

16

week

USING NATURAL LIGHT

Light from the sun varies over the course of a day. Understanding how this variation in natural light affects the subjects you want to shoot is one of the key skills necessary to becoming a well-rounded photographer.

In this module, you will:

- ▶ **assess the effect of different light positions** on photographs;
- ▶ **examine the theory of light and shade** and see how different angles of light can affect your image;
- ▶ **try it yourself** by playing with the effects of light and shade during a step-by-step photoshoot;
- ▶ **explore** the potential for light and shade in your photographs with six guided assignments;
- ▶ **review your photos** and see how you can avoid or correct some common light problems;
- ▶ **adjust your photographs** using Levels;
- ▶ **review** your understanding of light and shadow and see if you're ready to move on.

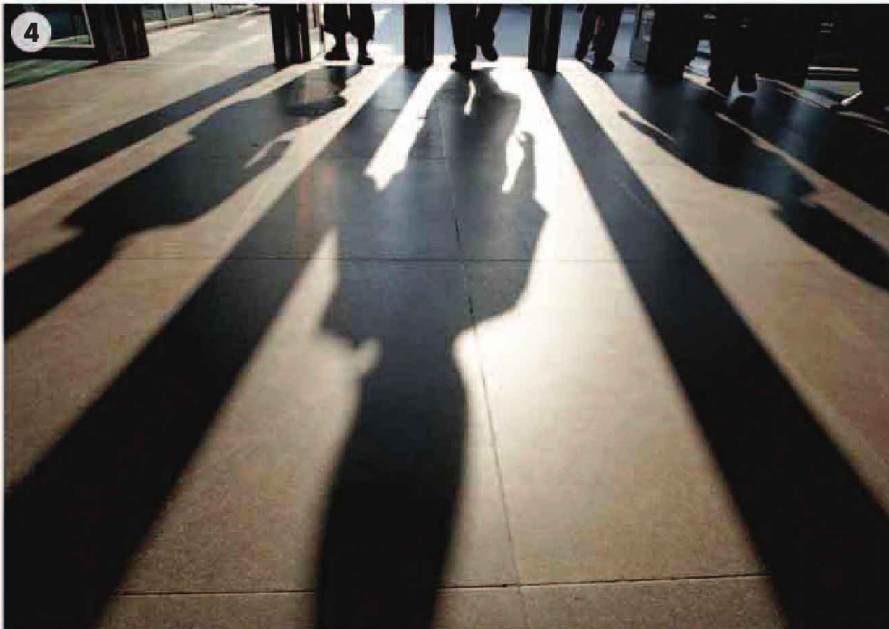
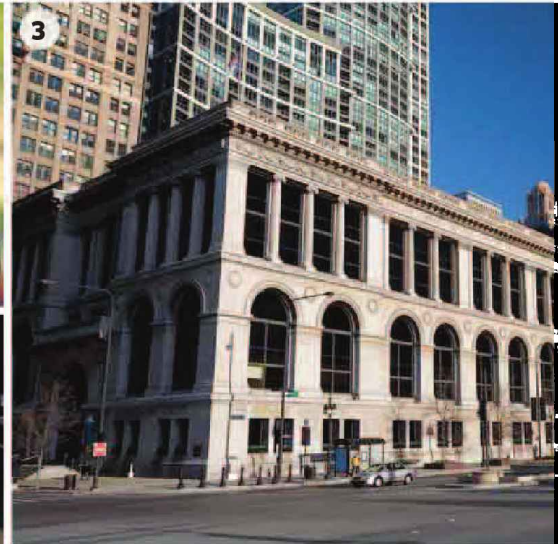
Let's begin...





▶ TEST YOUR KNOWLEDGE

Can you read light?



The position of your light source makes a big difference to your photograph. The five choices are: front light, backlight, low-angle light, top light, and side light. Study these images and match them with the right description.

A Front light: Casts short shadows and brings out tone and color.

B Backlight: Silhouettes are a common result of backlighting.

C Low-angle light: Characterized by elongated shadows.

D Side light: Often used to accentuate texture.

E Top light: Creates few obvious shadows with grounded objects.

F Low-angle light: Is warm in color and, when shining from the side, casts shadows across a scene.

G Backlight: A bright halo often appears around soft-edged objects backlit to one side.

