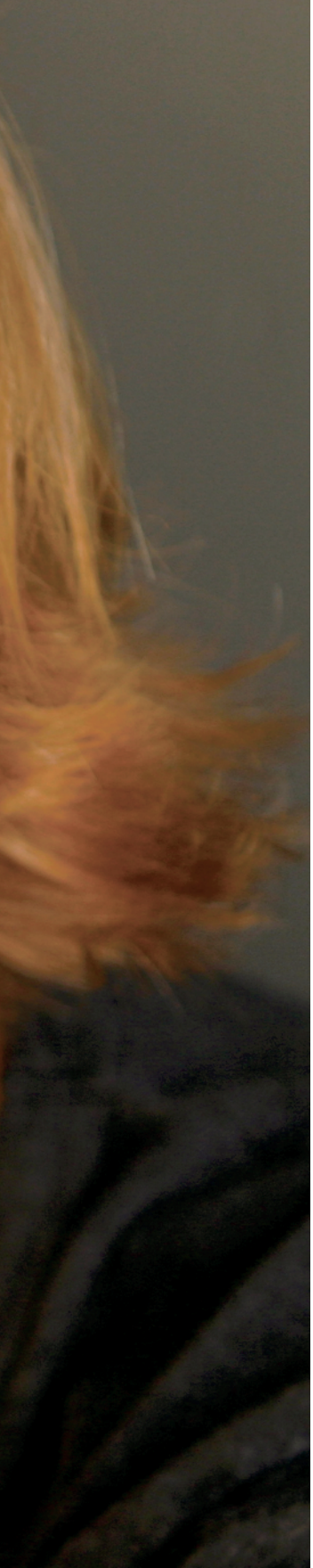


CHAPTER 1

WHAT YOU MUST KNOW ABOUT PHOTOGRAPHING PEOPLE

Before you dive headlong into your pursuit of photographing people, it is helpful to know some basics about how to best approach your subject, compose the photo, recognize the lighting, and use the equipment you have at your disposal. This chapter outlines these basics to get you started right as you begin to photograph people — whether a candid shot or a posed portrait.

OBSERVE AND CONNECT WITH PEOPLE

A person's appearance, personality, and relationships are interesting and unique, but how do you capture any of this in a photograph? Take the time to notice a person's special qualities, observe how they react, and make an effort to authentically connect. People want to feel respected, appreciated, and comfortable, and if you show an interest in them, they will respond to you and your camera. When you are photographing people, you are in a relationship, whether it lasts for a few minutes, a few hours, or a lifetime.

WHO ARE YOU PHOTOGRAPHING?

Decide what interests you about the person. Maybe the person has bright red hair and freckles, piercing green eyes, or a furrowed brow-of-experience. In addition to noting the unique physical attributes of your subject, ask yourself the following questions:

- What is the relationship you have with this person?
- What is the relationship between the people you are photographing?
- What message are you trying to convey?
- What is the intent of this image?

These are all questions to think about when you plan to take pictures of people. Everyone interprets the world a little differently; show the world what you see in this person. For example, in 1-1, you'd never have known that Dylan was shy at first and quite serious. After a few funny stories, we laughed, and he felt comfortable enough to let me get up close and photograph his great freckles.

CAPTURE A SPECIAL MOMENT

A moment in time — that is what a photograph captures. But what is a special moment? How do you find it, and how do you encourage it?

One of my favorite photographers, Henri Cartier-Bresson, defines the decisive moment in a photograph as "the simultaneous recognition, in a fraction of a second, of the significance of an event as well as the precise organization of forms which gives that event its proper expression." Whew! My translation — in a nanosecond, you must identify a special moment, have an intuitive sense of composition, and express what you see by capturing it with a camera.

You as the photographer need to decide when that moment occurs, whether it's a glance, an emotion, or a gesture that you think is important. You find that moment by observing what is going on around you and capturing it with technical confidence.

DIRECTING PEOPLE

There are two "directing" extremes when photographing people. One is to observe and be stealth-like in your approach; however, your

ABOUT THIS PHOTO *An authentic personality is easy to catch if you and your subject share a laugh. Taken at ISO 400, f/3.5, 1/60 sec. with a Canon Macro EF 50mm f/2.5 lens.*

subjects may never know you are photographing them and have no connection to you or the camera. The other extreme is to pose people and demand a certain look, which may result in an unnatural-looking photograph with no depth of character or personality. I think there are many shades of gray between these two extremes, and choosing the best approach depends on what you intend to capture. Throughout this book I share some ideas, stories, and techniques that I have used to connect with people and encourage that special moment.

