

**Mr. Giansante**



# **Digital Photography**

**August 2019**

# Table of Contents

Photo Guidelines .....	3
Photography Workflow .....	4
Rule of Thirds .....	4
Photography Tips .....	5
Take Great Photos .....	6
Yearbook Photo Tips .....	7
<b>Working with Digital Cameras</b>	
Settings.....	8
Shutter Speed.....	9
ISO.....	10
Action Shots .....	11
<b>Portraits</b>	
Flattering Angles .....	13
Classic Portrait Poses .....	14
Lighting .....	15
Facial Expressions .....	16
Examples of Good Photos.....	17



## PRINTING

Please consider the environment before printing anything from this document.



# Photo Guidelines

## Taking Photos

Choose interesting and artistic scenes for your photos.

Don't be afraid to get the best angle.

Zoom in. Better yet ... get closer.

Focus on Faces and Smiles.

Try to take photos that "tell a story".

## Lighting

Lighting is crucial to good photography.

Always ensure adequate lighting.

Natural light (sunlight) is better than artificial light.

For best results, the light should be shining onto the subject of the photograph.

Try to avoid shadows.

## Technical Requirements

Take all photos at the highest possible resolution for your camera. Don't use a cell phone to take photos.

Photos must be in JPG format (not GIF, BMP or another format).

Photo quality must be 300 dpi (dots per inch)

Black and White photos must be in grayscale mode.

Color photos must be in CMYK mode (not RGB !)

## Arranging Photos on a Page

Use a dominant photo. One picture on the spread should be 2 to 2.5 times larger than the others.

As a basic guide, 5 to 7 pictures on a spread look nice.

Crop out all unnecessary details.



# Photography Workflow



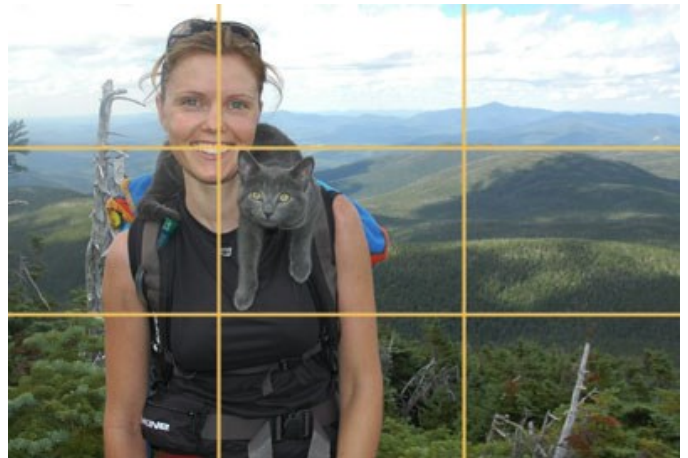
## Rule of Thirds

The rule of thirds is a compositional rule of thumb in visual arts such as painting, photography and design.

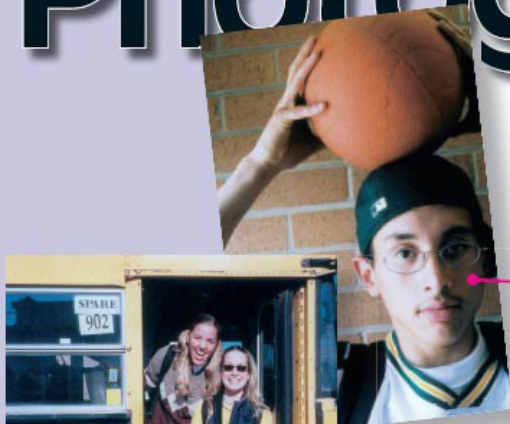
The rule states that an image should be imagined as divided into nine equal parts by two equally-spaced horizontal lines and two equally-spaced vertical lines, and that important compositional elements should be placed along these lines or their intersections.

