatic exposure, you set the shutter speed and the camera sets the aperture. To keep the picture sharp if you are hand holding the camera (it is not on a tripod), select a shutter speed of 1/60 sec or faster with a 50mm lens.



SET THE EXPOSURE-MANUAL

With manual exposure, you set both the shutter speed and aperture yourself. How do you know which settings to use? At the simplest level you can use a chart sometimes packaged with film, like the one at right. Decide what kind of light is on the scene, and set the shutter speed and aperture accordingly. The chart is based on what is sometimes called the “Sunny 16” rule. On a sunny day, set the aperture to f/16 and use the shutter speed closest to the ISO number. For example, if the ISO speed is 100, set the shutter to 1/125 of a second (or 1/100 if your camera allows it) and the aperture to f/16. The chart at right shows an equivalent exposure—a faster shutter speed at a wider aperture, 1/250 sec at f/11.

ISO 100 film Outdoor exposures for average subjects				
Shutter Speed 1/250		Shutter Speed 1/125		
Bright or Hazy Sun on Sand or Snow f/16	Bright or Hazy Sun (Distinct Shadows) f/11*	Weak, Hazy Sun (Soft Shadows) f/8	Cloudy Bright (No Shadows) f/5.6	Open Shade † or Heavy Overcast f/4

* f/5.6 for backlit close-up subjects
† Subject shaded from sun but lighted by a large area of sky

You can use a camera's built-in meter for manual exposure. (Below is yet another way you may see information displayed in a film camera's viewfinder. Depending on your exposure, one of the three indicators would light up.) Point the camera at the most important part of the scene and activate the meter. The viewfinder will show whether the exposure is correct. If it isn't, change the shutter speed and/or aperture until it is.

To prevent blur caused by the camera moving during the exposure (if the camera is not on a tripod), use a shutter speed of at least 1/60 sec with a 50mm lens. A shutter speed of 1/125 sec is safer.



Taking Your Picture

HOLD THE CAMERA STEADY

For horizontal photographs, keep your arms against your body to steady the camera. Use your left hand to support and focus the camera, and your right forefinger to press the shutter release.



For vertical photographs, support the camera in either your right or left hand. Keep that elbow against your body to steady the camera.



A tripod steadies the camera for you and lets you use slow shutter speeds, such as for night scenes or other situations where the light is dim.



TAKE A PICTURE

Make an exposure. Recheck the focus and composition just before exposure. When you are ready to take a picture, stabilize your camera and yourself and gently press the shutter release all the way down.



Make some more exposures. You might want to try several different exposures of the same scene, perhaps from different angles. See opposite page for some ideas.



Keep a record of your exposures. With film cameras, write down the frame number, subject, f-stop and shutter-speed settings, and any other relevant information. Then you won't forget what you did by the time you develop and print the film. Digital cameras record much of the technical data automatically but you may still want to note details about the subject or a reminder of your intent.

NOTE: What to do when your camera won't let you take a picture

- Make sure the camera is switched on and you have some indication—a signal light or menu display—of electrical power.
- Check that the battery is installed properly. If not, reinstall.
- If the battery is properly placed, rub the top and bottom of the battery with a pencil eraser to clean the contacts. If this doesn't work, replace the battery.
- Make sure you have the appropriate memory card or film in the camera. If you do, reload the film or re-seat the card in case it's not engaged properly.
- If you are taking a close-up, try moving back. Try changing from autofocus to manual.
- With a manual film camera, advance the film or move the advance lever.
- Try a new roll of film or a new memory card; the one you are using may be damaged.

DOWNLOAD THE PICTURES: DIGITAL CAMERA

When your memory card is full, or you are finished with a shooting session, download (transfer) the picture files to a computer or portable storage device and—for safety—back them up by duplicating as soon as possible. You can download files from the camera through a cable, or remove the card to a card reader. Erase (or reformat) the card from the camera's menu or the computer when you are certain the files are safely stored.



REWIND THE FILM: AUTOMATIC FILM CAMERA

Some cameras rewind automatically at the end of a roll. Others send a signal when no more frames are available, then rewind when you press a rewind button. Rewind the film back into its cassette before opening the camera. Store film away from light and heat until developed.



