

PHOTOGRAPHY PRIMER

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ABOUT THIS GUIDE

Welcome to the "Photography Basics" guide. I'm thrilled you're here! This will briefly cover what I call the "art and science" of it. Art is for the creative side and science to know how to manipulate your camera to achieve the desired results.

I'm very excited to work with you in your upcoming private lesson, and I'd like to especially welcome those of you who discovered my class through "Groupon." Don't hesitate to comment or contact me prior to the class if you have any questions not covered in this guide. No question is a silly one...trust

me, I've heard quite a few! That's where this guide can help. (You never know how many people are thinking of the same question that you dared to ask.) I'm looking forward to working with each of you.

Whether you have been a photographer for decades or have just picked up your first camera, the basics are always good to review. In this particular issue, I'll be discussing the **BASICS**: Exposure, Aperture, Shutter-Speed, White Balance, and Composition. Stay tuned for future issues covering more things in depth!

SO WHAT IS EXPOSURE?

Exposure is the amount of light collected by the sensor in your camera during a single picture. If the shot is exposed too long the photograph will be washed out. If the shot is exposed too short the photograph will appear too dark. Almost all cameras today have light meters which measure the light in the given shot and set an ideal exposure automatically.

You might wonder why there is not just a constant shutter speed or a constant aperture so that you would only have to worry about one

control. The reason is that even though they both control the amount of light getting to the sensor they also control other aspects of the picture. Shutter speed for example can be used to freeze subjects in midair with a fast speed or it can be used to blur water with a slow speed.

On most digital SLR's cameras today you can even change the sensitivity of the sensor when collecting light which is called the ISO speed. The common span of ISO speed is 100 to 800. *The higher the ISO speed the faster*

the camera collects light but it also adds more noise to the photograph than the lower speeds.

For example if your trying to take pictures in dim light without a tripod you might want to raise the ISO speed in order to get a picture that's not blurry. Most of the time you should keep it at a lower ISO speed if there is enough light, but it makes a big difference when there isn't.



2 stops UNDER



Perfect



2 stops OVER

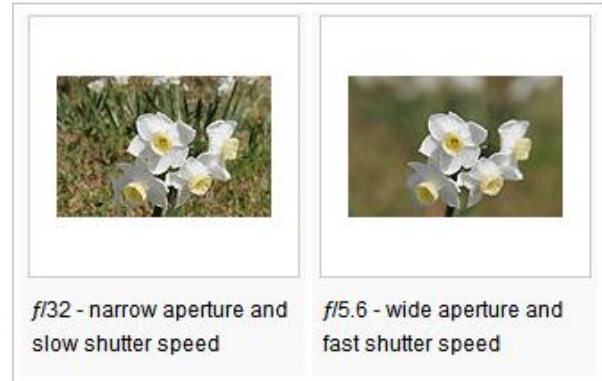
APERTURE

Aperture is the SIZE of the HOLE that the light enters your camera through. Just like drinking through a straw, more light enters when the APERTURE is wider than when using a very narrow aperture.

Aperture is measured in what's called **F-STOPS**. See the image on the right for an idea of sizes. The smaller the number, the wider the aperture.

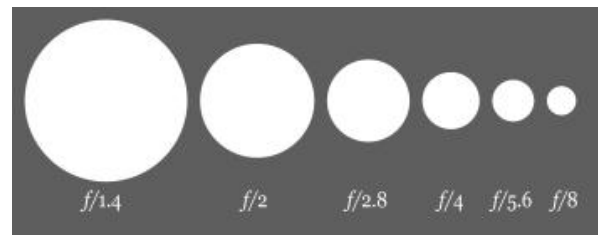
Typically, a fast shutter speed will require a larger aperture to ensure sufficient light exposure, and a slow shutter speed will require a smaller aperture to avoid excessive exposure

As you can see the relationship between APERTURE and SHUTTER SPEED is very important in ensuring that the proper amount of light enters your camera.



f/32 - narrow aperture and slow shutter speed

f/5.6 - wide aperture and fast shutter speed



SHUTTER SPEED

Shutter speed is one of the most basic important controls on a camera. Shutter speed controls the amount of time that your digital sensor, is exposed to light. In effect, the shutter determines what image is captured on your film. The **shutter** is a small plastic sheet that opens and closes to allow light onto the film or prevent light from reaching the film. The shutter is opened when you press the shutter release button on your camera to take a picture. The shutter speed determines how long the shutter remains open.

In addition to its effect on exposure, the shutter speed changes the way movement appears in the picture. Very short shutter speeds can be used to freeze fast-moving subjects, for example at sporting events. Very long shutter speeds are used to intentionally blur a moving subject for artistic effect. Short exposure times are sometimes called "fast", and long exposure times "slow".

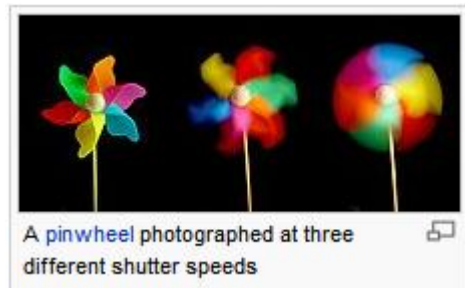
Shutter speed is measured in seconds – or in most cases fractions of seconds. The bigger the denominator the faster the speed (ie 1/1000 is much faster than 1/30).

