

What you can do with your camera!

What is today all about?

- Getting to know basically what your “camera” (*“point & shoot” compact*, *“phone”*, *“advanced compact”* / *“bridge”*, *“DSLR”*) can do, & how to do it.
- A basic introduction to camera controls & features, where they are and what they do – & *for you to find them on your camera!*
- A demonstration with a simple compact & another with a phone.
 - *Bridge cameras generally operate much like advanced compacts, and have electronic viewfinders so that they look like DSLRs, but you cannot change lenses.*
 - *DSLRs have roughly the same, or better/more, controls & facilities, sensors, lenses that can be changed, and they often have more “manual control” options (but they sometimes also lose facilities – especially the “higher end” ones!)*
- Some practice for you with YOUR camera (*after the tea break*)

Button, Dials &/or Screen Controls

What/where are the basic buttons, dials, screen controls:
(get your camera out & try to follow on it!)

- The **ON/OFF “button”!**
- **What do you see:** on the screen or through the viewfinder?
- **Menus:** button, dials, “4-way controller”, touchscreen button?
- **Exposure Modes:** – dial, dial or button + screen, touchscreen button?
- **“Macro” mode:** (may be a separate switch / button/ touchscreen button)?
- **Shooting/Reviewing:** button, dial, screen button, slide switch?
- **Display ON/OFF (!):** button, dial + button? *(because we’ve all switched the display off by accident at some time, and then need to get it back quickly!)*

Basic Modes? *(modes & symbols vary a lot between cameras!)*

The basic modes on most are something like:

- **“P” (“Programme”)** = pre-programmed **Shutter Speed & Aperture** combos
Note: these terms will be met often, & here is a basic explanation of what they, and others, mean
https://www.dpreview.com/articles/6407328260/buying-a-second-lens-what-lens-should-i-buy-next?utm_source=newsletter&utm_medium=email&utm_campaign=2017-january-18&ref_pe_1822230_223399600_dpr_nl_242_36
- <https://photographylife.com/what-is-aperture-in-photography> - **This is also very relevant to Slide 7**
- **“Auto” (“Automatic”)** like **“P”** but can often adjust shutter speed /aperture *Note: OTOH, on some cameras, “Auto” means the same as “Programme”!*
- **Zoom action:** buttons, dial, turn ring on the lens/body, “pinch” on the screen?
-  : [Auto] **(Flash)** = Flash activates/pops up & is ready to fire:
 : [On] (automatically / when you want it to /or never?)
 : [Off]
-  /“menu” **“Red Eye Correction”** = to prevent “red eye” effect from the flash.
- **“Scene” Modes** – Some cameras have many, e.g. 

& so what does each do? - *We will come back to some Scene Modes later!*

- **“Smart Auto”** Mode: Some cameras (e.g. my Canon A1400) even have something like this - they “look” at the scenes and decide which “Scene Modes” would be best (*hopefully you will agree – but maybe not?*)
-> *Look at the manual and the camera, and find out!*

NB: If you want, but don’t have, a printed manual it may be worthwhile contacting “Old Timer Cameras”
(<http://www.oldtimercameras.com/>) because they can sometimes provide one

More Advanced Settings *for some cameras*

- **“A”/“Av”** (“Aperture value”) = **“Aperture priority”** - like **“P”/“Auto”** but you can change Aperture & camera changes the Shutter speed for the same exposure.
- the **smaller the number**, the more open (“bigger”) the lens aperture is, and thus **more** light enters the camera – e.g. “F4.0 lets more light in than “F5.6”, and so the image is lighter.
- **“T”/“Tv”** (“Time value”) = **“Shutter priority”** – like **“P”/ “Auto”** but you can change shutter speed & the camera changes the Aperture for the same exposure
- the **smaller the fraction**, the quicker the shutter opens & closes, and so less light enters the camera, but the better it “freezes” motion – e.g. “1/500” is faster than “1/250” and freezes motion better
- **M” “Manual”** = Complete Aperture/Shutter Speed control – your choice!
-  **“Exposure Compensation”** = Press button & use “-”/“+” dial / screen-slider to reduce/increase Aperture to darken/lighten next image
– Generally only works when camera is set to “Auto”/“A”/“T”, & not “P”
- **“WB” “White Balance”** - compensates for colour-cast differences in light sources – generally it is set to “Automatic” (“AWB”) by default but it can often be selected manually – Try it!.
- **“B” “Bulb” /“Brief”** = Shutter stays open as long as shutter button is depressed
- **“Delayed action”**(2-10s, depends!) = a button/menu-press option to engage the mode, then press the shutter button & wait for a 2-10s delay before shutter fires.

