Silver Surfers @ Bedford
Vocality Project Training 2007

Session 3 – Teaching Digital Photography to Older Learners

Pointers for taking photographs

There are many things which need to be taken into account when taking a good photograph. With a digital camera we have the opportunity to take a lot of photographs because we do not need to print all of them. We can also delete the ones that we do not want.

However there are one or two thoughts for taking pictures that may help you to take better pictures first time.

Photograph composition

Cropping – check that you have what you want in the viewfinder, not extraneous detail. If you want the picture to be of your cat then the cat is what should be in the viewfinder – not your whole garden!

Make sure that everything in the viewfinder is there because you want it to be.

Landscape or Portrait?
A lot of people never, ever turn their camera on it's side and shoot an upright picture. It can be a little awkward to hold until you get used to it but, what a difference it can make to the picture. If you are taking a picture of one person then it is essential to shoot upright, you waste so much of the picture area at the sides if you don't. Even when you are shooting landscapes, you will find that, sometimes, the picture will look more dynamic with an upright frame.

Always think, with every picture you take, should this be an upright or a horizontal view? Usually the answer is obvious but sometimes, for instance when the composition is square, the choice is more difficult. In this case take two pictures, one of each.

Can't I leave the cropping for later?
If you crop your pictures afterwards using the computer you are throwing away quality. You are wasting some of the pixels in your camera. What's the point in having a camera with five million pixels if you are only going to use three million of them?

And so the tip is
One of the easiest ways to improve your photography is with careful attention to framing. Look into the corners of the viewfinder to see what is there. Do you need all that background? Can you get closer to your subject or zoom in? Would the picture look better as an upright or landscape?

Viewpoint
Selecting your viewpoint, the position from which you photograph the subject, is a very important part of composition. When taking a photo of a group of friends, how often do you move around the group looking for the best angle?

The first, most obvious difference between one viewpoint and another is the background. If you are photographing a subject that cannot easily be moved, the only way to change what is in the background is to choose a different viewpoint.

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Different views
The subject itself can look quite different viewed from different angles. Photos can be made to take on a whole new dynamic by selecting an extreme angle of view. Try lying down, getting the camera as close to the ground as possible, from the side etc.

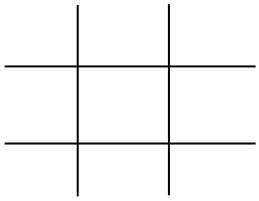
Also the perspective can change quite drastically, especially with wider angled lenses. If you photograph a person full length with a wide angle lens from a standing position, their head will be too big in proportion to the rest of their body. If, on the other hand, you kneel down and shoot the same picture from waist height, you will see that the whole picture is better proportioned. When shooting outdoors, the viewpoint you choose also affects how the light from the sun falls on your subject.

Shapes
If we are taking pictures of people or movable objects then, often, we also have the opportunity to arrange them into the shapes we want. 'Shapes' is what good photography is all about, creating shapes and textures that please you.

If you are shooting landscapes or other immovable objects then you must compose the picture by moving yourself and deciding where to place the point(s) of interest in your picture.

There are various compositional rules to help you. Occasionally you will find that a really striking picture will show a blatant disregard for the rules. Once you are aware of the rules then break them as often as you want but, at least, know you are breaking them and why.

Rule of Thirds
This is particularly good for landscapes but it works well for many types of subjects. The rule of thirds simply says that, instead of placing the main focus of interest in the centre of the frame, which gets a little boring, that you position it on an intersection of the thirds. The grid looks like a noughts and crosses outline.



For instance if the focus of your picture is a reflection of a boat, position the boat in the top third of the picture so that the reflection appears in the centre of the picture. Use the grid to try positioning around and between the lines.

Using Diagonals
Setting your subject matter on a diagonal will almost always make for a more dynamic picture. Even if this is an invisible diagonal that draws your eye between two points. Move around the subject and look for a diagonal.

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Exposure
By 'exposure' we mean the amount of light that falls onto the film, or CCD if you are using a digital camera. In modern cameras the exposure is usually set to automatic by default and, most of the time, it can be left there and will produce beautiful pictures.

Auto-exposure
If you have a modern camera, the chances are that the default metering system is 'centre weighted average', which means that, although it takes an average reading of the whole scene, it takes more notice of what is in the middle of the frame. This is good news.

The other good news is that it takes this reading at the time when you take 'first pressure' on the button to take your picture. When you push it halfway down and it beeps at you, not only is the focus now set (on an auto focus camera) but the exposure reading is taken and the aperture and shutter speed are set.

