DSLRs

Controlling the camera so it doesn't control you!

The Exposure Triangle

How to Make a Photo Rather Than Take a Photo

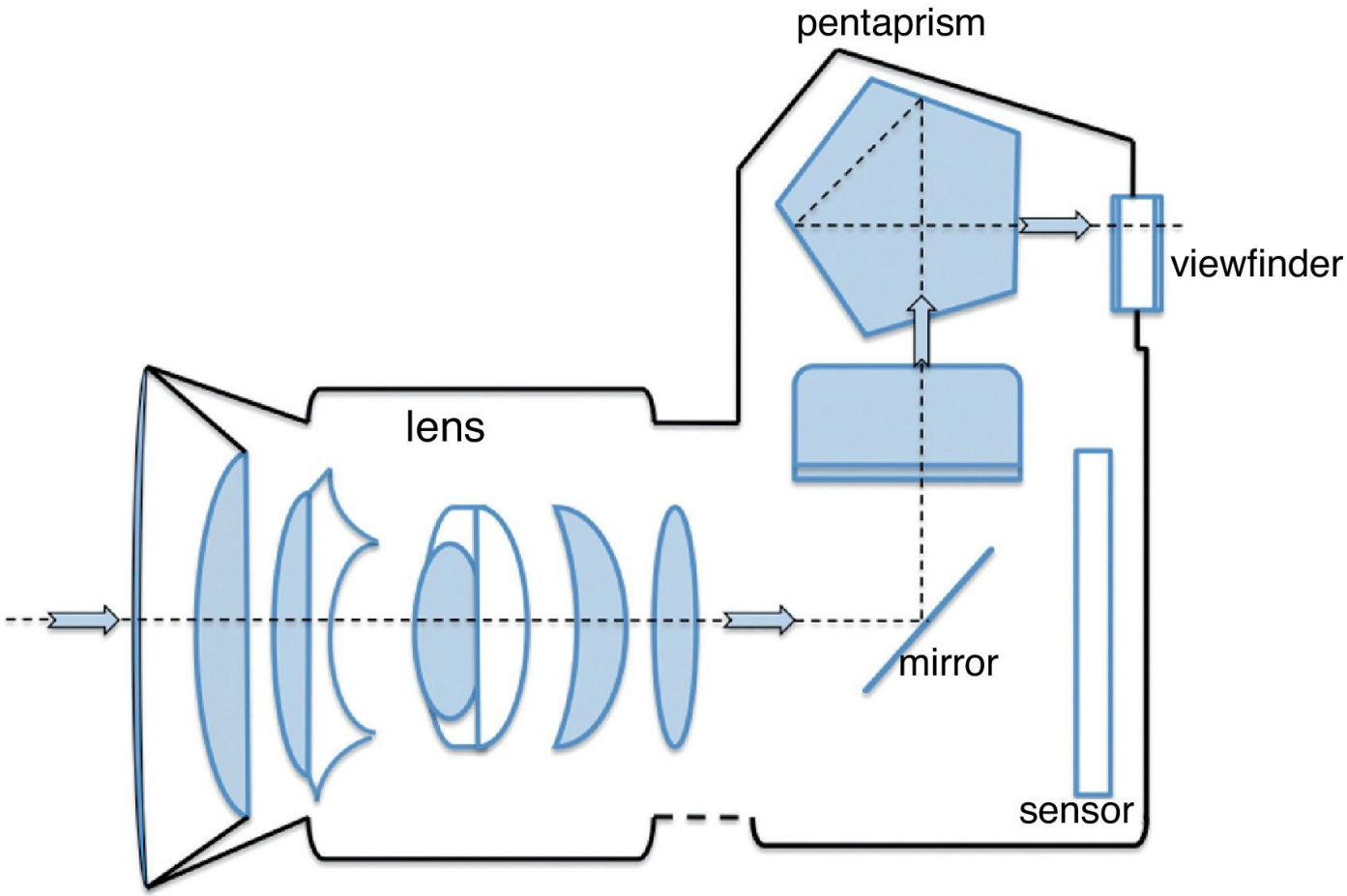
We all have thousands of images on our phone, hard drive and in the cloud. Back in 2000 when film was still at its peak the New York Times reported that “Kodak announced that consumers around the world had taken 80 billion photos, setting a new all-time record.” In 2020 with digital imagery being the norm the number of photos taken is predicted in Life In Focus magazine to be 1.4 trillion!.

Nowadays we don’t have to think about taking a photograph. The camera can do all that for you. All we have to do is point and shoot and 9 times out of 10 we will get a perfectly exposed image. However the look of this photo has been decided by the camera. The photographer has not decided anything about how that image is perceived by the viewer. As you now begin to analyse and respond to different images it is important to learn how to make your own images look the way you want them to. This presentation begins to look at how you can use the manual controls of your camera to influence how your images will look.

