GUIDES TO SPECIFIC TECHNIQUES OF PHOTOGRPAHY

HIGH DYNAMIC RANGE (HDR)

https://www.youtube.com/watch?v=ULPRZheC19E

What is Dynamic Range?

It is a measure of the range of brightness and darkness of light. Roughly your eyes (which are the best at this) have a range of around 32 steps. A very good camera has a range of around 16 and a typical camera around 12.

What does this mean for my Photography?

1) When buying a camera you should find out the dynamic range that your camera is capable of – the higher the more expensive is likely. It is one of many considerations in buying a camera
2) When taking shots – especially of a composition that contains RELATIVELY bright areas AND much darker areas, you need to be aware that any camera will struggle to capture the correct exposure for the wide variation. The answer is simple – you take a number of pictures on different settings and then merge them together.
3) Note that HDR is best done in Post Processing and NOT in camera. The HDR option is offered in many cameras but:
    a. Cameras have very poor processing capability and so do a poor job
    b. Normally HDR in camera results in a .jpeg image – which is then inadequate for subsequent post processing.

    However, your camera might have the ability to do "Exposure Bracketing" – this can be set in your camera to take a few shots in a row at different settings of aperture. Different cameras offer different options. This is effective and useful for some circumstances – but the settings are pre-set, so manual is more effective.

Here is a guide to how to go about producing an HDR image:

Needed:

- Digital Camera (not possible on current mobile phones)
- Tripod
- Possibly some ND Filters

IN Camera: https://progradedigital.com/hdr-photography-how-to-shoot-stunning-hdr-photos/

This uses the EV control to easily alter the exposure, but other controls in the exposure triangle (F Stop; ISO & Exposure time) can also be used.

- Set up shot / composition on Tripod
- Identify the brightest spot and reduce EV until it is not overbright (use your histogram to check this). Note the EV reduction required (say minus 2)
- Identify the darkest spot on your image and increase EV until it is not black – it shows some detail. Note the reduction in EV (say + 2)
- Now, hold your fingers in front of your lens and take a shot – this reminds you, when post processing that a series of shots follow

- Next take 3 to 7 shots across the range, quickly. Say +2; +1; 0; -1; -2….. go for at least 5 and 2 more than required at each end of the spectrum. This gives you the opportunity when in lightroom to choose / create a slightly brighter or darker mix.
- Suggest you use a remote trigger for the above – thus reducing the amount you touch the camera. The composition should remain identical for each shot to blend well in Lightroom.
- These can then be blended in Lightroom

In Lightroom: https://www.youtube.com/watch?v=yBFl6-X69xM

- Find the set in your thumbnails (the one with the hand will remind you where they are!)
- Select them
- Right Click and find the option: Photo Merge – HDR
- A preview page will appear – you normally need to allow 'auto align and optionally choose 'auto settings' options. The auto settings will create a basic automatic set of light changes -but this is simplistic and normally better done manually. You will also notice the 'deghost' option – this allows for small overlaps in the images that lead to shadows / ghosts (spooky eh!!). If this appears then switch on the deghost option and this will remove minor overlaps.
- Start the process and wait – it usually takes around 30 seconds, depending on complexity
- A new image will then be auto loaded and will appear in the tray. The suffix HDR.DNG is added to the file name – making it easy to distinguish from the original set.
- This can now be edited like any other image.

Example of HDR Image



For this image the sun was very bright – but an important part of the picture is how the low sun catches the foreground flowers – which were quite dark. Using 5 images at different EV settings the above was created using the technique above.