Exposure Control – More info

- Exposure is controlled by the combination of Shutter Speed, Aperture size and Sensor Sensitivity (“ISO”) settings
(*& other factors like “White Balance” (“WB”), to correct for variations in lighting methods*)
- The more light gets to the sensor, the “brighter” the image is for a given ISO sensitivity setting – You may be able to vary some/all the settings, but, e.g.:
 - If you increase the aperture (*to a lower numeric value!!*), then the “depth of field” / the image “near to far” sharp focus area reduces
 - *OTOH*, if you decrease the aperture (*to a higher numeric value*), you may have to use slower shutter speeds & thus have “camera shake” problems
 - If you increase the shutter speed (*to a higher numeric value!*) too far, under-exposure (dark image) results as you/the camera can’t then open the aperture enough to fully compensate, and, again, you lose “depth of field”.
 - If you increase the sensor ISO sensitivity (*to a higher numeric value*) to maintain the shutter speed &/or aperture setting, image definition / quality suffers at some point → find out that critical ISO sensitivity number for your camera!
- Exposure control sometimes includes “Average”/“Evaluative” (*whole image*), “Centre Weighted” &/or “Spot” options where you can select the area of the image for which you most need the correct automatic settings selection.

More on Focusing Modes

- **“Auto”** - camera selects the areas which it considers should “in focus”
 - *Can you still control and aim the main focus point(s)?*
- **“Average”, “Centre Weighted”, “Spot”** options where you select the area of the image for which you need the most accurate focusing
- **“Manual”** - if/how can you do that – *lens ring, buttons, dial, touchscreen?*
-  **“Macro”/ “Close Up”**: moves internal lens optical elements to allow it to focus much closer than normal, *or could it actually be just a “Digital Zoom”?*

(but results in reduced “depth of field”/“in-focus” image – accurate focusing is critical!)

Note:

In “film-era” days, the term “macro” was applied to camera/lens set-ups where the film image dimensions were greater than that of the objects being photographed. However, as camera sensor sizes now vary widely, it is generally applied to any setup for taking very close-up shots of small objects, but also to special very close-focusing lenses for DSLRs.

- **“Zoom Type”** – 2 modes – make sure you know which one(s) you have!
 - **Optical zoom**: moves some of the physical lens element positions to widen/narrow view angle, & the image file size from the sensor does not change
 - **Digital zoom**: like zooming on your PC screen - enlarges a portion of the image, but does not change the basic view angle/size of the sensor image & so reduces the definition as compared with Optical Zoom mode!
 - **OR**: you may have a combination of both available – if so choose **“Optical”** whenever you can for best results!

Scene Modes: what they could be?

-  **“Portrait”** Produces a “soft” effect when photographing people
-  **“Landscape”** Optimized for shooting landscape scenes which contain both near and far subjects.
-  **“Nighttime snapshot”**: snapshots of people against twilight/ night backgrounds by reducing the effects of camera shake, even without using a tripod
-  **“Kids & Pets”**: Capturing subjects that move around quickly, such as children and pets, without missing photo opportunities.
-  **“Action”/ “Sport”** - Prioritises Shutter speed over Aperture
-  **“Indoor”** Prevents camera shake & maintains subject’s true colour (*correct “White Balance”*) under fluorescent/tungsten lights.
-  **“Scene Modes”** - several more special modes, such as Night scene , Foliage, Snow, Beach, Fireworks
-  **“Stitch” /”Stitch Assist”/ “Panorama”** shoot overlapping images that can be merged/stitched to create 1 panoramic image on a PC

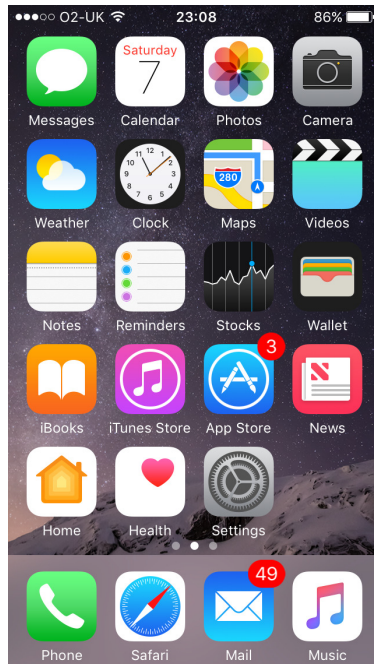
Exposure information – what & where?