The following is a story about how I directed and connected with a four-year-old named Sophia, who initially was not too happy about having her photograph taken, as shown in 1-2.

When I arrived at Sophia's house to photograph her family, she was intimidated by the activity, the photo equipment, and the presence of two people she didn't know: my assistant and me. She ran from us as we walked in the door. I had my camera, lenses, a tripod, diffuser, and reflectors along with some props: bubbles, a mirror, and long swaths of fabric netting. My goal was to create special family photographs depicting relationships and capturing special moments.

ABOUT THIS PHOTO *At first, Sophia felt I was an intruder. I like this picture, because she has a real expression on her face. Taken at ISO 200, f/4.0, 1/350 sec. with a Canon EF 70-200mm f/2.8L lens.*

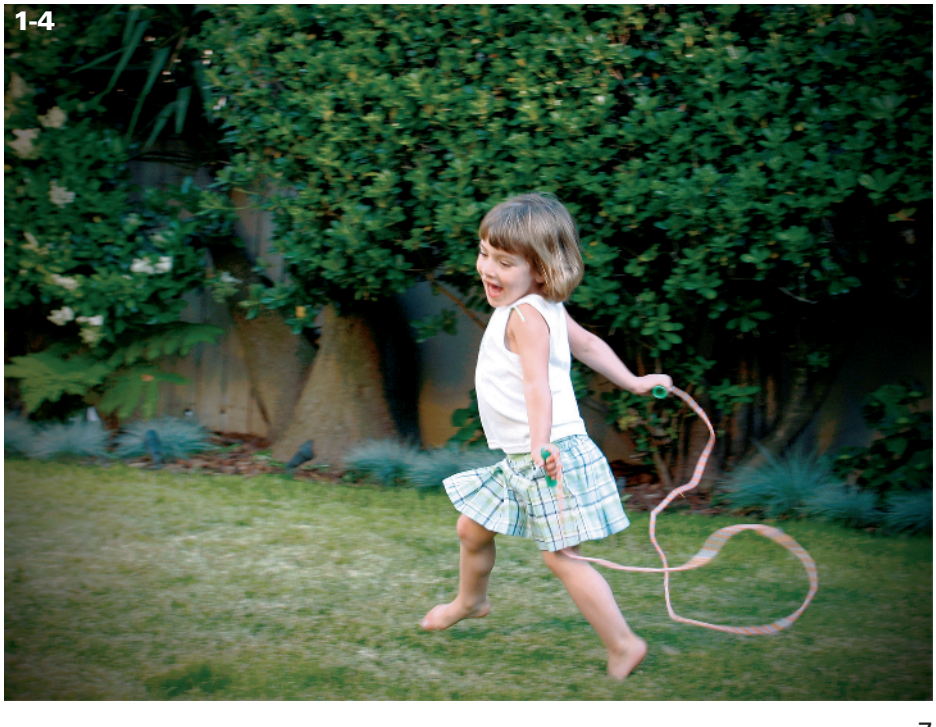
I began the shoot by talking with everyone and gathering them all together for various shots where they were casually positioned, both standing and sitting. We laughed and conversed between the shots. When I was shooting the pictures, I kept talking and gave them feedback about how they looked and direction on what to do.

I moved the family to the backyard, turned on some music, and helped Sophia blow bubbles in an effort to gain her confidence. I gave her some fabric netting to play with, and still defiant, she gave a sourpuss look off-camera. It took a while to build the trust, but eventually I was able to capture some great action shots of Sophia running around in the backyard, oblivious to being photographed, as shown in 1-3 and 1-4, capturing the kind of special moments I'd hoped for.

tip

When you're having your picture taken, you can't see how you look, which makes some people very self-conscious. People need feedback from their photographer. Encouraging comments and direction really help your subjects loosen up in front of the lens.