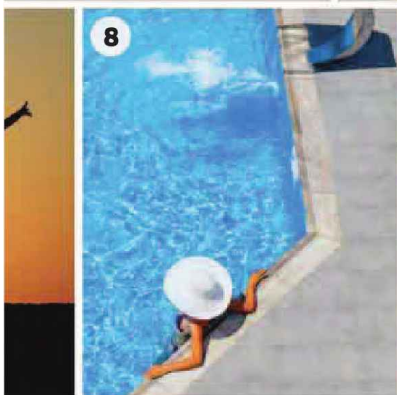
H Top light: Raised objects can cast strong downward shadows.

I Side light: Readable shadows provide good contrast.

J Backlight: Translucent objects come alive with color.

ANSWERS

- A/1: Temple in Thanjavur, India
- B/5: Silhouette of friends jumping
- C/4: Gate to subway
- D/3: Chicago Cultural Center
- E/8: Relaxing by the pool at midday
- F/6: Road in Tuscany, Italy
- G/2: Teenage girl at sunset
- H/7: Fire escape
- I/10: Cuban bass player
- J/9: Sunlit leaves



NEED TO KNOW

- Shadows are at their sharpest and darkest on cloud-free days.
- Shadows create contrast, which helps to define the shape and form of a subject. For this reason, overcast days aren't ideal for wide-open landscapes or large architectural subjects.
- Overcast days are generally shadow-free. This is because light from the sun is diffused by the clouds, which makes the light softer.
- Overcast days are good, however, for shooting close-ups and organic subjects such as flowers.
- The direction and time that the sun rises and sets varies through the year.
- The maximum height of the sun in the sky is greater in summer than in winter.



Review these points and see how they relate to the photos shown here



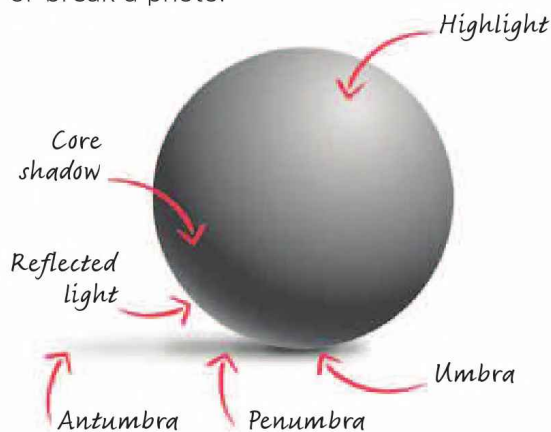
▶ UNDERSTAND THE THEORY

Light and shadow

As the sun moves around the sky, shadows lengthen, shorten, and change direction. Understanding how shadows impact on your subjects is crucial to creating eye-catching images. Here we take a look at three common subjects—portraits, landscapes, and buildings—and assess the impact of different lighting angles. Remember that this information is only a guide. You will need to photograph and observe your own favorite subjects under different lighting angles to see for yourself how the direction of light strengthens or weakens your imagery.

i ANATOMY OF A SHADOW

When the sun illuminates an object, the shadows it casts reveal outline, form, and texture in varying degrees depending on the direction of light. The way that light and shade affect your subject can make or break a photo.



i TOP LIGHT



Portraits: Top light creates shadows down the length of your subject's face; the eyes are rarely clearly visible.

Buildings: Strong downward shadows can be used to good creative effect in certain cityscapes.

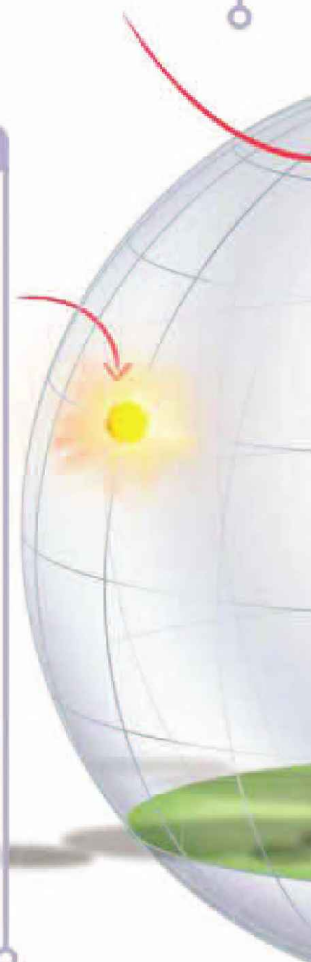
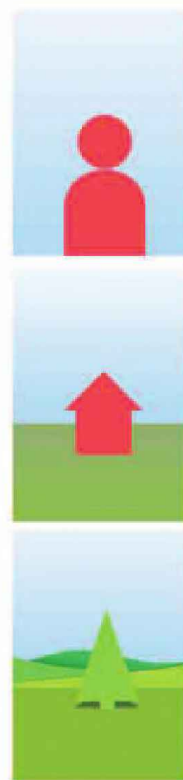
Landscapes: A lack of elongated shadows will make most landscapes look flat. Colors can appear vibrant.

i FRONT LIGHT

Portraits: Provided the glare doesn't make your subject squint, front lighting creates attractive, shadow-free portraits.