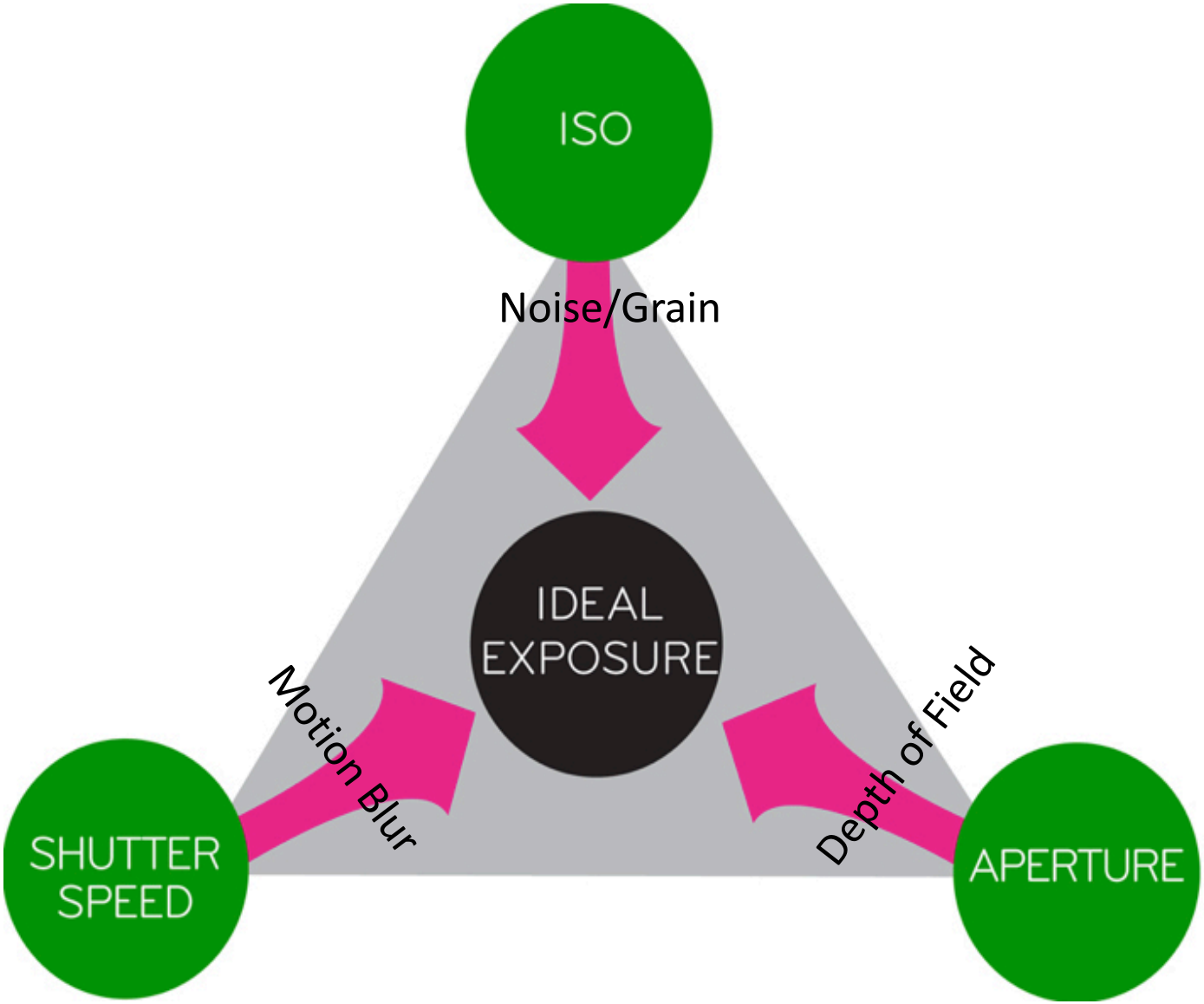
Back to Basics

- Single Lens Reflex
- The Exposure Triangle
- Aperture
- Shutter Speed
- ISO
- White Balance