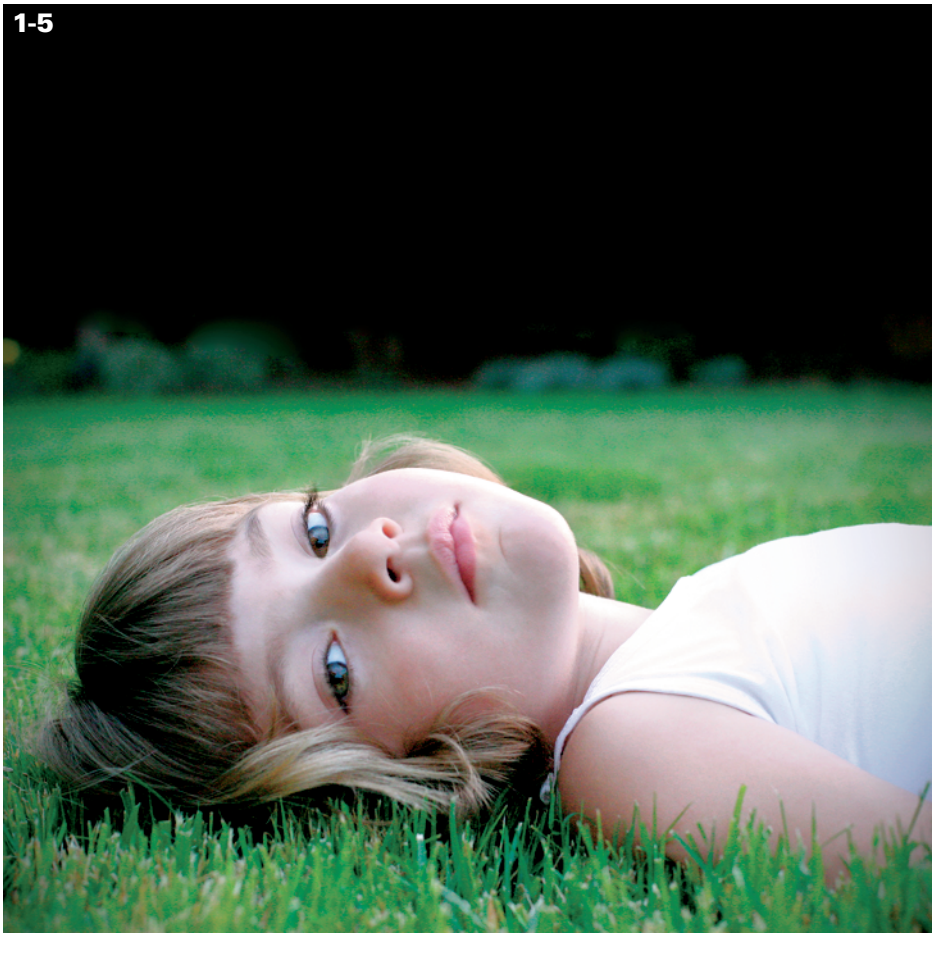
ABOUT THESE PHOTOS *Kids love action and movement. It takes their mind off being photographed and possibly having to say the word "cheese." Taken at ISO 200, f/4.0, 1/250 sec. with a Canon EF 70-200mm f/2.8L lens.*



The poignant, "decisive moment" occurred after all the activity waned and the photo shoot was officially over. I told Sophia I wanted to roll around in the grass, and asked if she would show me how. The beautiful resulting shot is 1-5.

COMPOSE YOUR PICTURE

What is a well-composed photograph? There are rules to follow and rules to break, but thoughtfully composing your photograph makes the difference between a mediocre image and an amazing image.



ABOUT THIS PHOTO
Here is the magical moment that was captured. Taken at ISO 400, f/5.6, 1/180 sec. with a Canon macro EF 50mm f/2.5 lens.

To compose your shot is to look through the viewfinder and interpret what you see. Keeping some basic rules in mind and recognizing certain design elements prior to pressing the shutter button enables you to create an image as opposed to just taking one.

LEARN CREATIVE TECHNIQUES TO COMPOSE YOUR PICTURE

When you're beginning to learn the basics about composing your image, remembering everything while you're looking through your viewfinder can be difficult. Start with one technique per situation, and, with practice, composing your photograph will become second nature.

The following are a few techniques to practice when taking photographs:

- **Experiment and take a lot of photographs.** Even after you think the picture taking is over, you never know when that magical moment will happen. Be prepared to capture unexpected moments.
- **Fill the frame with your image.** Look at the background and get rid of any distracting elements. Seeing people up close provides immediate impact and a feeling of intimacy.
- **Include a natural frame in your photographs.** Using an overhanging tree branch, doorway, or archway in the foreground creates more visual interest.
- **Place your subject off-center.** A face right in the center of an image is great for a driver's license or passport photo, but when it comes to artfully composing a shot, consider the Rule of Thirds. Think of your entire scene as a tic-tac-toe board, and place something of interest at one or more of those intersections.
- **Incorporate basic design elements in your photographs.** These basic elements include perspective, focal point, line, repetition, pattern, texture, color, symmetry, and contrast.