Buildings: Strong frontal lighting enhances the facades of colorful buildings and shows majestic outlines at their best.

Landscapes: With few shadows to define undulations, landscapes will look flat and dull. But large objects, such as mountains, will stand out well against a blue sky.



“ In the **right light**, at the **right time**, everything is **extraordinary**. ”

AARON ROSE

BACKLIGHT



Portraits: Backlight is rarely ideal, but dramatic silhouettes are an option; try capturing your subject in profile.



Buildings: Strong backlighting is ideal for powerful skyline silhouettes, but the outlines need to be clearly defined.



Landscapes: Colors will be hard to discern. Look for shadows that run toward the camera for a sense of depth.

SIDE LIGHT



Portraits: Side lighting will result in half the subject's face in shadow—fine if you want to create a little drama.



Buildings: Utilize strong contrast for arresting images, but be careful that shadows don't make the image hard to read.



Landscapes: Pronounced shadows help define the shape and texture of landscape features. Well-lit objects will exhibit strong color.

LOW-ANGLE LIGHT



Portraits: When the sun is low and off to one side behind your subject, look for atmospheric glowing halos of hair.



Buildings: The sun will sparkle off reflective surfaces, while others will be in dark shadow—good for contrast and drama.



Landscapes: Look for aerial perspective (far objects appear fainter than closer ones) to create a sense of depth.





▶ LEARN THE SKILLS

Using light and shade

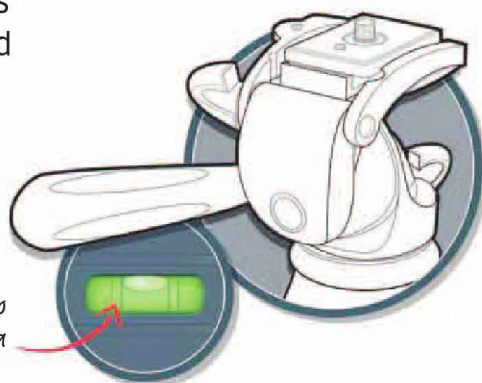


Many scenes are at their best when the sun is low in the sky, around an hour after sunrise or an hour before sunset. Shadows at this time of day are at their longest and help to define the shape and texture of objects in a scene. Shadows also add drama that can be used to create images with impact.



1 Assess your location

Take time to walk around your chosen subject and find a position where shadows form an interesting pattern. Use a tripod and a remote shutter release to keep the image sharp.

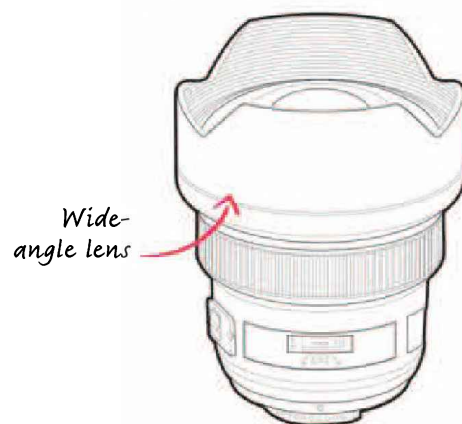


Check tripod level to straighten camera



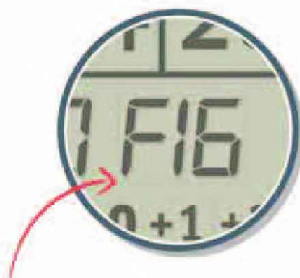
2 Use a wide-angle lens

The lens you use will affect your composition. Use a wide-angle lens if you want to exaggerate the spacing of shadows.



6 Set aperture and metering mode

Use a smaller aperture to maximize depth of field. Select evaluative metering and press halfway down on the shutter button to set exposure.

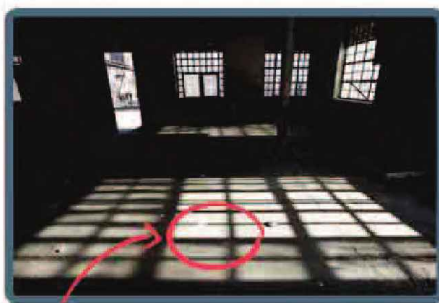


Small aperture may mean a lengthy shutter speed



7 Shoot a test shot

Focus the camera and take a shot. Check the exposure using your camera's histogram. If the histogram is skewed to the left, the photo may be underexposed. If it is skewed to the right, it may be overexposed.