(Digital) Single Lens Reflex

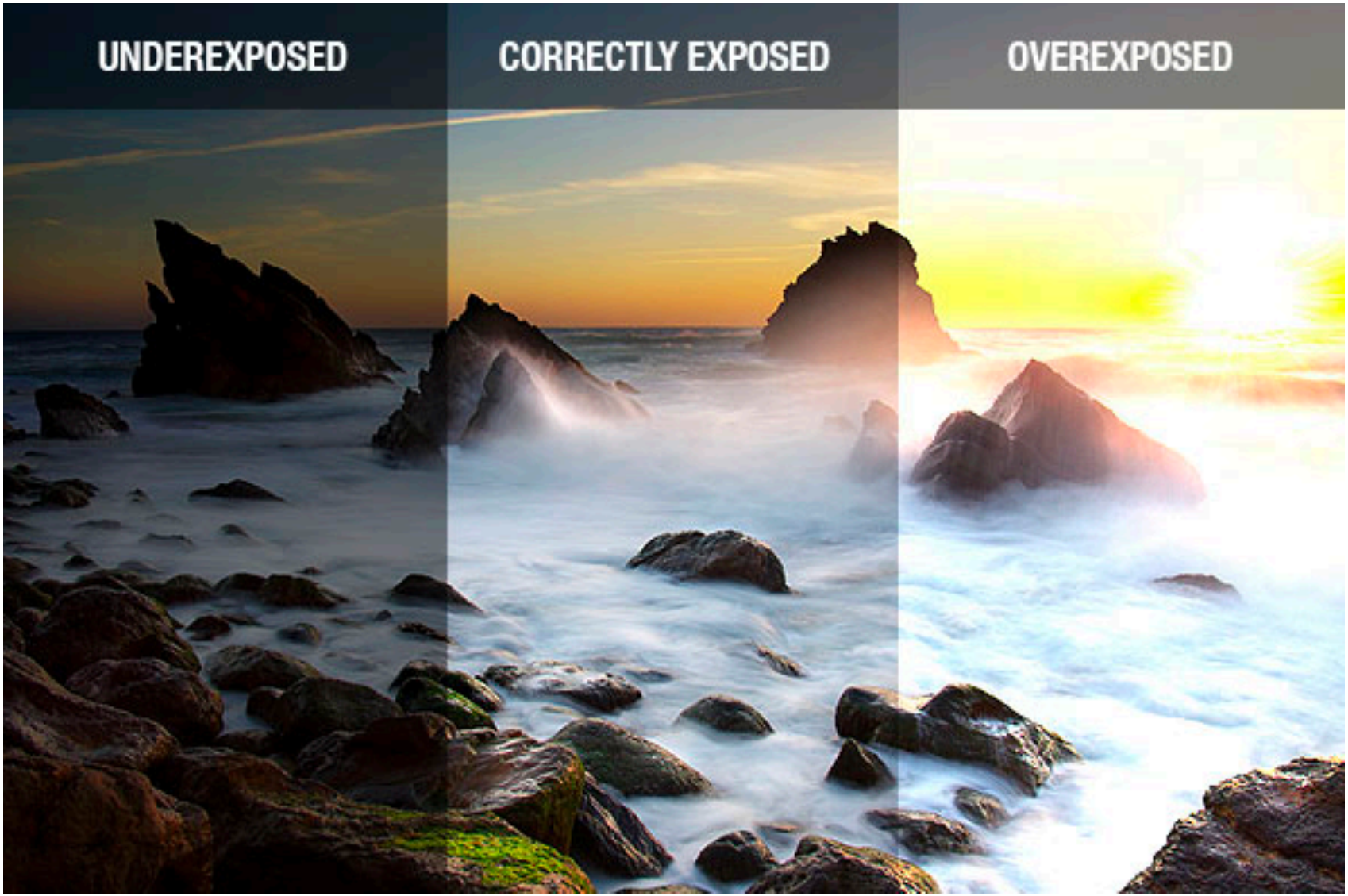


Exposure Triangle



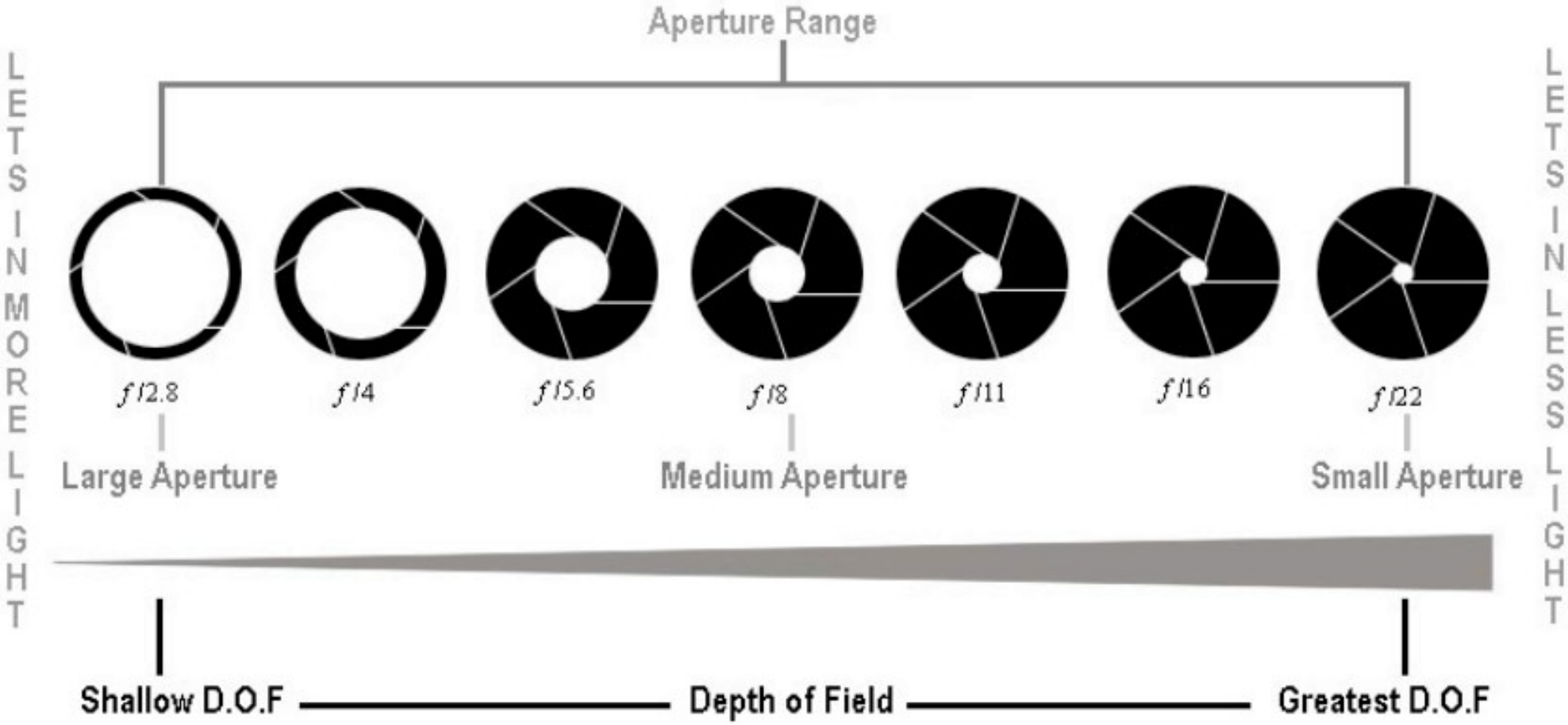
Typical Viewfinder Info

Ideal Exposure



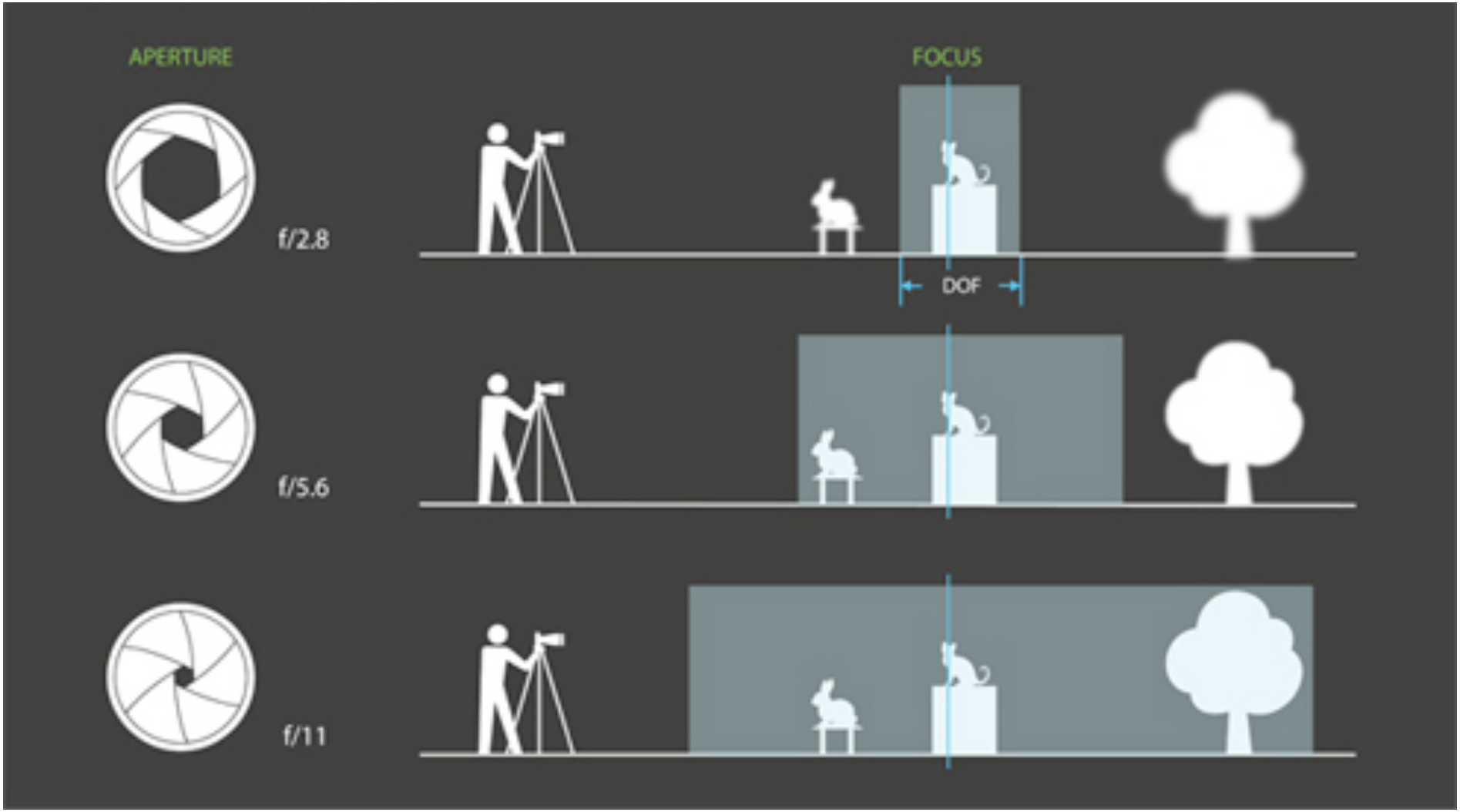
Try and “bracket exposure” to find out which is best for your image.