For more details about all the elements of composition and basic design elements, see Chapter 4.

TELL A STORY

Interesting and meaningful portraits are created by telling a story visually, as shown in 1-6, 1-7, and 1-8. If you watch a great movie or TV show and notice how it's edited together, you might see a wide shot of a room, then a medium shot of someone's face, then a close-up of a foot or hand or other detail in the scene. A series of images like this, when presented together for the viewer, tells a story, creates interest, and draws us in. The same principle applies when telling a story with still images.

ABOUT THESE PHOTOS *Each image in the series of 1-6, 1-7, and 1-8 is a progression in the process of telling a story. If you did not speak English, you would still be able to "read" the story visually. Taken at ISO 400, f/4.0, 1/125 sec. with a Lensbaby selective focus lens.*


1-8

UNDERSTAND LIGHT

Over the centuries, artists have translated their visions and impressions of light with a brush on canvas; you as the photographer have an opportunity to express yourself and capture light in a photograph. To understand and "see" light, it's important to know about the variations of light and how to identify those differences.

There are many types of light, both natural and artificial, but to see light as a photographer is to recognize the quality and direction of light and how it falls upon your subject. The source of light, the intensity, the angle, the color, the shadows and highlights that light creates, and where you place your subject all affect the look of your final image. Consider the following:

- Is your light source large (sun) or small (flashlight)?
- How intense is the light — harsh or soft?
- What color is the light; is it a gray overcast day or a golden sunset?
- Is the light directly overhead or hitting your subject at an angle?
- How can you modify the light to enhance your subject?

Searching for and creating flattering light is possible when you know what to look for. Once you learn this new language of light, the world opens up with many more photographic opportunities, and your images dramatically improve.

x-ref

In Chapter 3, I cover the subject of light in more detail, but these are the basic considerations.

ABOUT THIS PHOTO *Photographing people during the golden hours is an easy way to capture a beautiful portrait. Taken at ISO 400, f/5.6, 1/90 sec. with a Canon EF 70-200mm f/2.8L lens.*

FLATTERING LIGHT

One way to create flattering portraits is to shoot during the *golden hours*, generally the first hour and last hour of sun during the day. At these times, your subject can face the sun without squinting, because the light is diffuse and soft and it's easy to capture a sparkle in the eye. After just a few photographs, you will begin to notice how the low angle of the sun and the soft intensity of the light make a big difference in the quality of your images — and everyone will love the photos. In figure 1-9 it was a late summer sunset at the beach and I knew that by facing my subject towards the soft, setting sun, it would illuminate her face with a beautiful golden glow.


1-9

If you don't have soft, afternoon light, another way to flatter your subject's features is to use a whiteboard or soft, gold reflector to reflect light back into the dark areas of the face, as demonstrated in 1-10. Given most people aren't thrilled


1-10

ABOUT THIS PHOTO *A gray day required using a gold reflector to help brighten up the faces in the family photo. Taken at ISO 200, f/4.5, 1/125 sec. with a Canon EF 24-105mm f/4L IS lens.*

to see pictures of themselves with under-eye shadows and wrinkles, reflecting soft, even light back into the face will make them much happier with the resulting photograph, as you can see in 1-11.

Now you can begin to search out flattering light in every situation. After learning that reflected light brightens my face, fills in shadows, and camouflages wrinkles, I have taken to standing near large white walls and understand the many benefits of restaurants with soft light and white tablecloths. As a result, I look better!

WHAT OUR EYES SEE

It's frustrating when your images don't convey what you intended to capture. If you've taken a high-contrast digital photograph and noticed that the shadows and highlights in the image have little to no detail, you are not alone. Many people don't realize that our eyes recognize a broader range of light than a camera is capable of recording. We can see the details in dark shadows and bright highlights that our cameras cannot capture. Keeping this in mind when you are composing your scene enables you to choose the best locations for a shot and gives you a better chance of correctly exposing your image.

x-ref

In Chapter 3, I provide more technical information to help you measure the difference between the light you see and the light the camera records.

