

LESSON 4 HANDOUT
INTRODUCTION TO PHOTOGRAPHY
Summer Session – 2009

Lighting basics for better photos

Improve your photos by controlling your camera's flash and taking advantage of available light in all conditions.

http://www.hp.com/unitedstates/consumer/digital_photography/take_better_photos/tips/light.html#5

Bright conditions indoors



Bright light from a window can make your subject too dark.

You can greatly improve your daylight photos indoors by keeping the following things in mind.

- **Let in all the light you can**

Provide as much natural light as possible by opening curtains and blinds. This way you can keep from using your camera's flash, which generally washes out color and casts harsh shadows.

- **Avoid standing in front of windows**

Placing your subject in front of a bright window will leave them silhouetted against the bright light shining in. The light will often appear too bright, and your subject too dark.

Bright conditions outdoors



Photos taken at dusk or dawn produce softer shadows.

There is such a thing as too much light when photographing outdoors. Use these tricks to preserve color and detail.

- **Avoid harsh midday sunlight**

The same way your camera's flash can wash out color, the intense midday sun can mute colors and cast deep shadows, reducing warmth and detail.

The best time of day for photos is either early morning or early evening. Colors are warmer and shadows are softer.



Intense sun mutes colors and casts deep shadows.

Low-light conditions indoors



Photo taken with flash on.



Photo taken without flash. Colors are more realistic.

- **Disable your flash**

Using your flash should be a last resort in most situations. It mutes color and casts stark, deep shadows (especially unflattering for portraits).

On some cameras, press the flash button and select Flash off.

Take advantage of indirect, ambient light from lamps, overhead lights, or candles instead. Set your camera to the Auto shooting mode. It will slow its shutter speed (the time needed to capture enough light) when the flash is off. To avoid blurring, use a tripod or stable surface to keep your camera steady.

There are other tools you can use to improve your indoor shots.



Photo taken without white balance adjustment, and one with white balance set to Tungsten.

- **Adjust white balance**

Artificial light can produce unnatural tinting in your photos. Many cameras will compensate for this automatically. As accurate as automatic white balance is most of the time, it's not always perfect. For more control, set your camera to Tungsten (normal incandescent bulbs), or Fluorescent to fix color.

Low-light conditions outdoors



A long exposure can produce breathtaking night shots.

The same rules for low-light conditions indoors apply to the outdoors as well. Avoid the flash and use a tripod to steady your camera. Holding perfectly still is especially important outdoors. You will often have even less light than when you're indoors. This means longer exposure time (sometimes as long as a few seconds).

Here are a couple additional options to improve outdoor photos.

- **Adjust ISO for light sensitivity**

If your camera allows you to adjust ISO, set it low (somewhere around 50 or 100) for rich detail in low-light.

- **Use Night Portrait shooting mode**



For low-light photos with moving subjects like people, set your digital camera to a night portrait setting, if available. This uses the flash very briefly at the beginning of a long exposure to capture detail. It still helps for you to keep your camera as steady as possible, but it's not absolutely necessary in this mode.

The direction (position) of light



When it comes to the direction of light, there are 360 degrees of possibilities. When the light isn't working for you, change it by moving your position, your subject's position, or the light itself, if possible.

High front light (sunlight)

We are trained early on that high front light is the best type of light, and often it is.

Pros:

- Most of the scene is well lit.
- Bright sunny days bring out the colors of a scene.

Cons:

- Sunlight may cause your subjects to squint.
- Very high sunlight (seen at noon) will create deep shadows under eyes and chins, unless you use fill flash.



Front light

Front lighting illuminates the portion of the subject facing the photographer. Your camera's flash is the most common type of front lighting.

Pros:

- Provides the most information to the camera by lighting the entire

scene.

- Easiest type of light to deal with photographically because there are fewer shadows to confuse the camera's light meter.