Aperture

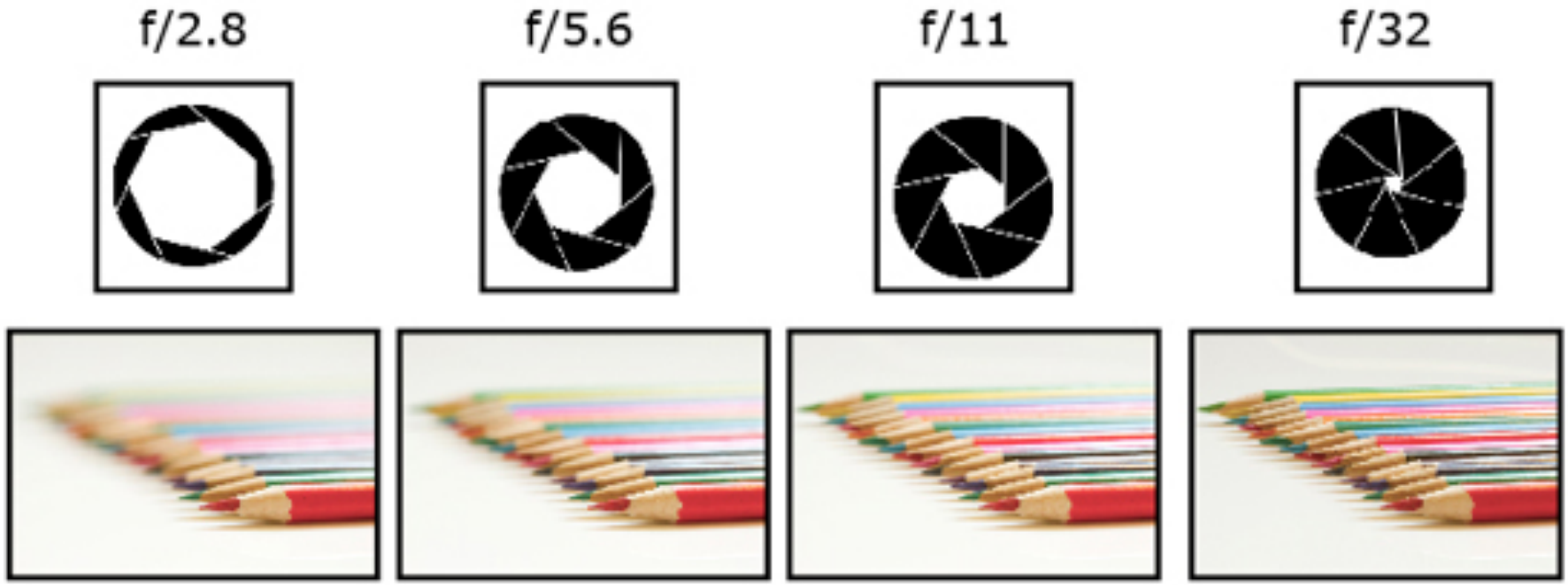

Aperture Range
LETS IN MORE LIGHT
LETS IN LESS LIGHT
f/2.8
f/4
f/5.6
f/8
f/11
f/16
f/22
Large Aperture
Medium Aperture
Small Aperture
Shallow D.O.F
Depth of Field
Greatest D.O.F

Depth of Field (DOF)

In optics, particularly as it relates to film and photography, depth of field (DOF) is the distance between the nearest and farthest objects in a scene that appear acceptably sharp in an image.



Depth Of Field Example

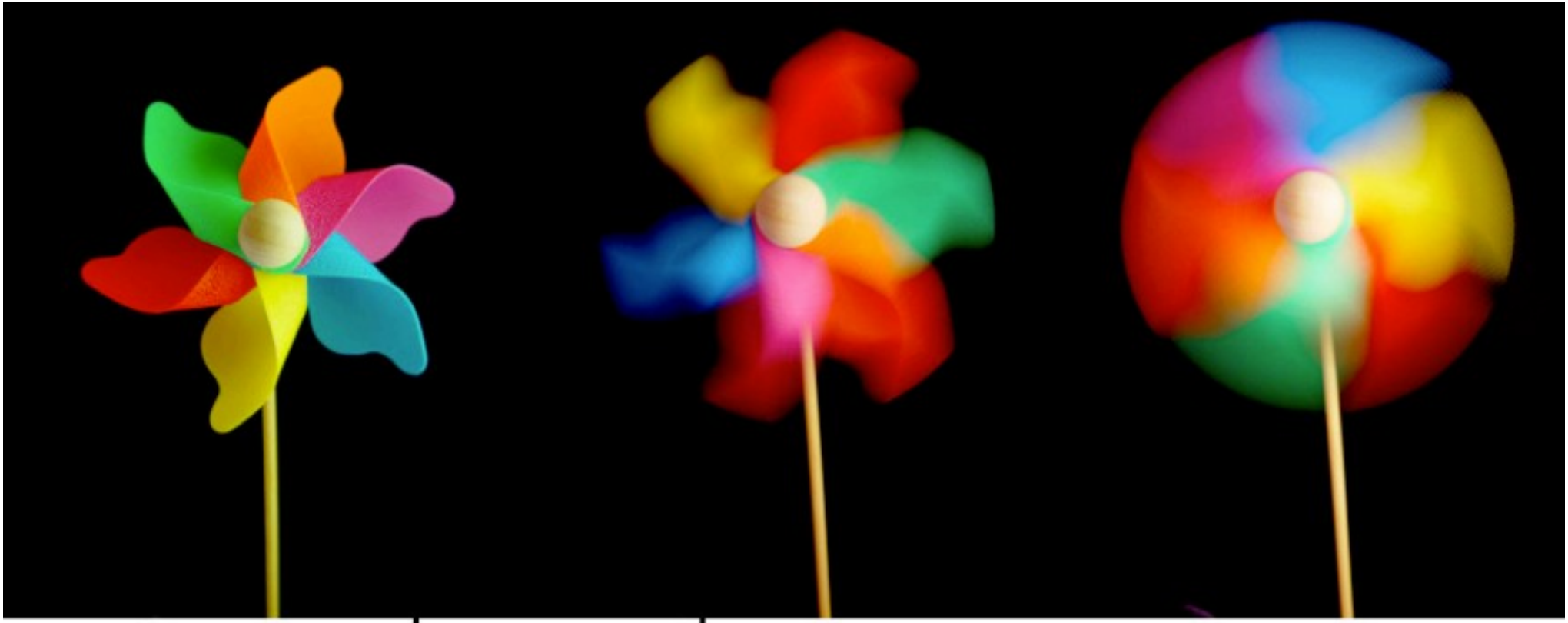


Examples of Depth of Field

Broad Depth of Field at f16

Narrow Depth of Field at f2.8

Shutter Speed



1/1000 1/500 1/250	1/125 1/60	1/30 1/15 1/8 1/4 1/2 1 2 4 8
Freeze action/movement	Hand held camera no slower than 1/60	Movement blur - tripod required

How Shutter Speed Effects Studio Photography

Shutter too fast

Shutter too slow

How Shutter Speed Effects Daylight Photography

shutter speed at
1/3 sec.