Focus on the foreground to ensure that the whole image is sharp



8 Continue shooting

Try different compositions. Wait to see how the light develops and consider more variations of the same scene until the sun is higher in the sky, for example, or has set completely.



Keep your camera switched on between shots, ready for action.

Where to start: Find a location where a low sun creates long, slanting shadows that you can exploit for effect. Other elements of the scene will create shadows that add depth to the image.

You will learn: How to accurately expose the scene so that shadows are dark and rich, while at the same time the highlights are not overexposed, and how lens choice affects the spacing of shadows.



3 Use a telephoto lens

Alternatively, use a telephoto lens if you want to compress the spacing of shadows (you may need to position yourself farther from your subject if using a telephoto lens). A zoom lens will let you use both wide-angle and telephoto settings.



4 Use lowest ISO setting

Using the lowest ISO setting will provide optimum image quality. A low setting, such as ISO 100, can result in a slow shutter speed, but with the camera mounted on a tripod you will avoid camera shake.



5 Use Aperture Priority

Select Av (or A) so you can fine-tune aperture to control depth of field. The camera will set the appropriate shutter speed.

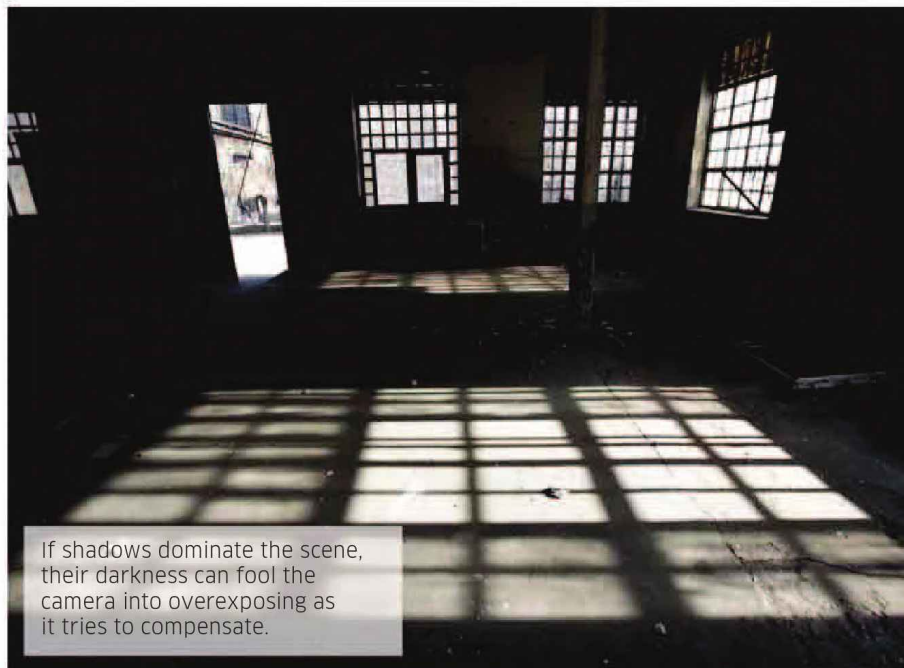
When you set your zoom lens to its wide-angle setting, you may need to get closer to your subject.



ISO 100 is the lowest setting



Aperture Priority



If shadows dominate the scene, their darkness can fool the camera into overexposing as it tries to compensate.

WHAT HAVE YOU LEARNED?

- The position of the sun relative to your camera and subject changes the shape and visibility of shadows.
- Where shadows fall affects how three-dimensional your subject looks in a photo.
- The lens that you use affects the spacing of shadows in your image.



▶ PRACTICE AND EXPERIMENT

Playing with light

The assignments on the following pages will help you develop the way you think about light and shade. The key is to be out shooting at different times of the day to see how light changes. Where you position your camera relative to the sun will play a big part in the success or otherwise of your photos. There's no right or wrong answer, though. Experimentation is often necessary to decide what works and what doesn't.

Shooting a silhouette against a sunset sky will produce a bold, colorful image.