KNOW YOUR EQUIPMENT

The light is beautiful, your subjects are positioned and comfortable, and you are composing your shot — this is not the optimal time to learn the basics about your equipment. If you are floundering with the technical fundamentals, you might miss that magic moment. Using the camera and lenses needs to become second nature to you, so you can concentrate on creating the best image. Learning about the basics in increments and

ABOUT THIS PHOTO
I zoomed in to capture the flattering light created by the gold reflector. Taken at ISO 200; f/4.5;1/125 sec. with a Canon EF 24-105mm f/4L IS lens.

practicing along the way is a good recipe for success. Following is a brief overview of some basic equipment essential to beginning your photographic journey.

MEGAPIXELS

A digital image is made up of thousands of tiny, tile-like, colored squares called *pixels*, and one million pixels equals one *megapixel* (MP). This is important to know because digital cameras measure *resolution* (the quality of the image) in megapixels. For example, a 7MP camera produces an image capable of being printed at 11" × 14" or possibly larger, while still retaining sharpness and detail. Think about your final product: If you need to print out large images, make sure you are using a camera with the appropriate number of megapixels.

MEMORY CARDS

Memory cards are the recording medium for digital cameras — the digital camera writes the image data to the removable memory card as you shoot. Because memory cards are available in many shapes, sizes, and speeds, and some are proprietary to the manufacturer's camera, refer to your camera manual, or to the memory card itself, to identify which variety your camera accepts. When you purchased your camera, a small-capacity memory card was probably included, typically 16MB (*megabyte*); however, I'm sure you quickly discovered that a 16MB memory card does not hold very many images.

Pay attention to the memory card capacity and make sure you purchase at least one 1GB (*gigabyte*) memory card. For example, a 7MP camera set at the highest resolution with a 1GB memory card holds approximately 280 images — Table 1-1 outlines the general capacities of various memory card sizes, based on camera pixels. Having a 1GB media card enables you to shoot images continuously without running out of room, and you avoid having to download your images to a computer in the middle of a shoot. Memory cards are also very fragile, so be careful when you take them out of the camera. Keep them away from magnetic sources and curious dogs that enjoy chewing on plastic — these could damage your card and result in lost images.

BATTERIES

Digital cameras use either a rechargeable battery pack or traditional batteries. And, digital cameras

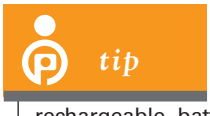
Table 1-1

Approximate Memory Card Capacities*

Memory Card Size	*5MP Camera*	*6MP Camera*	*7MP Camera*	*8MP Camera*	*10MP Camera*	*12 MP Camera*
	Number of images					
512MB	280	232	140	120	116	90
1GB	560	464	280	240	280	232
2GB	819	640	560	480	409	320
4GB	1,628	1,280	1,120	960	814	640

** These numbers are approximate. Check your digital camera manual and LCD viewfinder to confirm the number of images your memory card holds in relation to your camera's resolution settings.*

use significantly more power than traditional film cameras. Although traditional cameras need their batteries replaced after approximately every 15 rolls of film shot, your digital camera may run out of batteries before you've filled up the media card, especially if you view multiple images on your LCD screen in between shots. Constantly viewing your images on the LCD screen reduces battery life quickly.



I recommend buying an extra battery pack or investing in rechargeable batteries and always having extras on hand.

COMPACT DIGITAL CAMERAS

Compact digital cameras are better than ever now with improved sensors, bigger LCD screens, and lots of features — some can even capture video. The main appeal is that you can carry them with you everywhere so you never miss a shot. In spite of their small size and lack of an interchangeable lens, it is possible to capture some fantastic images of people with these cameras just by learning a little about the basic functions. Given that there is not a standardized design for the functions and features on different manufacturers' cameras, you may need to consult your camera manual to find the following modes:

- **A and P.** Automatic (Auto) and Program (P) modes are the most common modes people use when shooting with a compact digital camera. Automatic is fully automatic: The camera makes all the decisions. Program is an advanced automatic setting that allows you to make decisions about the flash, white balance, and drive mode. When it is in these Auto modes, your camera makes its best guess in determining the exposure by focusing, reading the light in the scene, and automatically choosing a shutter speed, aperture, and white balance.

Using the automatic modes can result in acceptable images, and they are a good place to begin, but you won't have much control over the outcome unless you use some of the scene/creative modes too.

