



TWOPEAS/NABUCKET.COM PHOTOGRAPHY COURSE: 12 WEEKS TO BETTER PHOTOS

By Mark & Joanna Bolick

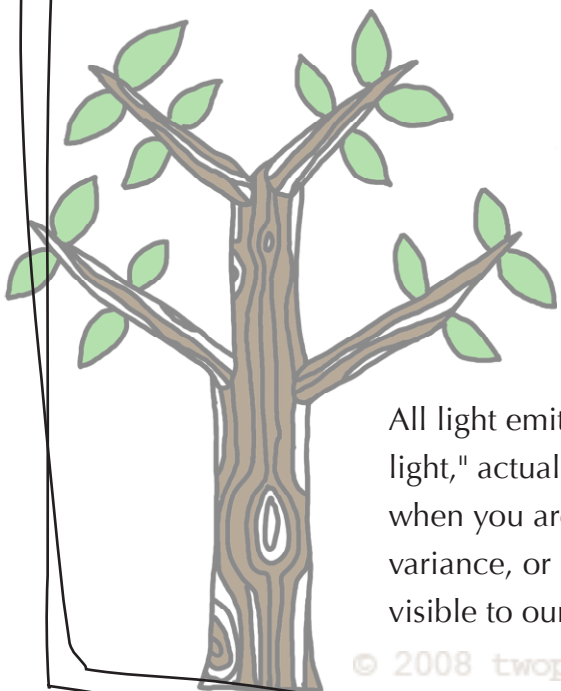
LESSON three: The Color of Light

Over the past 2 weeks we've been experimenting with modes and settings and you guys have done a wonderful job! We're excited to hear all your feedback! We know, too, that you've encountered some frustration while trying to complete the challenges – for instance, when you've tried to use your highest f/stop or fastest shutter speed indoors. While our answers have varied depending on the specific situation or camera, there has been one constant throughout – the photos you take and the results you get will always depend on the amount of light that you have.

Which brings us to this week's topic – light! Light, however, is a very comprehensive topic, as there are thousands of lighting situations you could encounter from day to day, so please consider this week just the tip of the iceberg. Next week we'll move on to flash photography, and during weeks 6 & 7 we'll come back to light and talk about specific situations and suggestions for indoor and outdoor photography. (So if we haven't answered your questions about light yet at the end of this lesson, hang in there!)

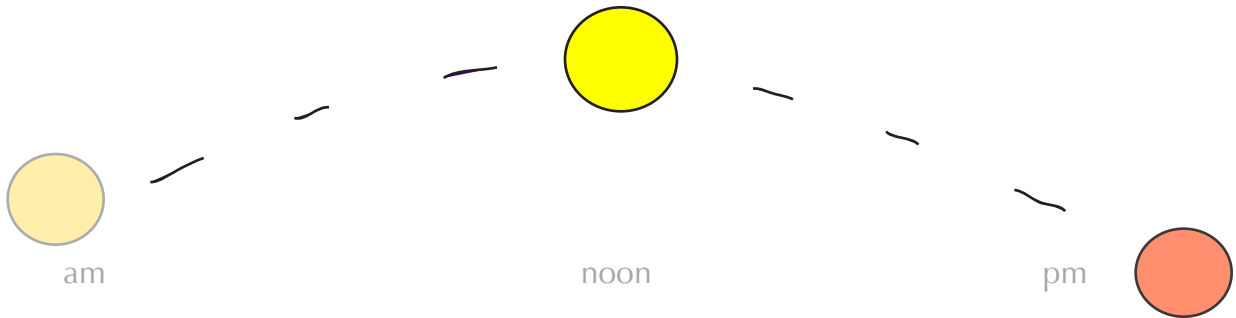
The subject of this lesson is the color of light, and the point is to help you use your knowledge of it to enhance your photos. All colors of light have an actual color temperature measured in Kelvin, but for the purpose of this lesson our main focus is the color cast and not the specific temperature of the light. (For most real world use it's not necessary to know the Kelvin temperatures unless you are using a high-end photo editing program for post-processing.)

All light emits a particular color. Sunlight, although referred to as "white light," actually contains all the shades of the color spectrum. So even when you are using natural light for your photos there can be a color variance, or "cast," based on the portion of the color spectrum that is visible to our eye.