Save your best images and review them later (see pp.276–277)



EASY

1 HOUR

BASIC

OUTDOORS

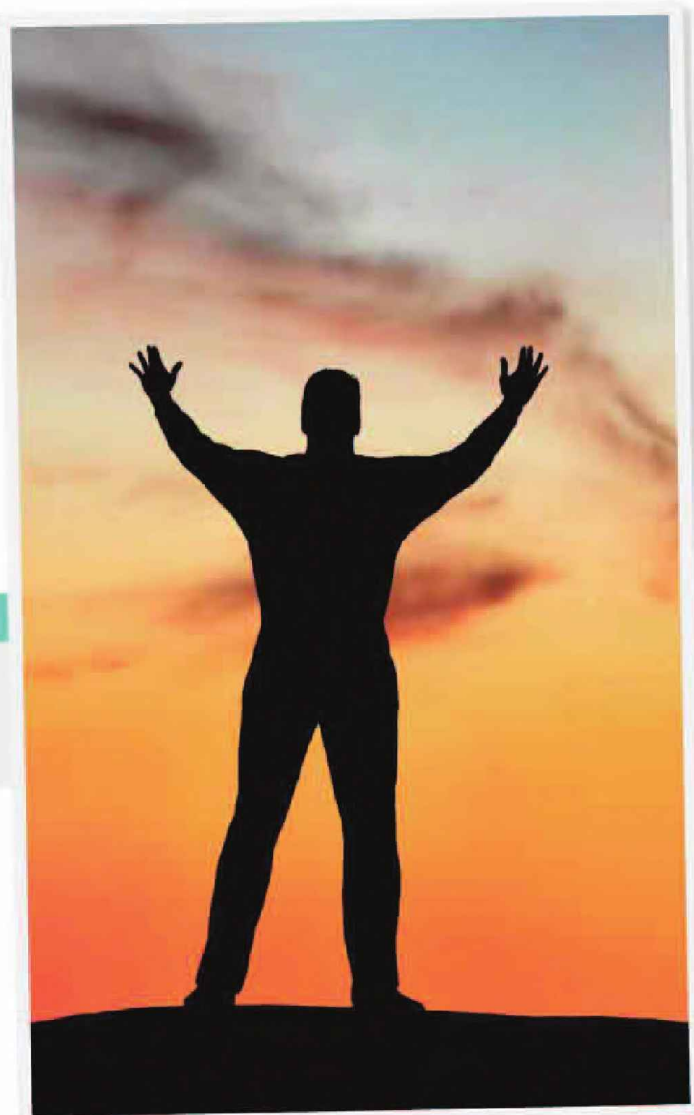
A MODEL

Silhouettes are created when shooting backlit subjects. They are caused because cameras typically can't cope with such an extreme contrast range. However, with the right subject and background, silhouettes make interesting photos.

■ **Shoot** at sunrise or sunset. Position your model against the brightest part of the sky.

■ **Compose** different shots so that your model is looking toward the camera and in profile, and see which is more effective.

■ **Keep** your compositions simple. Avoid letting other elements in the scene overlap your subject, since this can make the shape of the silhouettes look confusing.



To create a silhouette, the background needs to be far brighter than your foreground subject.

Pro tip: You see the deepest, sharpest shadows when the sun is high in the sky on a cloudless day. Clouds can act like giant reflectors by lightening shadows and reducing contrast.

HALOS

MEDIUM

OUTDOORS

1 HOUR

A MODEL WITH LONG HAIR

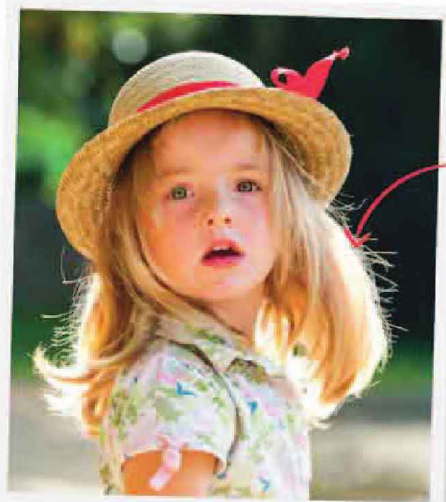
BASIC + reflector (or flash)

When you use **backlighting** to shoot a portrait of a person with a full head of hair, you often see a bright outline around their head. This is a halo, and it can add an atmospheric feel to a portrait shot.

■ **Shoot** when the sun is relatively close to the horizon, and position your model between you and the sun.

■ **Set** the exposure of your camera so that your model is correctly exposed. You may need to use a reflector (see pp.274–275) or fill-in flash to balance the contrast.

■ **Experiment** with models who have other hair types to see what, if any, difference this makes.