- You should find out the “technical details” of your pictures,
& *we want you to include that info with photos submitted this year!*
- It’s called the “**Exif**” (“*Exposure Information*”) data, & shows at least the following:
 - Date (*and so we will “know” if you start submitting very old shots for the Competitions :)*)
 - Camera make/type
 - Image size (*in “pixels”*) & Image file size (*in “kB” or “MB”*)
 - Shutter speed, Aperture size, and possibly the exposure metering mode
 - Lens “focal length” & Zoom setting (*only “sometimes” for some camera/lens combos*)
 - ISO sensitivity setting
 - Image type (*“jpg”/“jpeg”, or “RAW” - but you may need a specialist file viewer to see RAW data*)
 - Any Exposure adjustments used, including possibly “White Balance” setting.
 - Whether flash was used
- Info should, or can, be displayed “on-screen” in the camera, but you can also find it via the “File”/“Properties” drop-down menu on a PC when you view an image in a file viewer
(e.g. MS Office “Office Image Manager” (OIS)/“Windows Photo Viewer”, or when opened in image editing programmes like Adobe Photoshop Elements, or s/w provided with cameras).
- You can also use specialist file viewers (*e.g. “ExIF View”, “ExifPro”, “Photome”, etc., - some of which are free downloads*) as these often give more info (*e.g. the image “Histogram” showing “exposure balance” across the frame*)

Taking photos with an iPhone 5s

Some Instructions

- Get to know the touch screen camera button/icon
- Point the screen to the object
- Click the white circle to take a picture



iphone 5s - photo options at the bottom of the screen

- Time- Lapse
 - Slow- motion
 - Video
 - Photo
 - Square
 - Panorama
 - Selfie
-
- The White touch button to take a shot