If your main point of interest is not in the centre of the frame, it's a good idea to put it there temporarily while you focus and take your light reading, then move the camera whilst still holding the button halfway down and compose the picture the way you want it to be.

A common use for this technique is when you are taking a close up shot of two people and there is space between their heads, if you're not careful the camera will focus on the wall or trees behind them. If the background is very dark or very light this can alter the exposure significantly and result in faces that are too dark or too light.

Lighting
Sunlight
If you are able to choose the time of day to shoot your pictures, try to pick a time when the sun is low in the sky, either shoot in the early morning or late afternoon otherwise with the sun too high in the sky the subject's eyes will be in shadow and/or they will be squinting in the strong light. A nice side effect of shooting in the early morning or late afternoon is that the colour of the light is 'warmer', reds and yellows are stronger which generally gives a more pleasing effect.

If you are photographing in sunlight, try to position yourself so that the sun hits your subject from the side, this will give you nice 'modelling' and help create a 3D effect in the picture. Sunlight behind the subject can give a very pleasing 'backlight' effect but be careful that you are not getting 'flare' in the lens, which degrades the contrast of the image.

Using Flash
Built in flash lights can produce a lighting that is flat, make the shadows harsh and promote red eye. If there is any light at all, then use as much of it as you can. Modern autofocus cameras tend to do this automatically, they use the widest aperture to let as much natural light in as possible and add the flash to bring the exposure up to what is neccessary.

You may get an 'outline' effect when the flash light casts a shadow on the wall behind the subject. This can be minimized or eliminated by either posing your subject against a dark coloured wall or getting them far away from walls. The drop off in the intensity of your flash light is such that a white wall ten metres away will be quite dark if you are taking a close-up shot.

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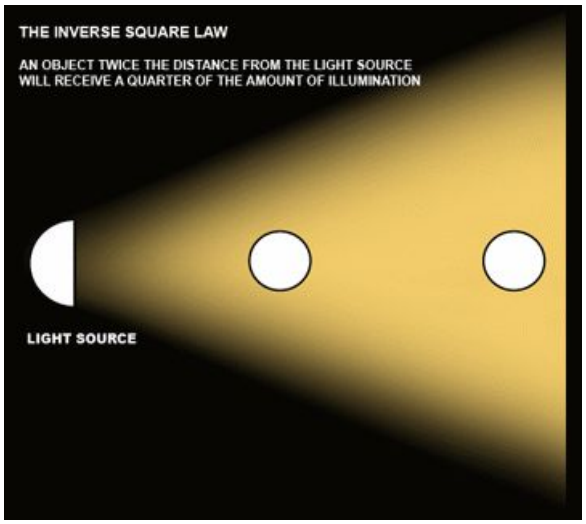
Red eye
'Red eye' has been a major problem for camera manufacturers since they first started including flash guns in their cameras. There are many complicated and ingenious methods to eliminate the problem but none of them seem to work.

The most common method in use at the moment is the 'pre-flash', which is usually a series of flashes fired quickly just before the shot to try to close the pupils of your subject(s) and thereby lessen the problem. Apart from the fact that this does not seem to work that well, the problem is that people think that you have already taken the picture and start to walk away. The best bet is to live with the problem and use programs on the computer to eradicate red eye afterwards.

The Inverse Square Law
It's useful to know a little about the *inverse square law* especially when using flash.

Basically all the *inverse square law* says is that an object that is twice the distance from a point source of light (a lamp or flash) will receive a quarter of the illumination. So what it means to us is that if you move your subject from 3 metres away to six metres away, you will need four times the amount of light for the same exposure.



The reason why the power of the light diminishes so rapidly is because it *spreads* and so a smaller and smaller proportion of the light hits the object. As you can see from the diagram the beam of light fans out quite quickly and the object furthest from the light receives only a small proportion of the light, most of the beam misses the target.

The more the beam is focused the higher proportion of the light will fall on the object. With a theatrical spotlight for instance which has a very narrow beam, much more light will fall on the object.

So why do we need to know this?

If you are using flash on camera and everything is automatic then you don't need to worry about it at all. Except you may 'run out of light' because your flashgun is not powerful enough. It is very useful though to have some understanding of what is going on so that it doesn't come as a surprise when you see the effects of all this in under or over exposed photos.

Just remember 'at twice the distance, a quarter of the light reaches the subject'.

Close Ups
The first problem we need to look at is, how close the lens will focus. Lenses have a minimum focus distance which varies considerably from lens to lens, some longer zoom lenses have a 'macro' setting and will focus quite close but most lenses will not focus close enough to take very close pictures. With compact digital cameras getting really close will be a problem.