Longer hair makes for better halos than tightly cropped hair



Use a reflector to push light toward your subject and avoid shooting a silhouette.

ISOLATING SHADOWS

EASY

OUTDOORS

1 HOUR

A SUBJECT WITH AN INTERESTING SHAPE

BASIC

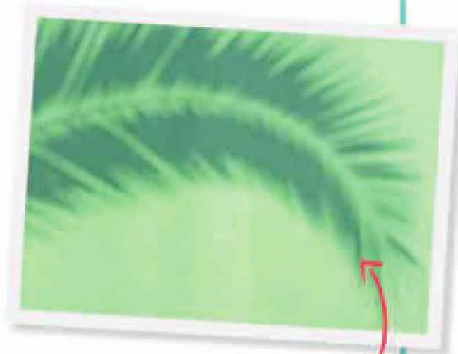
Shadows can be used to make interesting abstract photos when you exclude the subject casting the shadow.

■ **Shoot** on a cloudless day when there are strong shadows either on the ground or cast onto vertical structures, such as a wall.

■ **Look** for subjects that cast interesting shadows, and find positions where their patterns are most eye-catching.

■ **Frame** your shots so that you exclude the subject and shoot only the shadows.

■ **Use** a longer focal-length lens if the sun is behind you, to keep your own shadow from entering the photo—unless it's intentional.



Shadows become softer the farther they are from the original subject

WHAT HAVE YOU LEARNED?

- It's easier to create a silhouette when the light source is at about the same level as the camera.
- Tightly cropped hair is less effective at producing halos than flowing, wispy hair.
- Plain, flat surfaces make good settings for shadow photos.



LIGHT STARS

- EASY
- 1 HOUR
- BASIC
- OUTDOORS
- A BRIGHT POINT LIGHT SOURCE

The sun is a point light source, which means that it's relatively small compared to the area that it illuminates. Point light sources in photos produce attractive star shapes that can add a point of interest to an image.

- Shoot 10 different photos that use light stars for extra interest.
- Shoot with the camera pointing toward your chosen light source. This can be the sun or even street lighting after sunset.
- Never look at the sun, either directly or through a camera—it can easily damage your eyes.
- Adjust the aperture for different effects; the smaller the aperture, the more pronounced the star shape produced.

The number of rays in a light star is affected by the number of blades in the lens's aperture



LOW-ANGLE LIGHT

- EASY
- 1 HOUR
- BASIC + tripod
- OUTDOORS
- SCENIC LOCATION WITH VERTICAL FEATURES

The closer the sun is to the horizon, the longer shadows become. Shadows help to define the shape and contours of a landscape or city street.

- Find an interesting scene with vertical features, such as trees or columns.
- In the first or last hour of a sunny day, shoot a series of images that include both the vertical features and the shadow they cast.
- Move around the scene as you shoot, varying the direction of the shadows and the height you shoot at. Compare your shots to see which ones you prefer.

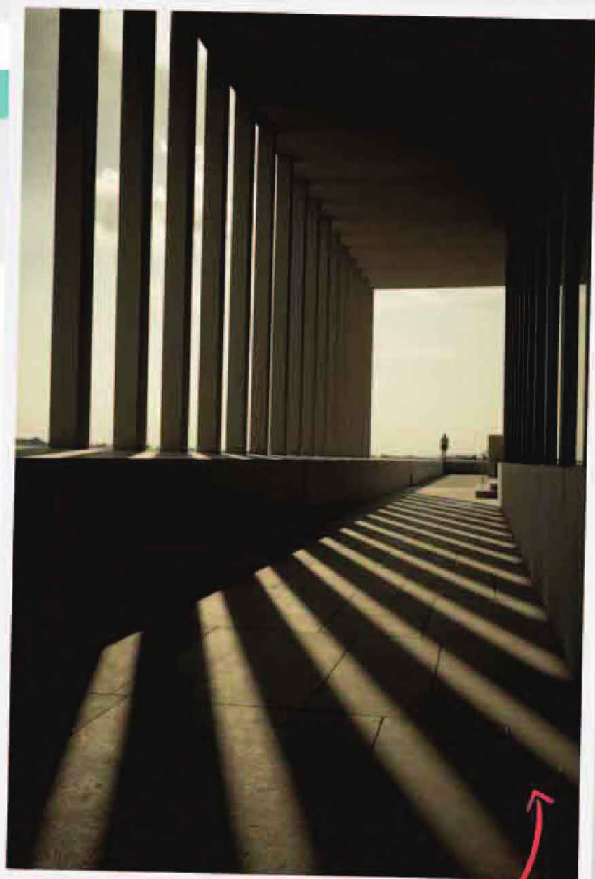


Long geometric shadows create a feeling of depth

GEAR: REFLECTORS

Reflectors are used to redirect light into the shadow areas of a scene so that contrast is reduced. Commercial reflectors come in all shapes, sizes, and finishes, such as white or silver. They are typically made of a soft material so they can be folded up to fit in a camera bag pocket. If you want to see the effect before buying a reflector, try using a sheet of white posterboard. Reflectors are most useful when shooting portraits with side or top lighting. Gold reflectors add an appealing warmth that's very effective when shooting portraits.





