



## Introduction to Photography

### Exercise: Exposure and Light Metering

The goal of this exercise is to give you an opportunity to practice using your camera in manual mode to make controlled exposures. You will be making a series of images that will allow you to build an understanding of the way your camera's light meter responds to different situations. Since the light meter is programmed to respond correctly to a particular subject tone (18% reflectance) it will sometimes suggest camera settings that give incorrect exposures. Being aware of where these errors may occur will allow you to make more consistently correct exposures.

#### The light meter

The light meter in your camera measures the brightness of light entering the lens, considers the shutter speed, aperture, and ISO settings you have made, and then indicates the likely exposure result on a scale using "0" for a correct exposure, "-" for under-exposure (too dark), and "+" for over-exposure (too light).

The light meter is programmed to assume that all scenes reflect 18% of the light that falls on them. This means the subject is not very light or dark in tone and reflects an average amount of light. The colour of a surface is not important, only the amount of light it reflects. Some examples of 18% reflective surfaces include green grass, clear blue sky, and weathered concrete.

The meter indicates that the exposure settings are correct if they will result in a photograph where the subject looks as if the subject is neutral in brightness. This means subjects that are very light (white, pale yellow etc.) will appear darker than expected, and subjects that are very dark (black, dark blue, dark brown etc.) will appear lighter than expected.

#### Exercise

To keep this exercise simple, keep the aperture set to F5.6 and ISO set to 100 for all tasks. Adjust only shutter speed to bring the light meter to "0". Make sure the whole frame is filled with the subject described in the task when making your meter reading and exposure. All scenes should be in even light (no shadows) unless the task specifies otherwise.

#### Tasks:

1: Identify a subject and background that are grey and neutral in brightness (i.e. not white, not black). Adjust shutter speed until the meter indicates a correct exposure and make a photograph. Check that the brightness of the image matches that of the subject. If the image is too light repeat the whole task with a lighter toned subject until the photograph looks correct. If the image is too dark repeat the whole task with a darker toned subject until the photograph looks correct.

2: Identify a subject and background that is very colourful and neutral in brightness (i.e. not very pale, not very dark). Adjust shutter speed until the meter indicates a correct exposure and make a photograph. Check that the brightness of the image matches that of the subject. If the image is too light repeat the whole task with a lighter toned subject until the photograph looks correct. If the image is too dark repeat the whole task with a darker toned subject until the photograph looks correct.

3: Find a subject and background that are white. Adjust shutter speed until the meter indicates a correct exposure and make a photograph. The photograph should render the white subject darker than it really is. Adjust the shutter speed to a slower setting and repeat until the subject brightness is correct in the photograph.

4: Find a subject and background that are black. Adjust shutter speed until the meter indicates a correct exposure and make a photograph. The photograph should render the white subject lighter than it really is. Adjust the shutter speed to a faster setting and repeat until the subject brightness is correct in the photograph.

5a: Find a scene where some parts are brightly lit and other parts in shadow. Zoom in or walk closer to the light areas and make you exposure setting with nothing but light subjects in the viewfinder. After completing your meter reading and setting the shutter speed adjust your composition to include some shadow areas. The meter may indicate that the settings are now incorrect, ignore the meter and make the exposure. The image should have light areas that look correct and shadows that look very dark.

5a: Photograph the same scene as in 5a. Zoom in or walk closer to the shadow areas and make you exposure setting with nothing but shaded subjects in the viewfinder. After completing your meter reading and setting the shutter speed adjust your composition to include some brightly lit areas. The meter may indicate that the settings are now incorrect, ignore the meter and make the exposure. The image should have shadow areas that look correct and lit parts that look very bright.