- **Portrait mode.** Likely represented as a head icon on your mode dial. When you select the Portrait mode, the camera adjusts the aperture and shutter speed for you, minimizing the depth of field (DOF) for a soft background effect that isolates your subject from the background.
- **Sports mode.** By setting the camera to Sports mode, usually indicated with a runner icon, your camera automatically chooses the fastest shutter speed possible, given the situation. Some cameras also activate Continuous Shooting mode (instead of Single Frame) and disable the flash. This setting also works well for capturing active subjects and candid moments.
- **Macro mode.** Using the Macro mode, which is usually represented by a flower, enables you to focus closer to your subject and capture details in your images that were previously too small or out of focus. Just because the Macro mode is represented by a flower doesn't mean that flowers are the only allowable subject. With Macro mode you can take close-up photos of people and capture every freckle and eyelash in perfect detail.
- **Landscape mode.** Generally represented by an icon that looks like a mountain range, Landscape mode (also known as *Infinity mode*) automatically uses a small lens aperture that provides maximum sharpness for distant and wide-vista scenes. This mode is also useful when photographing groups of people that are positioned at various distances from the camera.

Here are a couple of ways to control the light on your subject:

- **Flash mode.** A lightning bolt icon is located on the back of your camera representing the Flash mode. Set your Mode dial to P, which allows you to cycle through all your flash options. Some compact cameras require you to use the Manual mode in order to use the full features of your flash. Selecting the forced flash option enables you to use the flash outside in bright light, filling in harsh shadows on faces.
- **Exposure compensation.** Digital cameras have an additional feature that controls the amount of light hitting your camera's sensor; it's called *exposure compensation*. Adjusting your exposure compensation to add more light (+) or reduce light (–) is a quick, semi-automatic way to adjust how the camera records the light in your scene. By using exposure compensation, you still don't have total creative control over your camera, but you can make your image appear lighter or darker.

Have you wondered what zoom on a compact camera really means? Camera manufacturers often refer to *digital zoom* and *optical zoom* when marketing a compact digital camera. Optical zoom is the important feature because it refers to the lens optics and results in getting you closer to your subject without sacrificing image quality — a true zoom. The lens is not removable on a digital compact camera or a larger super-zoom variety, but both cameras refer to *focal length* as "X." For example: From your location, 3X optical zoom gets you three times closer to your subject, and 10X optical zoom gets you ten times closer to your subject. Digital zoom doesn't actually result in a closer shot, the camera is simply zooming and cropping so the image you are focused on appears larger, but the result is a lower-quality image than if you were zooming with an optical zoom.

dSLR CAMERAS

The d stands for digital and the SLR for single lens reflex. The camera's reflex mechanism is a series of mirrors and prisms inside the body that reflect the image coming through the lens to your optical viewfinder. Digital SLR cameras are similar to traditional film SLR cameras, except that an image sensor captures your images and records them onto a media card instead of film.

In addition to the compact camera scene modes listed in the previous section, a dSLR also includes two more modes that are helpful when shooting pictures of people:

- **Shutter priority.** Referred to as Tv. You set the desired shutter speed, and the camera automatically adjusts for the proper aperture exposure. This is a good setting to use when you need control over movement in your image. You can choose to freeze the action or blur it, depending on your shutter speed selection.
- **Aperture priority.** Referred to as Av. You set the desired aperture, and the camera automatically adjusts for the proper shutter speed exposure. Use this setting to control your depth of field. This is great for isolating your subject and blurring out the background with a wide aperture.

While compact digital cameras have some great uses, there are several big advantages that dSLRs have:

- **Image quality.** A larger image sensor provides larger pixels, and more of them, for greater detail in your images. Enhanced ISO capability leads to faster shutter speeds and less noise (a grainy appearance at higher ISOs, usually 800 or higher) in your images.

- **Speed.** You experience faster start-up and focusing, less shutter delay, and more frames per second for shooting images in sequence; dSLRs are great for taking pictures of kids, animals, sports, or anything else that moves.
- **Creativity.** Manual modes allow for greater control. Manual mode is what most professional photographers use.
- **RAW format capability.** RAW files are uncompressed and therefore offer more options and control over your final image.

For more information on file formats and how to choose the best one for you, see Chapter 10.

- **Lenses.** You have the ability to swap lenses for different perspectives and effects.