Proponents of the technique claim that aligning a subject with these points creates more tension, energy and interest in the composition than simply centering the subject would

Source: Wikipedia.org



# Photography Tips



## MOVE IN CLOSE

- the closer to your subject the better the picture will be
- avoid pictures from across the field or back of the gym



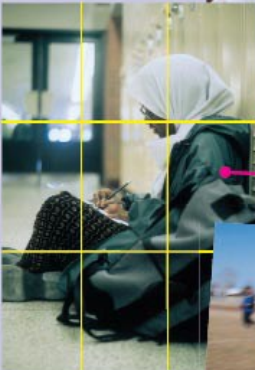
## LOOK FOR GOOD LIGHTING

- use flash: both indoors and outside
- strong sunlight can provide some of the best lighting conditions



## USE FOREGROUNDS & SIMPLE BACKGROUNDS

- a simple background places attention on the subject
- foregrounds can add a sense of depth, dimension and distance



## RULE OF THIRDS

- place the subject on any of the intersecting lines to avoid centering them on the photo



## GET PEOPLE ACTIVE

- avoid stiff static poses
- active people are relaxed and will provide natural expressions



## BE READY FOR ANYTHING

- arrive early to your event to ensure you don't miss anything
- have your camera ready to capture spontaneous moments
- choose a position that gets you closest to the action



## HOLD YOUR CAMERA STEADY

- a steady camera will provide the sharpest, most clear pictures
- squeeze down gently on the shutter button, jabbing down often results in blurred images

# Take Great Photos

Want to compose your pictures like a pro? Our CNN photo experts say these are the top tips to remember when you are out in the field.

## Use the rule of thirds

When taking a picture, it's not surprising that your first instinct may be to place the subject smack dab in the center of the frame. But for a more compelling composition, imagine the scene that you're going to photograph with imaginary lines dissecting the frame into three sections, horizontally and vertically. Rather than always placing the subject in the center of the frame, put it in one-third of the frame – just a bit off-center. This placement gives the subject room to “move” in or out of the frame; it also adds pizzazz to the overall photograph, showing the viewer the environment the subject is in.

## Know how to use your flash

In low-light situations, use a tripod, film with a high ISO rating or a flash that is balanced with the available light. You can also try using your flash with a slower shutter speed. Take the flash off your camera and avoid pointing it directly at the subject. You can bounce the flash off the ceiling or wall if your camera has the ability. When you're outside, keep the sun behind you. And keep this in mind: The best flash photographs are those in which you can't tell if the photographer used a flash.

## Take as many photos as you can

It's always better to have more material than you think you need. And who knows, the photographs you take on a whim may turn out better than your planned shots.

## Check the background

Try to avoid distracting backgrounds. Plain backgrounds often work best. And don't forget to make sure your subject doesn't have anything sticking out of his or her head, like a tree or a utility pole. (It happens more than you think.)

## Keep it steady

You've got to hold your camera steady to get a quality shot. A tripod comes in handy, but you can also try to use something to prop your elbows on to help steady the camera.

## Frame your elements

Try using elements from the foreground of a scene, like tree branches, to create a frame within the edges of your photograph. The use of framing draws the viewer to the main subject and helps to add depth and interest.

## Map out the story

Think ahead about what shots you'll need. You can even write out a script if you are shooting a narrative. And remember to vary your shots. It takes different angles to tell a complete story.

## Light it up

Be sure to consider the quality of the natural light around you when you're taking your pictures. The great, golden light available in the afternoons and early evenings is much more illuminating and flattering than the harsh daylight in the middle of the day.

## Get close

The best shots are often the most simple, get in close to your subject to capture emotion and intimacy. So, no matter what story you are telling, always be sure to get plenty of close-ups.



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# Yearbook Photo Tips

Photography is a vital part of the yearbook. Make sure your photographers understand how to load and unload film properly from their cameras. Have your photographers practice focusing on different subjects around the yearbook room until they can focus quickly and confidently. If you use a darkroom pay close attention to the proper temperature, time and concentration of chemicals. If you are not developing your own film, make sure you have an account set up somewhere so the final bill will be paid all at once. Keep track of negatives by filing them in notebooks and protect them from dust and scratches by placing them in plastic pages.