Shadows often help add interest to what would otherwise be a nondescript foreground

BACKLIGHT

EASY

2 HOURS

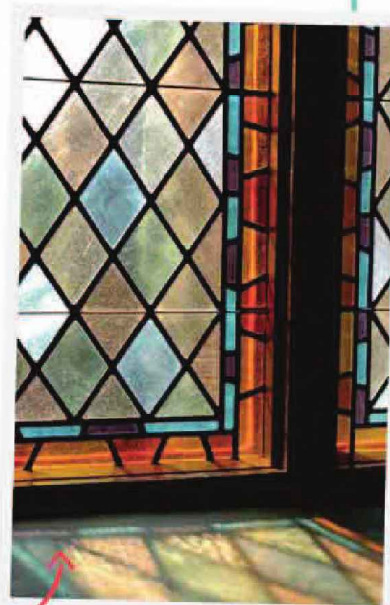
BASIC

INDOORS OR OUTDOORS

TRANSLUCENT SUBJECTS

The colors of translucent subjects—such as leaves or stained-glass windows—intensify when backlit.

- Shoot a series of photos of translucent subjects backlit by the sun.
- Fill the frame with your subject for greater impact by zooming in.
- For a more abstract effect, shoot close-up details of your subjects.
- Experiment with your camera's color controls to intensify color even further.



Backlit stained glass throws color onto its surroundings. These colors can make interesting photos in their own right

Hat causes dense shadow in full sun



Reflectors redirect and soften light to brighten overly dark shadows.

WHAT HAVE YOU LEARNED?

- Shadows are at their longest just after sunrise and just before sunset.
- Color is affected by lighting direction—translucent objects benefit from being backlit.
- To avoid an unwanted shadow or silhouette, lower the contrast by using a reflector or flash.



▶ ASSESS YOUR RESULTS

Reviewing your shots

Once you've completed your lighting assignments, edit your images and pick out your 10 best shots. Look critically at each image: what's good about each one, and what could be improved? Here's a checklist to help you assess your images and troubleshoot some common problems.



Are your low-angle shadows well-defined?

The light from the sun becomes softer the closer the sun is to the horizon. Mist or haze further reduce the sharpness and depth of shadows, creating what can be a romantic feel to a landscape.



Are your silhouettes confusing?

Simplicity is the key to shooting successful silhouette images. This shot works because the outline of the tree is not confused or obscured by other elements in the scene.



Are your backlit images low in contrast?

Flare from the sun will lower contrast. Here, placing the lamppost between the camera and the sun has avoided flare in this image.



Is there flare in your photos even though the sun isn't visible?

Using a lens hood will reduce flare when the sun is just outside the shot, but using flare can add to an image's emotional appeal.

“ In nature, **light creates the color.**
In the picture, **color creates the light.** ”

HANS HOFMANN

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WEEK



⦿ **Is your shadow in the shot?**

When shooting with front light, it's all too easy to accidentally include your own shadow in the photo. This image makes a virtue of this by turning the shadow into the subject.



⦿ **Are your portrait subject's eyes hidden by shadows?**

With top lighting, the nose, chin, or a wide hat can cast ugly shadows. This shot has used a reflector to bounce light into the shadows.



⦿ **Is your image correctly exposed?**

It's generally better to set exposure to retain highlight detail than shadow detail. In this shot, the balance between the two is successful.

⦿ **Are your images sharp?**

Attaching your camera to a tripod to avoid camera shake is often necessary in low light—particularly when shooting landscapes that require a large depth of field, such as this shot.



▶ ENHANCE YOUR IMAGES

The Levels tool



No matter how carefully you set exposure, occasionally the photo you download onto your computer appears flat and washed out. One of the most common causes is a cloudy atmosphere. This photo of Glen Nevis, Scotland, was taken in hazy light in late afternoon with a telephoto lens. The distance between the camera and the subject exacerbates

the poor light quality, resulting in a very low-contrast image. Fortunately, you can fix the contrast by using image-editing software.