Outdoors

For instance, on a clear, bright day outside you'll often encounter a soft yellow cast in morning photography, a cooler, bluer color cast at mid-day, and a warmer, orange color cast in afternoon photography. (Also, take note that in morning and evening light your photos will have a softer contrast as compared to the harsh, strong contrast found in the middle of the day.) Below are three examples of photos taken on the same bright day at the beach.



6:45 am



12:00pm



6:15 pm



The color cast on an overcast day will vary depending on the cloud cover. But fortunately for us, most outdoor color casts can be used to enhance and flatter our photos, as long as we keep in mind the kind of light we'll get at particular times of the day. So use the warm glow of the setting sun to your advantage!

week three 2

Indoors

Indoor light, however, is where we can run into a few problems with color cast. Artificial light creates a color cast that may not be readily apparent to the naked eye, but will become immediately obvious when photographed.

The two main types of indoor light are fluorescent and incandescent bulbs. Fluorescent lights, often found in office environments or warehouse superstores, can give off a green or purplish cast. Incandescent lights, often found in our homes, tend to give off a yellowish/orange color cast. (As opposed to a soft yellow light outdoors, the yellow light found indoors tends to be overbearing and unpleasant.)

This photo was taken in our kitchen with the white balance set on auto (AWB). Note the obvious yellow cast in the skin tones and on the walls. The red tablecloth almost looks orange.



Since purple, green, and strong yellow casts can be rather unflattering to our subjects, indoor lighting requires more work. This is where **White Balance** comes into play.

White balance is simply a fancy way of setting the color temperature of your image. The human eye is very adept at compensating for color changes in light and allowing us to view light in a very large spectrum. Most film cameras handle white balance in the film itself and you simply purchase film to match the lighting situation. Camera sensors, however, are not quite as intelligent, and they must be told what color the light is for a given situation in order to compensate for that color. To help with this, digital cameras come with some pre-set white balance settings such as Auto (AWB), Daylight, and Tungsten, among others. Properly setting your white balance for your lighting situation will greatly increase the impact of your photos and decrease the amount of time you spend editing them. White Balance settings will vary from camera to camera, but here are some typical icons & the settings they correspond to:

cloudy



tungsten



bright sun



fluorescent



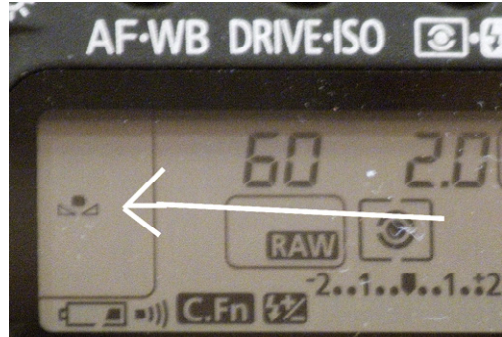
week three 3

Tutorial: Custom White Balance

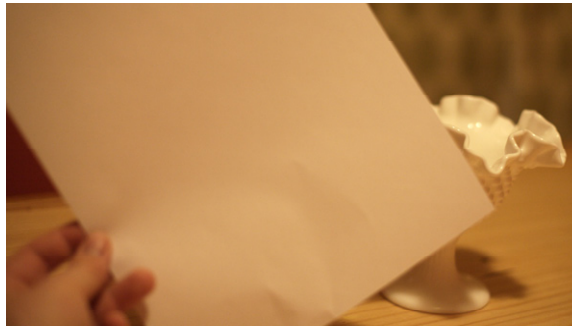
The best way to combat color casts indoors is to use a custom white balance (it can also be referred to as a manual white balance.) This will force the camera to set its white balance for the exact lighting situation that you are shooting.

Please note: Setting a custom white balance is camera specific. To familiarize yourself with the process, we're going to take you through a step-by-step using our camera. These steps could vary quite a bit depending on your camera. We think you'll be pleasantly surprised, though, how easy and effective it can be to use a custom white balance.

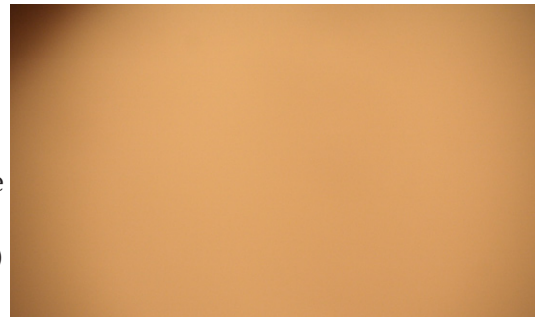
Step 1: Locate the custom white balance setting on your camera. We selected ours by pressing the "AF/WB" button and then turning the dial to locate the correct icon.