In most cases you'll probably be using shutter speeds of 1/60th of a second or faster. This is because anything slower than this is very difficult to use without getting camera shake. Camera shake is when your camera is moving while the shutter is open and results in blur in your photos.

If you're using a slow shutter speed (anything slower than 1/60) you will need to either use a tripod or some type of image stabilization (more and more cameras are coming with this built in).



Images taken with a lower shutter speed invoke a visual sense of movement. Exposure time 3 seconds.



A pinwheel photographed at three different shutter speeds

UNDERSTANDING WHITE BALANCE



You might have noticed when examining shots after taking them that at times images can come out with an orange, blue, yellow etc look to them – despite the fact that to the naked eye the scene looked quite normal. The reason for this is that images different sources of light have a different ‘color’ (or temperature) to them. Fluorescent lighting adds a bluish cast to photos whereas tungsten (incandescent/bulbs) lights add a yellowish tinge to photos.

We don’t generally notice this difference in temperature because our eyes adjust automatically for it. So unless the temperature of the light is very extreme a white sheet of paper will generally look white to us. However a digital camera doesn’t have the smarts to make these adjustments automatically and sometimes will need us to tell it how to treat different light.

Preset White Balance Settings

Here are some of the basic White Balance settings you’ll find on cameras:

- **Auto** – this is where the camera makes a best guess on a shot by shot basis. You’ll find it works in many situations but it’s worth venturing out of it for trickier lighting.
- **Tungsten** – this mode is usually symbolized with a little bulb and is for shooting indoors, especially under tungsten (incandescent) lighting (such as bulb lighting). It generally cools down the colors in photos.
- **Fluorescent** – this compensates for the ‘cool’ light of fluorescent light and will warm up your shots.
- **Daylight/Sunny** – not all cameras have this setting because it sets things as fairly ‘normal’ white balance settings.
- **Cloudy** – this setting generally warms things up a touch more than ‘daylight’ mode.
- **Flash** – the flash of a camera can be quite a cool light so in Flash WB mode you’ll find it warms up your shots a touch.
- **Shade** – the light in shade is generally cooler (bluer) than shooting in direct sunlight so this mode will warm things up a little.

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CAPTURE. INSPIRE. CREATE

Don Wright has been capturing moments and moving pixels since 1995, at the great age of 14. He continues to learn new things on a daily basis and enjoys nothing more than sharing what he's learned.

Find us on facebook @ DonWrightDesigns

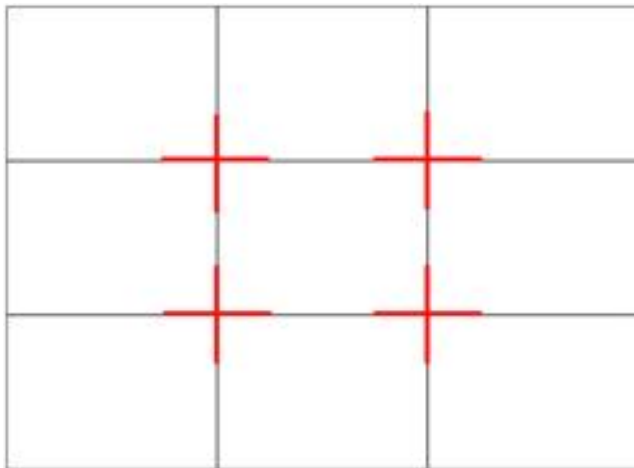
I'd like to thank **Darren Rowse**, the editor and founder of Digital Photography School for using some of his ideas and lessons for this quick guide.

Some Links to check out:

Www.strobist.com
www.dg28.com
www.digital-photography-school.com

THE RULE OF THIRDS

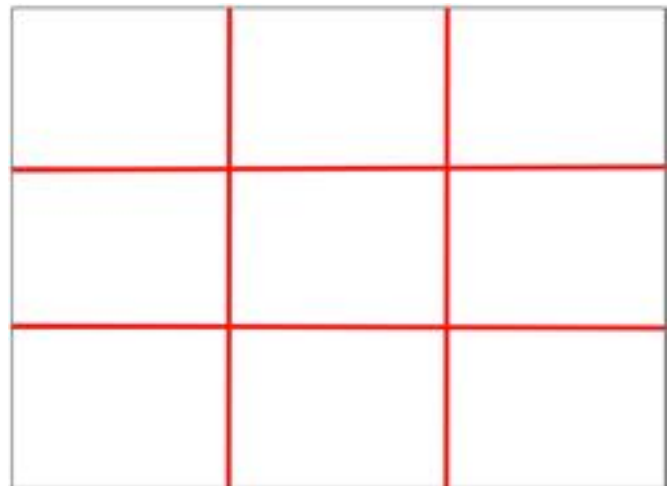
The basic principle behind the rule of thirds is to imagine breaking an image down into thirds (both horizontally and vertically) so that you have 9 parts. As follows.



As you're taking an image you would have done this in your mind through your viewfinder or in the LCD display that you use to frame your shot.

With this grid in mind the 'rule of thirds' now identifies four important parts of the image that you should consider placing points of interest in as you frame your image.

Not only this – but it also gives you four 'lines' that are also useful



The theory is that if you place points of interest in the intersections or along the lines that your photo becomes more balanced and will enable a viewer of the image to interact with it more naturally. Studies have shown that when viewing images that people's eyes usually go to one of the intersection points most naturally rather than the center of the shot – using the rule of thirds works with this natural way of viewing an image rather than working against it.

By Darren Rowse