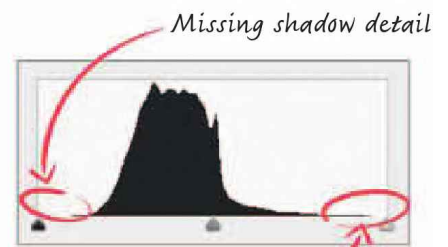
Weak shadows

Flat contrast



1 Working with the Levels tool

To boost the tones of your image, select the Levels command in your editing software. The Levels box shows the image's histogram. Here, we can tell the image lacks contrast because the histogram is very biased toward the midtones.

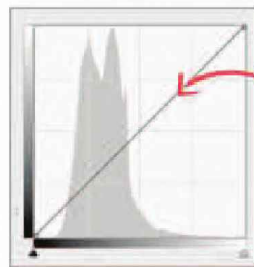


Missing shadow detail

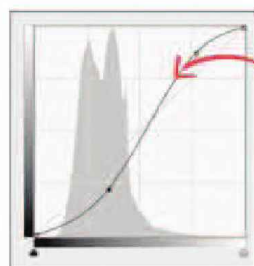
Missing highlight detail

i THE POWER OF CURVES

Another way to adjust the tones in an image is with the Curves command (see pp.230-231). Curves is only available in more powerful image-editing software, but it offers greater control than the Levels option. The Curves box features the image's information in a histogram. A diagonal line overlaying the histogram represents the tonal distribution of the image, from highlights at top right to shadows at bottom left.



Line showing distribution of tones across the image

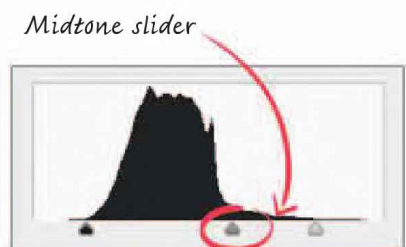


Manipulating the diagonal line to form a simple S-curve will add contrast to a photo



4 Adjust the midtones for more punch

Move the Midtone slider to the left to brighten the midtones and to the right to darken them. With the Midtone slider set to the right, the image looks much punchier. Contrast is improved, and darkening the image has made the colors more intense.



Midtone slider

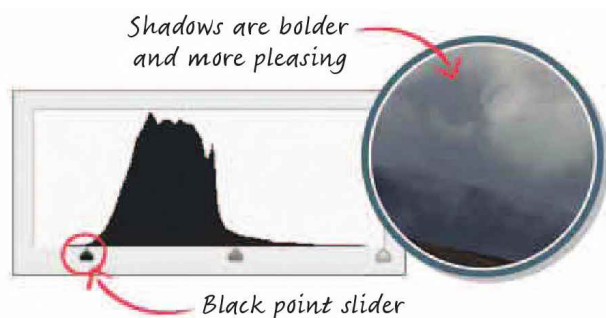
Pro tip: Don't make numerous Levels adjustments to a JPEG image. Repeatedly altering the tonal range, for example, can cause posterization, visible as abrupt changes in tone across the image.

Pro tip: Another sign of an overprocessed photo is when the Levels histogram has a comblike appearance.



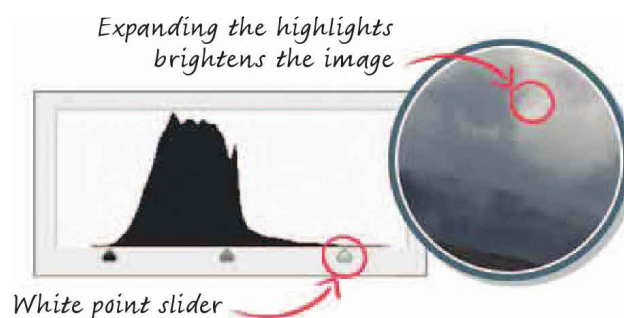
2 Set the black point for richer shadows

To deepen the shadows, move the Black point slider right until it reaches the left edge of the histogram. This is called setting the black point. As you do so, the image will get darker. Having set the black point, shadows now appear much bolder.



3 Set the white point for stronger tones

Set the white point by moving the opposite slider, the white point, to the left. Take more care with this slider: although a few small regions of pure black are acceptable, areas of pure white look unattractive. Avoid pulling the slider so far that the highlights burn out to white.



5 Correct color casts with Levels

The Levels gray picker tool can be used to remove color tints in an image. Select the tool and then click anywhere in the image that you think should be a neutral gray.