REWIND THE FILM: MANUAL FILM CAMERA

You'll know that the roll of film is at its end when the film advance lever will not turn. The film-frame counter will also show the number of exposures you have taken. Activate the rewind button at the bottom of the camera. Lift the handle of the rewind crank and turn it clockwise until its tension releases.



What Will You Photograph?

Some Basic Guidelines to Get You Started

WHERE DO YOU START?

One place to start is by looking around through the viewfinder. A subject often looks different isolated in a viewfinder than it does when you see it surrounded by other objects. What interests you about the scene? Why do you want to photograph it?



GET CLOSER (USUALLY)

Often people photograph from too far away. What part of the scene attracted you? Do you want a picture of your friend from head to toe, or are you interested in the expression on her face?



LOOK AT THE EDGES

How do the edges of the photograph intersect the subject? Does the top edge cut into the subject's head? Is the subject down at the bottom of the frame with a lot of empty space above it? See what you've got and see if you might want something a little different.



LOOK AT THE BACKGROUND (AND FOREGROUND)

How does your subject fit within its surroundings? Will details in the background detract from your main subject? Is there a pole or a tree that appears to grow out of someone's head?



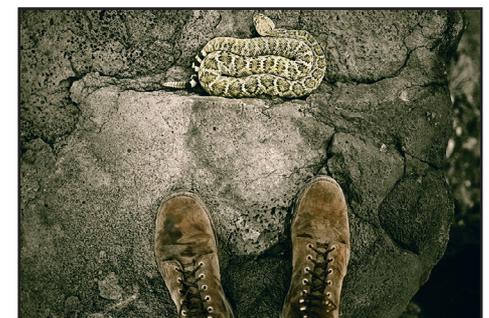
CHECK THE LIGHTING

Is the light more or less even overall? If these are your first pictures, you are most likely to get a good exposure if you photograph an evenly lit scene, not one where the subject is against a very light background, like a bright sky.



BUT WHY NOT EXPERIMENT, TOO?

See what happens. Include a bright light in the picture (but don't stare directly at the sun through the viewfinder). Try a different angle. Instead of always shooting from eye level, try getting up high and looking down, or try kneeling and looking up.



What Will You Photograph?

continued

Photographing People

A good portrait shows more than merely what someone looks like. It captures an expression, reveals a mood, or tells something about a person and about the photographer, too. Props or an environmental setting are not essential, but they can help show what a person does or what kind of person they are.

Put your subject at ease. To do this, you have to be relaxed yourself, or at least look that way. You'll feel better if you are familiar with your equipment and how it works so you don't have to worry about how to set the exposure or make other adjustments.

Don't skimp when shooting portraits. Taking three, four, or even a few dozen shots to warm up can get your subject past the nervousness that many people have at first when being photographed.

Try to use a fast enough shutter speed, 1/60 second or faster with a 50mm lens, even if you are using a tripod, so you can shoot when your subject looks good. If you have to ask them to "hold it," they are likely to produce a wooden expression. **NOTE:** If you are hand holding the camera, be sure to use a faster shutter speed with a long-focal-length lens.

Photographing close to home can be an easy place to start—or a difficult one. Conventional portraits or snapshots are pleasant and fun, but someday you may want to move beyond them to a more personal image, one that reveals more about the person you are photographing or your relationship with them.

NICHOLAS NIXON
Bebe, Sam, and Clementine, Cambridge, 1990

What makes a portrait? A tight cropping that shows only part of a scene can tell as much about people and their relationships as a more conventional portrait. For a series of family portraits, the photographer used a view camera loaded with individual sheets of film. He included the characteristic edges of the film as part of the photograph.



LARRY SULTAN
My Mother Posing for Me, 1984

To see our parents is to see ourselves. It can reveal how we feel about them and about ourselves, as well as something about who we might or might not become. Larry Sultan's book *Pictures from Home* is a complex view of his family that contains old family snapshots, stills from home movies, text by Sultan, and commentary from his parents, in addition to the pictures he made of them.



Some pictures of people look unplanned, made either without the subjects knowing they are being photographed or without seeming posed or directed by the photographer. It isn't always easy to tell if a photograph was posed or not.

Set your camera's controls beforehand if you want to be relatively inconspicuous at a scene. Prefocus if you can, although that may not be possible. Longer-focal-length lenses require more critical focusing than do shorter lenses. A camera with automatic focus can help you work unobtrusively.