The motion is blurred

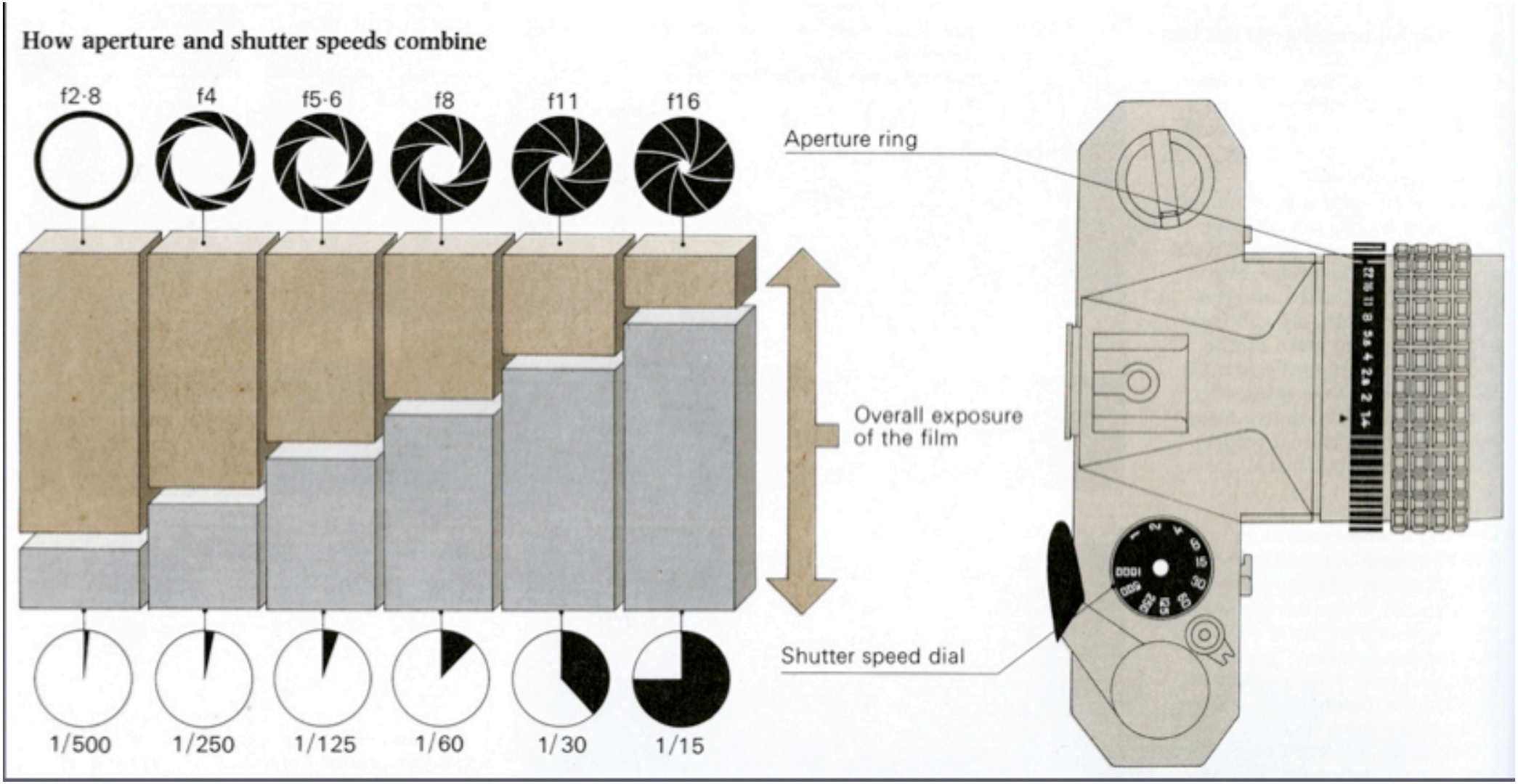
By blurring the motion, it looks like movement and gives a different impression from when you actually saw it.

shutter speed at
1/640 sec.

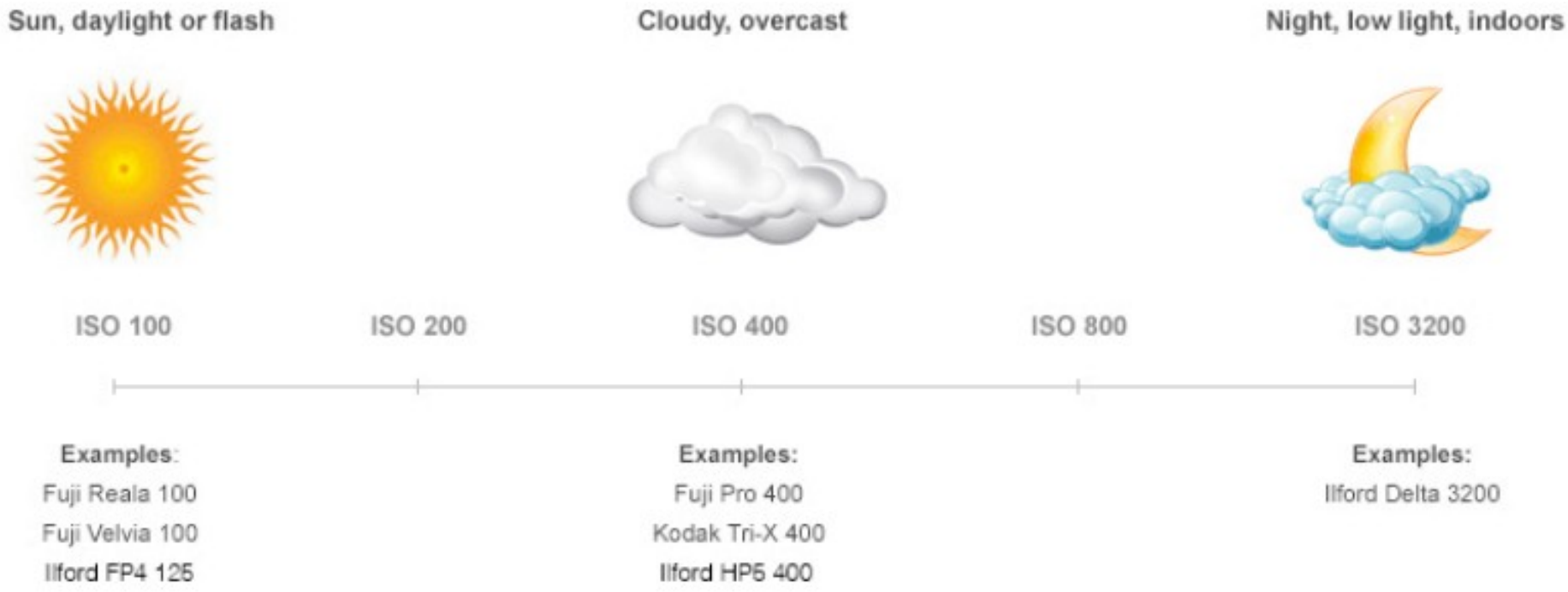
Freezes motion

Even a fast-moving action can be frozen in the picture.
A moment of motion that even the human eye cannot see can be captured by the camera.