CHOOSE LENSES FOR YOUR dSLR

There are various lenses available for a dSLR camera, and each type of lens has different capabilities. The choice of a lens is based on the results you want to achieve in your images. Depth of field, lens aperture, and lens focal length are determining factors in the creation of your image.

DEPTH OF FIELD

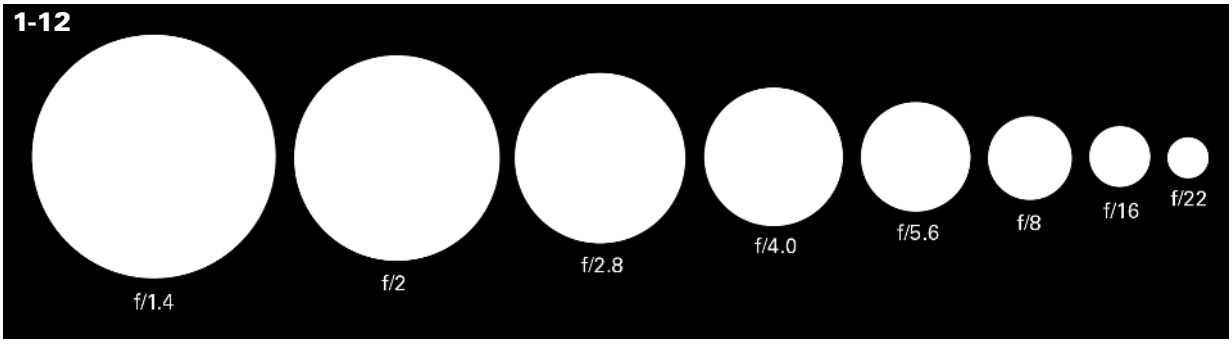
Depth of field (DOF) refers to the zone of sharpness in your image. Your DOF is deep if most of your scene is in focus; it is shallow if a small area is in focus. The human eye is drawn to the part of an image that is sharp and in focus. As a photographer, you can creatively use DOF to direct the viewer's eyes to the important elements in your photograph. There are three ways you can control DOF:

- **Distance to your subject.** An image taken in close proximity to your subject produces a shallow DOF. An image taken at a considerable distance from your subject will have a deeper DOF.
- **Aperture selected.** Aperture can be confusing because a large f-stop number (f/22) represents a small lens opening and a small f-stop number (f/2.8) represents a large lens opening. It's easier to think of it like this: A large aperture (f/2.8 or f/4) provides a shallow DOF; for example, your subject is in focus but the distant mountain range is blurred. A small aperture (f/16 or f/22) provides a deep DOF; for example, both the subject and the distant mountain range are in focus. Using a small aperture is a good way to ensure the environment surrounding your subject is in focus. In images by Ansel Adams, he used a very small aperture to capture sweeping vistas of the environment in minute detail.
- **Lens focal length.** Short focal length lenses (for example, 17-35mm) have a large field of view. Long focal length lenses (for example, 70-200mm) have a narrow field of view.

LENS APERTURE

Measured in f-stops, a *lens aperture* is a mechanical iris inside of the lens that opens and closes to varying degrees to control the amount of light hitting the digital camera's sensor. Think of the aperture of your camera lens as the pupil in your eye. In a dark room, your pupils enlarge and open up to let in more light — in bright light, your pupils constrict to let in less light. The aperture f-stops on your lens control light in the same manner, as shown in figure 1-12.

ABOUT THIS IMAGE *Standard aperture openings are f/1.4, f/2, f/2.8, f/4, f/5.6, f/8, f/16, and f/22.*



If it starts to get confusing, just remember, a larger aperture (for example, f/1.4, f/2, f2.8, or f/4) lets in more light and gives you a shallow DOF. Use a larger aperture to isolate your subject and blur the background, as shown in 1-13.

A smaller aperture (for example, f/16 or f/22) lets in less light and gives you deeper DOF. Use a smaller aperture to render your entire scene in focus, as shown in 1-14.

ABOUT THIS PHOTO *An example of shallow DOF using a large aperture. Taken with a Canon EF 70-200mm lens at f/2.8.*

ABOUT THIS PHOTO *An example of deep DOF using a small aperture. Taken with a Canon EF 24-105mm lens at f/22.*

1-14

x-ref

Learn how aperture, shutter speed, and ISO combine to create a good exposure in Chapter 3.