Step 2: Find a plain white piece of paper (or posterboard or cardstock) to photograph. You want to take the photo of the paper in the lighting situation you'll be shooting in.



Step 3: Hold the paper so that it fills the entire frame. The white paper doesn't have to be in focus - it just has to fill the frame. (If your camera won't take the photo because the object is too close to the lens, switch off the autofocus on your lens, take the photo, and switch the AF back on.)



Step 4: On your camera's menu locate the custom white balance setting. Your camera will ask you to select the photo you just took of the white paper, and set this as your white balance.



****If the light changes or you change locations you will have to redo the white balance. To stop using a custom white balance, simply turn your white balance setting back to the AWB icon or whichever preset you prefer.**

WEEKLY CHALLENGE: Experimenting with White Balance

So here's the question we want to focus on this week:
What can I do to combat color casts in indoor photos?

This week we're going to stay indoors for our photos. You can change your white balance no matter what mode you're operating in, so for this challenge, take your pick of modes - from aperture priority to shutter priority to manual. However, it will be easiest to see the differences in your photos if you turn off your flash.

1. Photograph an object (or people, as long as they're willing to sit still for a bit) in your house the way you typically would, using the auto white balance setting (often indicated as AWB.)
2. Now select the tungsten white balance setting (usually the icon for this setting is an upside down lightbulb) and take the photo again.
3. Grab a piece of white paper, posterboard, or cardstock, large enough to fill the frame of your lens.
4. Follow the steps in your manual to set your custom white balance.
5. Using your custom white balance, take your photo again.
6. Upload your photos and compare.

***Bonus points: Experiment with your other white balance settings. Try out the "cloudy" setting outdoors versus the "bright" setting. Take your camera to the office if you have fluorescent lights overhead and play around with that white balance setting. If you have a film camera, try experimenting with tungsten film.

[Setting the white balance for a static tungsten setting will assume that incandescent is the sole light source in the photo. This can be a problem if you have a combination of both natural light and incandescent light in your photo. The color balance for tungsten is significantly different than the balance for natural light and you can get some pretty eerie colors. The best way to combat this in camera is to use a custom white balance for your indoor shots. This will force the camera to set its white balance for the exact lighting situation that you are shooting.]



1. For our challenge photos we placed a white milkglass vase on the table in our dining room. Not only does this room have incandescent lighting, but it also has very orange walls, which lend a distinct color cast of their own.

The first photo was taken in manual mode with our white balance set on auto.

2. The difference between the first and second photos is not drastic, but this may have more to do with the orange walls.

The second photo was taken using the "tungsten" setting.

3. The third photo was taken after setting a custom white balance.



Q & A: Light

Q: Are there other tools for setting a custom white balance?

A: Yes. Because you have to set your custom white balance for every lighting scenario, it's not always convenient to carry around a large piece of white paper. There are professional accessories that will help you achieve the same thing -- such as Expo Imaging's Expodisc (www.expodisc.com) -- they're just more expensive.

Q: Cindi asked, "How and why would I use a gray card...?"



A: A gray card (just like it sounds - it's a neutral gray colored card) is another tool you can use to set white balance.

However, you use a gray card when you want to correct your white balance in post-processing instead of in-camera.

Using a Gray Card

Basically, you shoot a frame with your gray card in the setting where you're going to be taking your photos. Then you shoot the rest of your photos as you normally would. (Just as you would change the custom white balance in camera for each different lighting scenario, take a photo of the gray card in each different scenario as well.)

When you're done taking photos, your next step is to open the photo of the gray card in your photo-editing program to set your white balance for each series of photos you took in that setting.

For example, in Photoshop CS3, you would:

1. Open your photo of the gray card in Photoshop.
2. Select Image >> Adjustments >> Curves from the menu at the top.
3. In the curves box, select your middle ink dropper (the gray one) and use it to click on the gray portion of the gray card in the photo.
4. Before closing the Curves box, select "Save Preset" to save your new white balance settings.
5. Now open the rest of the photos that you took where you first photographed the gray card.
6. For each photo, select Image >> Adjustments >> Curves, and then choose "Load Preset" to load your custom white balance setting to color correct the image.

week three 7