The Relationship Between Shutter Speed and Aperture



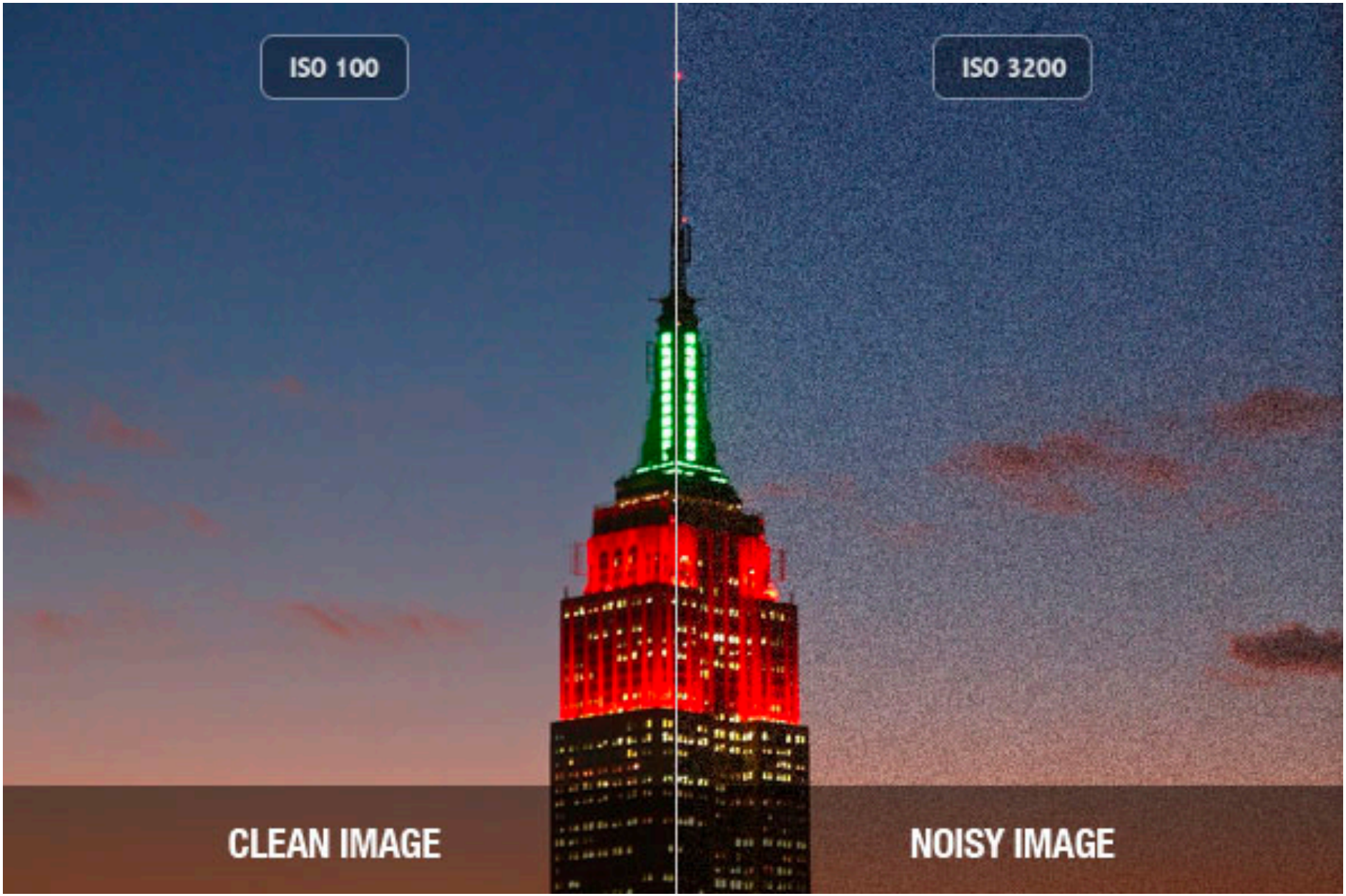
ISO



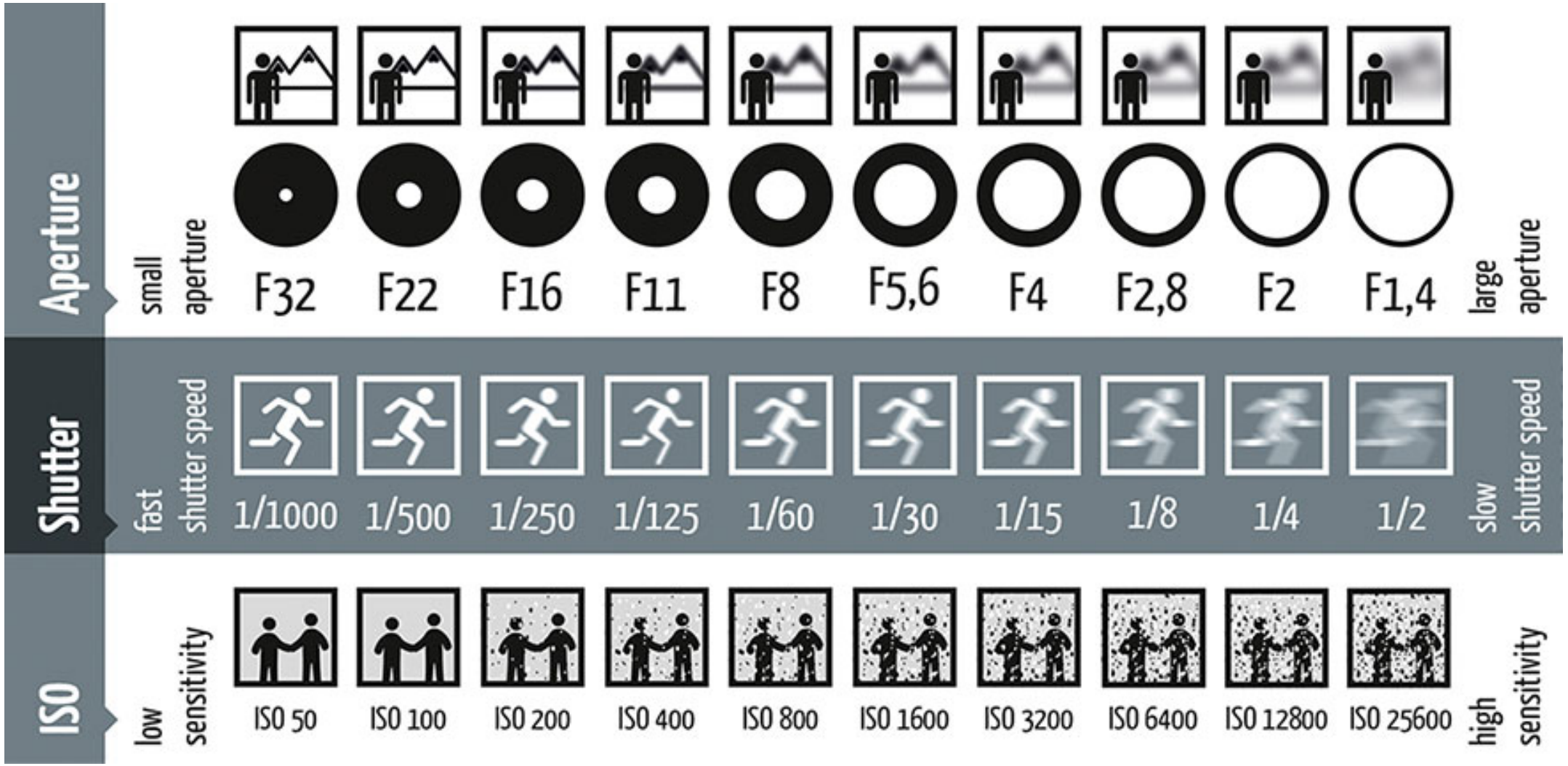
In traditional (film) photography ISO (or ASA) is the indication of how sensitive a film is to light. It is measured in numbers (you've probably seen them on films – 100, 200, 400, 800 etc). The lower the number the lower the sensitivity of the film and the finer the grain in the shots you're taking.