A lens with a larger maximum aperture (for example, f/2.8) is considered a "fast" lens because more light passes through the lens, allowing a faster shutter speed. A lens with a smaller maximum aperture (for example, f/5.6) is "slow" because less light passes through the lens and requires a slower shutter speed. A fast lens is optimum when shooting in low-light situations and for creating a shallow DOF. Due to the high-quality optics, these lenses are heavier and more expensive.

Made of optical glass or plastic, a lens attempts to duplicate the human eye by seeing an image, focusing, and transmitting its colors, sharpness, and brightness through the camera to the digital sensor. Many types of lenses are available for your dSLR, and understanding how they work helps you gain creative control over your image. Choosing the right lens is a tradeoff between cost, size, weight, lens speed, and image quality.

Before you purchase a lens, know that lenses are not interchangeable between camera brands. A lens mount is the point of connection between the lens and your dSLR, and these connections are proprietary to the camera manufacturer. A lens designed for a Canon camera will not work on a Nikon camera. If you're interested in purchasing a third-party lens, manufacturers do produce lenses with mounts to fit all the major dSLR cameras manufactured.

LENS FOCAL LENGTH

The focal length of a lens, which is displayed on the barrel of the lens, establishes the field of view for the camera. The following is a description of the various lenses and their focal lengths:

- **Standard lens.** A lens with a focal length of 50mm is considered a normal, all-purpose lens because it closely approximates what your eyes see. With its natural angle of view and perspective, a standard lens captures the subject plainly, with no special effects; but you can use standard lenses in creative ways by varying the subject's distance, aperture, and angle.
- **Telephoto lens.** The focal length of a telephoto lens ranges anywhere from 60 to 1000mm; acting like a telescope, it magnifies your subject and narrows the field of view. Images taken with a telephoto lens have a flattened perspective and a shallow DOF. This lens is ideal for portraits because you can isolate your subject from the background and the perspective is very flattering.
- **Wide-angle lens.** The focal length of a wide-angle lens is any measurement less than 50mm, but is typically 17-28mm. Traditionally used for environmental portraits or special-effect images, this lens exaggerates or stretches perspective and distorts the view if your subject is too close to the camera. At close range, a wide-angle lens can produce comical, distorted images, and it is not considered a flattering choice for portraits.
- **Macro lens.** Macro lenses have various focal lengths, (for example, 50mm, 65mm, and 100mm), and unlike other lenses, enable you to photograph your subject from a very close distance without distortion. Shooting with this lens not only produces images with a different scale, but it also focuses your viewer's attention on details that might otherwise go unnoticed — your images will have a close-up, intimate feel.
- **Selective focus lens.** Traditionally used to correct the converging lines of buildings as you composed your shot from the ground, selective focus lenses provided a solution to the unnatural perspective problem. Now these lenses and other selective focus lens variations are also used for a contemporary effect. You can manually control the lens to find a sweet spot of focus in your image and artfully blur other elements, producing a dreamlike aesthetic. See 1-6 for an example of selective focus.
- **Focal length multiplier.** This is also known as the dSLR *crop factor*. Now that I've told you all about lens focal lengths, here is one more factor that can affect the perceived focal length in your final image. In the beginning, a 35mm SLR camera and lens would capture images and record them onto film. Now with dSLRs, the image is captured by the camera's sensor and recorded onto a media card. Many dSLR cameras have a sensor smaller than the

35mm photographic film frame and only capture part of the information projected by a lens. This results in a cropped field of view, which makes images appear as though you are shooting with a longer lens. To compute the focal length, you must know your dSLR crop factor or multiplier; this information is included with your camera. The three most common multipliers are 1.5, 1.6, and 2.0. For example, if you attach a 100mm lens to a dSLR with a 1.5 crop factor, it captures images as a 150mm lens (100mm × 1.5 = 150mm).

More expensive dSLRs have a full-size sensor, capable of capturing images without a crop factor; however, unless your image requires a wide-angle look, shooting with a longer focal length can be very flattering to your subject.

An *f-stop* is a fraction that indicates the diameter of the aperture. The f stands for the focal length on the lens, the slash (/) means divided by, and the number represents the stop in use.

The photo was taken at ISO 1600, f/11, 1/640 sec. with a Canon EF 24-105mm f/4.0L IS

Remember to visit www.pwsbooks.com after you complete this assignment an share your favorite photo! It's a community of enthusiastic photographers and great place to view what other readers have created. You can also post comme and read encouraging suggestions and feedback.