A fast shutter speed is even more important for unposed photographs of people than for planned portraits. Your subject is likely to be moving and you are likely to be hand holding the camera rather than using a tripod. A fast film or high ISO setting will be useful; 400 works well in most situations.

DR. PETER MAGUBANE
Zulu Women

Portraits showing very different cultures—from the photographer's or from the viewer's—are better when the photograph conveys more than just that difference. Magubane, who lives in South Africa, preserves tribal costumes and rituals in his series Vanishing Cultures of South Africa. But his photograph presents more than just the exotic; the bold colors form the kind of strongly graphic composition that would make a compelling image of any subject.



MASSIMO VITALI
Jardin du Luxembourg,
Paris, July, 2000

Gatherings reveal clearly the way people interact—or choose not to. Vitali erected a scaffold eighteen feet above the grass to achieve an unusual perspective on an urban weekend. His large, highly detailed prints can be seen as an array of individual portraits in one picture.



What Will You Photograph?

continued

Photographing Places

How do you photograph a place? Most important is: What do you want to remember or communicate to someone who hasn't been there? What is the best—or worst—part of the place for you? Do you want a large vista or a close-up of a small part of a scene? What feeling do you get from being there? Look at a scene from different angles, walking around it to view it from different positions. Get closer or step back to see a scene from farther away. When you are close to an object, even a slight change of position will alter its relation to the background. Change your point of view and a subject may reveal something you didn't see at first.

STUART ROME

Horsetail Falls, 1996

Your favorite place can seem more remarkable from a well-chosen vantage point. Shooting these falls from underneath an overhang framed the water with a curtain of ledge. The delicate softness of the blurred waterfall makes a contrast with the hard darkness of the surrounding rock.



MITCH DOBROWNER

Rope Out,
Regan, North Dakota 2011

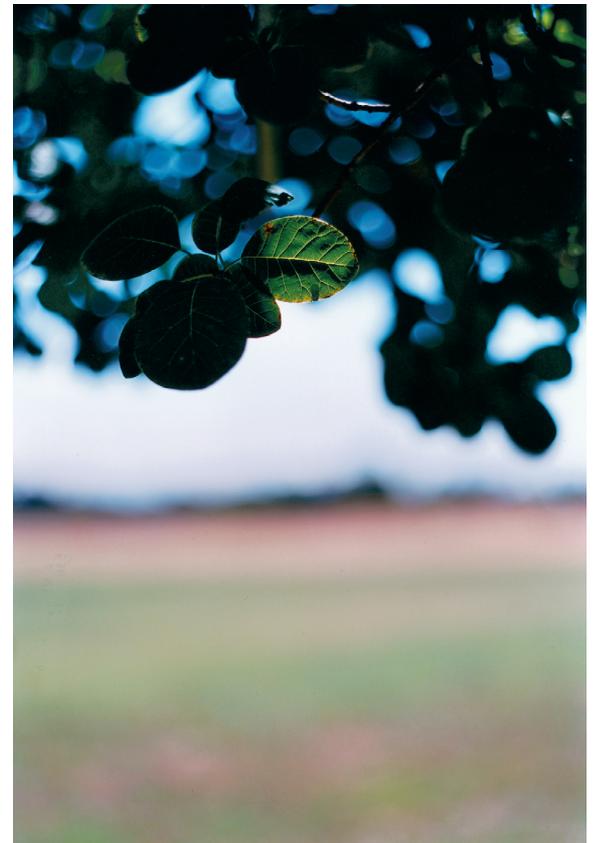
It's not just the land that makes a landscape. The sky offers an unpredictable and ever-changing element. Dobrowner, who awoke that morning feeling that "something was going to happen," heads into inclement weather with his camera, rather than avoiding it. This tornado, one of four from the same storm, touched the ground for about fifteen minutes.



TERRI WEIFENBACH

1. August 1998

A scene doesn't have to be fully described to communicate effectively. Weifenbach concentrates on the play of light on a single leaf to suggest the entire environment.



JEM SOUTHAM

Bolenowe Moor, Cornwall, England. From *The Red River* 1982-1987

Time of day is important in setting a mood. Warm interior light contrasts with the coolness of failing daylight, suggesting a human presence and giving life to the scene.