In Digital Photography ISO measures the sensitivity of the image sensor. The same principles apply as in film photography – the lower the number the less sensitive your camera is to light and the less noise is visible.

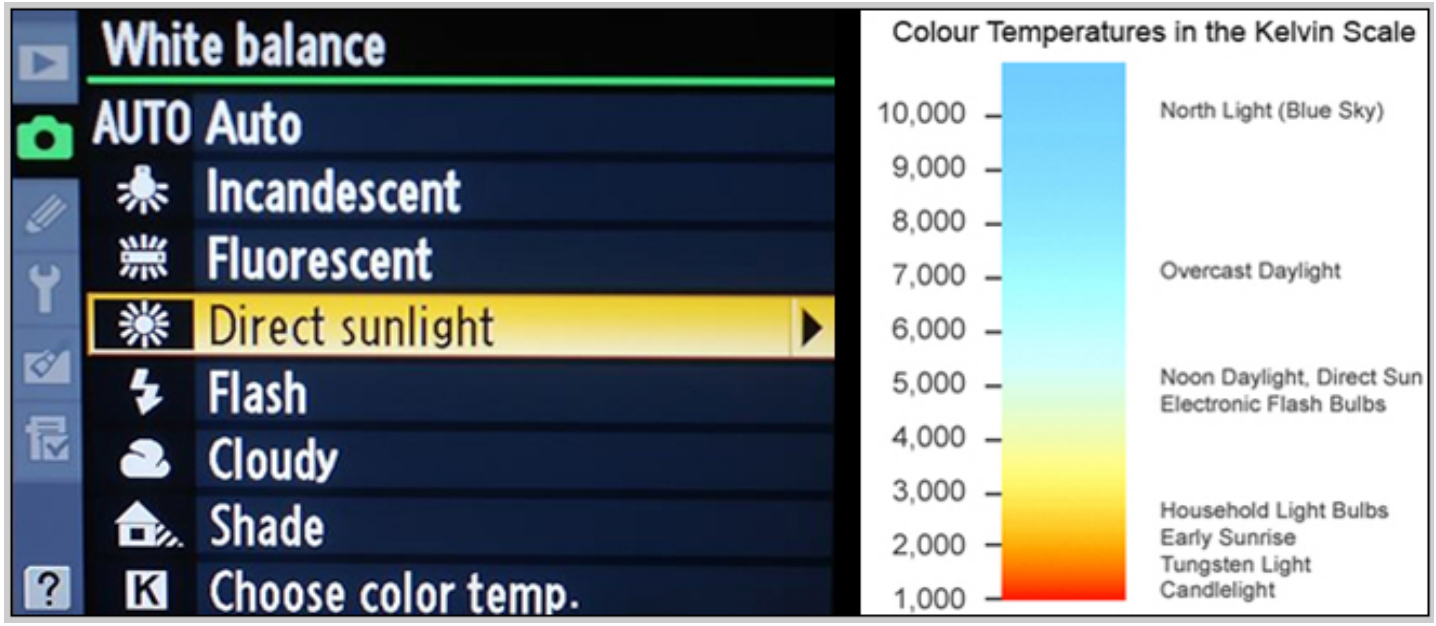
The Effect of ISO



Quick Reference Sheet

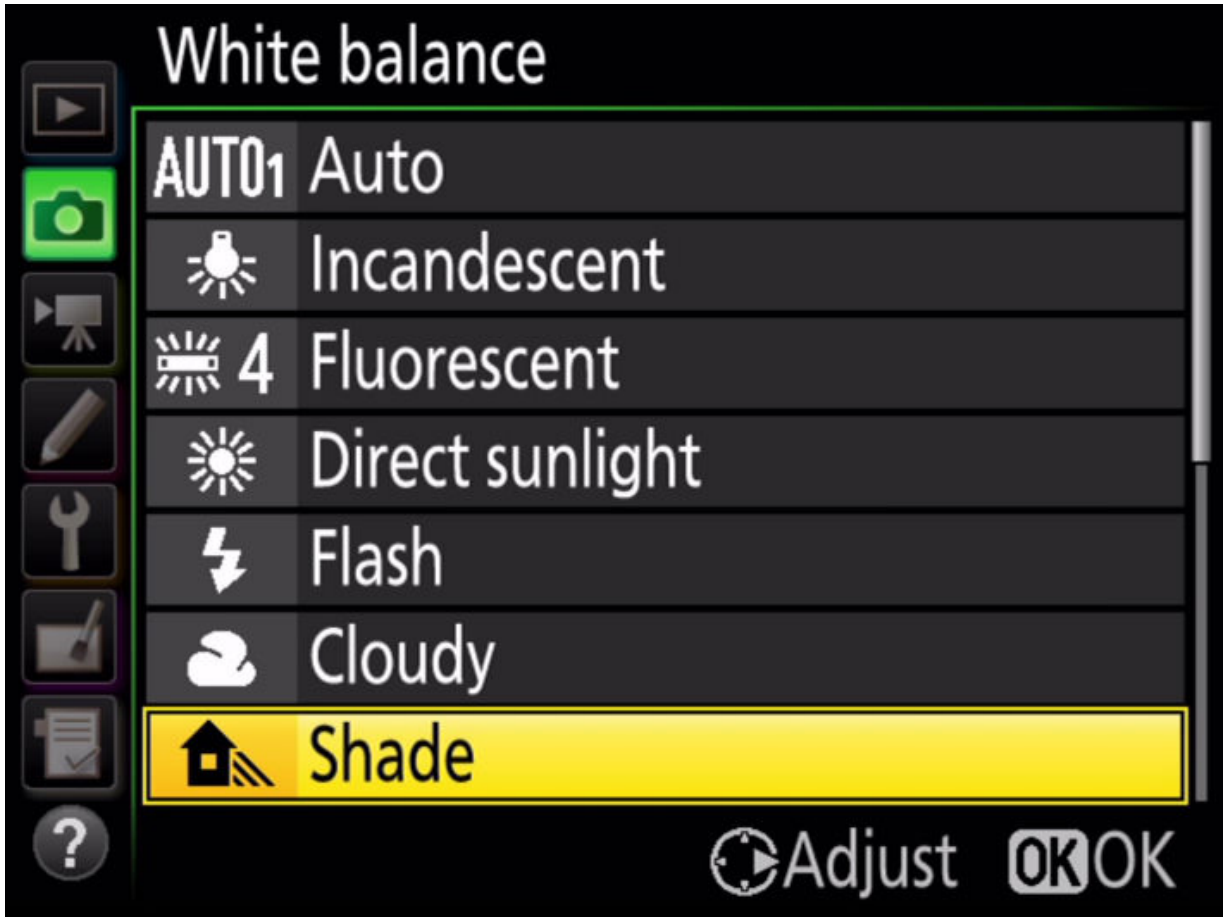


White Balance



White balance (WB) is the process of removing unrealistic color casts, so that objects which appear white in person are rendered white in your photo.

White Balance Options on a DSLR



These may vary depending on which DSLR you are using. The above is based on those in a Nikon D750

White Balance Presets Explained

WHITE BALANCE PRESETS

Your guide to what they do and when to use them

AUTO

A simple failsafe mode for snapshots, but the White Balance may vary from one shot to the next, and you may not get the colours you expect.

Incandescent

This is the closest match for regular domestic lighting, and will correct the colour much more effectively than auto White Balance.

Fluorescent

This comes in many different types and current D-SLRs offer no fewer than seven alternatives, so some trial and error may be needed.

Direct Sunlight