Cons:

- Can be a bit boring—pictures lack volume and depth.
 - Textures and details are minimized. Scenes appear flat with few shadows.
 - Flash pictures may result in very bright subject areas and very dark backgrounds, if the background is beyond flash range.
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Side light

Side lighting is perfect when you want to emphasize texture, dimension, shapes, or patterns. Side lighting sculpts a subject, revealing contours and textures. Use side lighting to exaggerate dimension and depth. At a 45-degree angle to the side, it's one of the most flattering types of portrait lighting.

Pros:

- Can separate the subject from the background.
- Conveys depth, as in a landscape at sunset.
- Conveys texture, as in a weathered tree, fence, or plowed field.

Cons:

- May be too severe for some subjects, creating some areas that are too bright, and some that are too dark. (See Fill flash to compensate.)
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Back light

Light that comes from behind your subject is by far the trickiest to use, but the dramatic results may be worth the effort.

Pros:

- Simplifies a complicated scene by emphasizing the subject, as in a silhouette.

- Provides a flattering halo of light in portraits.
- Adds strong shadows in landscapes.

Cons:

- Lack of detail in a dark subject.
- Causes lens flare resulting in low contrast and strange light spots across the picture.
- Using exposure compensation to overcome backlighting results in too-bright background.



Note: In backlit situations, prevent lens flare by shielding your camera with a hat, hand, or book—enough to shade your camera lens but not obscure your subject.

Some tips and techniques to consider:

- Turn the flash off and use -1.0 or -2.0 exposure compensation for a dramatic silhouette—perfect for sunsets with a tree, boat, or person in the foreground.
- Use $+0.5$ or $+1.0$ exposure compensation (or your backlight compensation button) to properly expose your subject. Your background may get too light or even washed out.
- Use fill flash—an excellent option for portraits where you want that glowing “halo” of rim light but need to brighten shadows or prevent a silhouette.
- Use a white reflector card (poster board works) to reflect light back onto your subject—especially useful for close-ups like flowers.
- Move in closer, filling the frame with your backlit subject, so the brighter surrounding light doesn't confuse your camera.

Flash, fill flash, and flash off



Lucky for us, an automatic flash is included on just about every camera sold today. And most include a fill-flash setting for those less-than-perfect lighting situations that need a little boost. That doesn't mean the camera is fail-proof. You still need to know how and when to use these features.

General flash tips

Our favorite flash tips bear repeating:

- Stay within flash range. Check your camera manual for the recommended range (usually 4 to 10 feet).
- A higher-speed film may extend your flash by a few feet, so it does pay to use the higher-speed film, even indoors for flash pictures.
- Batteries that are approaching exhaustion will not give full flash power even if the camera is still working.
- Prevent red eye by asking your subjects to look slightly away from the camera, and turn on all the room lights to shrink their pupils.
- Avoid use of the "red eye reduction" flash setting—to many people it's distracting and confusing.



Fill flash

Fill flash is included on most of today's cameras, and is a favorite feature. It is just enough flash to fill in areas of a picture that would otherwise be too dark.

Use fill flash for sunny day portraits to fill in those dark shadows under the eyes, nose, or under the rim of a baseball hat. It can even help in a difficult lighting situation, such as a dark complexion on a beach, or a child playing in the snow.

Fill flash is also useful for side-lit and back-lit pictures. For instance, a backlit scene may have enough bright areas in the background to provide an "average" brightness for the entire picture, but the actual subject is left in the dark. Fill flash balances the scene so that the subject is properly exposed, and the background is left alone.



Flash off

There are occasions when your camera thinks the flash is needed, but in fact it isn't. You probably have a "Flash Off" (or similar wording) setting on your camera. Here are a few examples of when to use it:

- When you are too far away from your subject for the flash to be effective.
- When the flash would create annoying reflections from mirrors and other shiny surfaces.
- At sunset or in other low-light situations where you'd like a foreground subject to be silhouetted.
- Where the quality of the existing light is beautiful, like a kitten sleeping in the sunbeam.

Where flash is not allowed (steady yourself against a wall and anchor your elbows at your side).