## Digital Cameras

Choose a camera for the right pictures. Different cameras are best for different picture taking. Before purchasing your camera decide what types of pictures you are going to take with it.

YEARBOOK PRINT SIZE				
RESOLUTION	4x6	5x7	6x8	7x9
2 MEGAPIXEL	good	poor	poor	poor
3 MEGAPIXEL	excellent	good	poor	poor
4 MEGAPIXEL	excellent	excellent	good	poor
5 MEGAPIXEL	excellent	excellent	excellent	good

Choose the camera with the right resolution for you

### Be Aware of Power

Digital cameras use a lot more power than film cameras. Be sure to compare the power of consumption of each model before purchase. Rechargeable batteries are a good value too so make sure your camera is compatible with rechargeable batteries.

### LCD Screen

The LCD screen on a digital camera is a great way to compose your shots. The size of the LCD screen varies among models – up to 2.5 inches. The larger the screen, the easier it will be to see the image. You have to consider how bright the screen appears. If you plan on using this feature, you may want to compare models to see which one is brightest. Using your LCD screen will use up a lot more power and require more frequent battery changes.

NUMBER OF PHOTOS THAT CAN BE STORED*						
CAMERA SIZE IN MEGAPIXELS (RESOLUTION)						
	1.0 (1,000,000)	2.0 (2,000,000)	3.0 (3,000,000)	4.0 (4,000,000)	5.0 (5,000,000)	
CARD CAPACITY	32MB	91	35	24	14	12
	64MB	182	71	53	32	25
	128MB	365	142	106	64	51
	256MB	728	283	212	128	102
	512MB	1456	566	424	256	204
	1.0GB	2912	1132	848	512	408

\*Actual number may vary depending upon specific camera model.

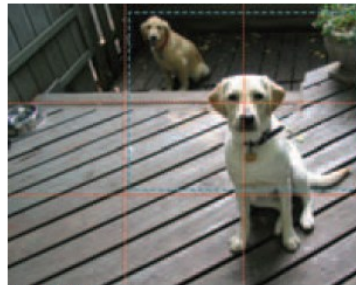
Number of photos that can be stored

### Media Card

Digital cameras allow you to capture a large volume of pictures on a single digital media card. Get a high capacity memory card or a few smaller cards and you can shoot all day and then print only the shots you like.

### Using a Digital Camera

- Take lots of shots. Save the ones you like and delete the rest.
- Use your camera's LCD image display to frame your shots, but remember using the LCD will use up your battery power at a faster rate.
- Set camera to its highest resolution and lowest compression.
- Use the optical zoom or get closer to your subject.



## Improve Yearbook Pictures

### Be Ready for Anything

Spontaneous moments make priceless pictures. To capture them, you need a camera with you, consider a low-cost pocket-size model as a standby.

### Stay Close

The closer you get to the subject, the better your picture will be. Getting close eliminates distracting, unnecessary backgrounds and shows the subject clearly.

### Get People Active

To avoid stiff, static poses, prompt your subjects to be active. Their expressions will be more relaxed and natural.

### Rule of Thirds

Imagine a tic-tac-toe board in your viewfinder, and locate the main subject off-center, usually at one of the places where the lines meet. Allow for a feeling of implied motion by leaving more space in front of the picture's subject.

### Background and Foreground

A simple background focuses attention on the subject and makes clear, strong pictures. Including a foreground is important when taking scenic pictures. Elements in the foreground add a sense of distance, depth and dimension.

### Look for Good Lighting

Good lighting can make your pictures more interesting, colourful, dimensional, and flattering to the subject. Strong sunlight is only one of the many types of good lighting.

Use your flash. You can improve your pictures by taking full advantage of the flash built into most cameras. It provides extra light when you need it, especially indoors, and it freezes action for sharp pictures. A typical range is four to twelve feet, check your camera manual for your flash range.

### Hold Your Camera Steady

Holding the camera steady is vital for sharp, clear pictures. When you push the shutter button, press it gently rather than jabbing it. Even slight camera movements can rob your pictures of sharpness.