Calibrated to give neutral colours under midday sun – and you can use it as a fixed standard for recording sunlight, and using this preset can prevent skin tones turning 'cold'.

Cloudy

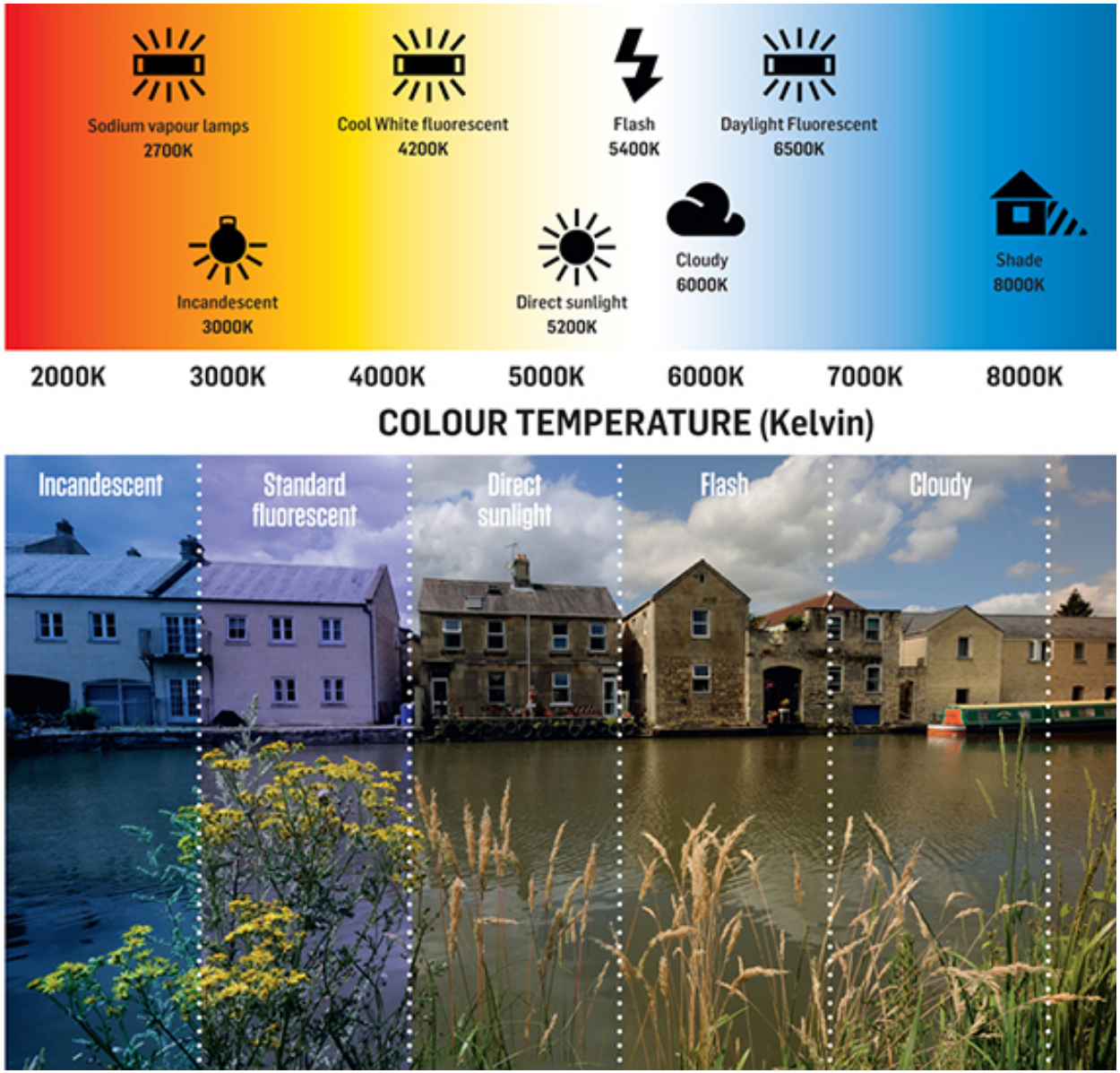
Light has a cooler tone under a cloudy sky, and this preset will warm up the colours. It's good for portraits but can be too much for landscapes.

Shade

This is designed for open shade under a blue sky. This preset will give you more natural-looking skin tones.

K

More advanced D-SLRs let you set the White Balance colour temperature manually – useful with some studio lighting.



White Balance Comparisons

Tungsten

Fluorescent

Daylight

Cloud

Shade

For the **manual white balance** here is a series of the same subject but using different settings for white balance. The source of light with warmest colours – tungsten light – results in the strongest correction towards cooler colours and on the opposite end it is „shade“ giving the strongest adjustment towards warmer colours. This means that if the lighting remains the same (daylight) in all photos but the camera White Balance settings are changed to those shown, a colour cast will appear on your photos