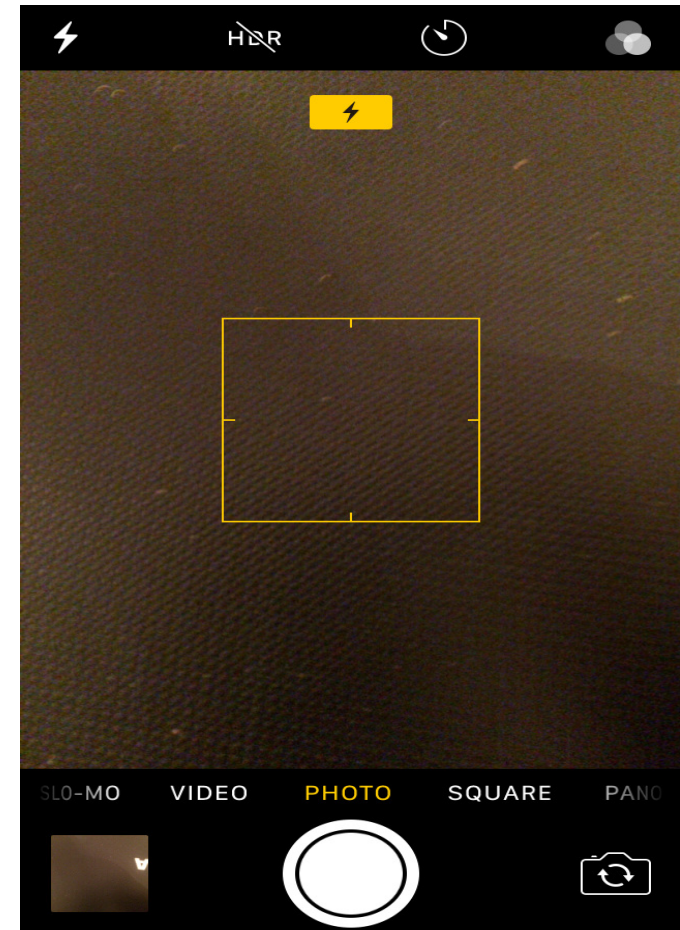
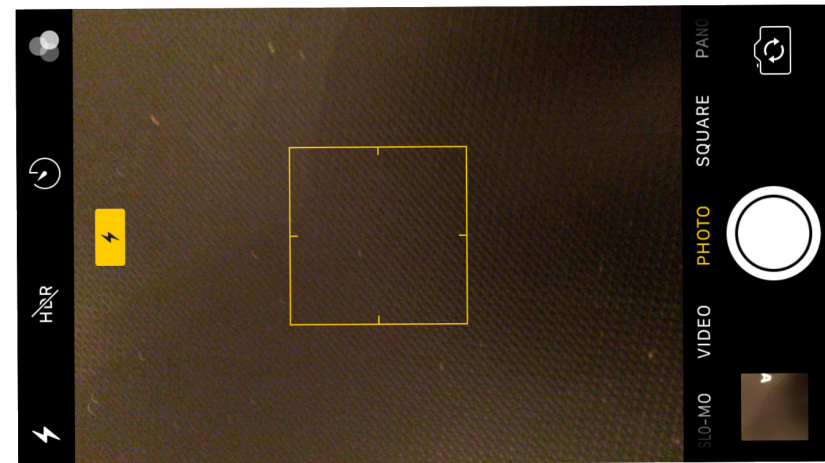
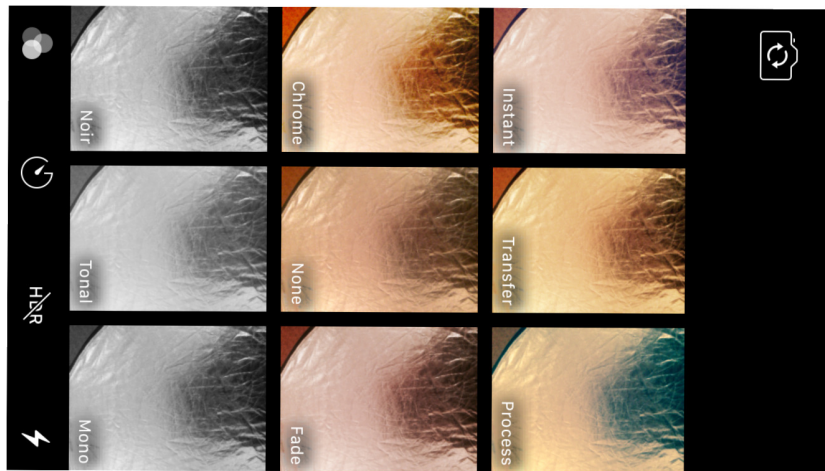


Photo options at the top of the screen

- Flash - Auto-On-Off
- HDR – High Dynamic Range
 - Improving the exposure of your photo high contrast scenes
 - Like Landscapes
 - More colour and details in
 - Both the dark foreground and brighter sky
- Timer – 3 or 10 seconds to delay the picture
- Toner *(Not quite the same, but similar to, the “White Balance” adjustment!)*



Camera functions continued

- Zoom or Pan: by pinching the screen in or out
- Focus and exposure controls:

Tap on a specific spot to focus the camera on the object.

A square appears with SUN icon, move the sun up or down to adjust the exposure and the lighten or darken the shot.

- Burst mode: to take ten pictures a second, pointing at the object, tap the screen and hold the white circle.
- Grids: “rule of thirds”. The photo looks better than the subject is off center. Aligned about a third of the way from the left, right, top or bottom of the grid. Composed of two horizontal and two vertical lines.

Monochrome version of a normal picture

(sorry – the Printout is monochrome!)

Colour



Monochrome



Zoomed picture

The definition is poorer when zoomed!
& why is that?



To steady the mobile phone

- Lean against something solid (a building, tree, etc.) so that you yourself don't move.
- Hold the phone firmly with both hands and don't stretch your arms out too far.
- Selfie stick
- Octopus (*also "Gorillapod"*) style Tripod



Conclusion

- When you know how, it is easier to use
- I hope you all have lots of fun
- Enjoy snapping