# Working with Digital Cameras

## MAKE SENSE OF SHOOTING MODES

The mode you choose affects the amount of control you have over camera settings



### Auto mode

If you're a complete novice, this mode is ideal because the camera takes care of all the settings automatically.



### Auto Flash Off mode

The same as Auto, but for museums, theatres or indoor sports venues where using a flash might get you thrown out!



### Portrait mode

The camera softens skin tones and uses a wide aperture to throw the background out of focus.



### Landscape mode

Designed for vivid landscape shots taken in daylight. The built-in flash is switched off and you might need a tripod in poor light.



### Child mode

In this mode, the camera makes backgrounds and clothing colourful but keeps skin tones soft and natural looking.



### Sports mode

The flash is switched off and the camera uses faster shutter speeds to help freeze fast-moving subjects.



### Close-up mode

This favours a smaller aperture to improve depth of field. Consider using a tripod when there's a risk of camera-shake.



### Night Portrait mode

The flash fires to light your subject, but the camera uses a slower shutter speed to capture the background lighting too.



### Manual mode

This is designed for experts. You choose the shutter speed and aperture yourself, though the camera still suggests settings.



### Aperture Priority

Use this if you want to choose the aperture yourself. The camera will set the shutter speed automatically for correct exposure.



### Shutter Priority

Use this if you want to choose the shutter speed yourself. The camera will set the aperture automatically so that the exposure is correct.



### Program AE mode

Ideal for general use, or when there's little time to think. The camera sets the shutter speed and aperture but you get to control other settings.



### GUIDE

A special feature on the D3100 that shows you what to do as you're taking pictures. It's a great way for beginners to learn about photography.



Canon



### Full Auto

The idiot 'green square' mode – sets all the camera settings for you automatically.



### Creative Auto

Only found on most recent EOS SLRs. Lets you tweak aperture and exposure compensation in a jargon-free way.



### Metered manual

You set both aperture and shutter speed, but the camera still gives a meter reading (see p97).



### Aperture priority

You set the aperture, and the camera then sets the shutter speed for you.



### Shutter priority (time value)

You set the shutter speed, and the camera then sets the aperture for you.



### Program shift

The camera pairs aperture and shutter speed, but you can tweak them – see below.



### Movie mode

Only found on the mode dial of some newer EOS models that feature HD video recording.



### Portrait mode

Sets a wide aperture to blur backgrounds, but overrides other settings, see p96.



### Landscape mode

Sets aperture to maximise depth of field, but overrides other settings, see p96.



### Close-up mode

Sets a wide aperture to blur backgrounds, but overrides other settings, see p96.



### Sports mode

Sets a fast shutter speed to freeze action, but controls other settings too, see p96.



### Night portrait mode

Combines flash with a slow shutter speed, but fixes other settings, see p96.



### Flash off mode

Fully automatic mode that ensures flash does not fire – see full details on p96.



### Automatic depth of field

Tweaks aperture and focus to ensure key parts of picture are sharp. See p96.



# Working with Digital Cameras

FIRST OF  
A NEW SERIES  
TO COLLECT

## Digital CHEAT SHEET Camera

Find the right shutter speed for every situation!

SHUTTER SPEED	TYPICALLY USED FOR...
1/4000 sec	Freezing extremely fast movement
1/2000 sec	Freezing birds in flight
1/1000 sec	Freezing motorcycles, cars and other fast vehicles
1/500 sec	Freezing mountain bikes, runners and athletes
1/250 sec	Freezing slow-moving animals or people walking
1/125 sec	Panning motorcycles, cars and other fast vehicles
1/60 sec	Panning mountain bikes close to the camera
1/30 sec	Panning fast-moving cyclists at a distance
1/15 sec	Panning runners, kids or moving animals
1/8 sec	Blurring fast-flowing water close to the camera
1/4 sec	Blurring people walking
1/2 sec	Blurring slow-moving water
1 sec or slower	'Milky' water effects



### Learn the lingo: Panning

Lets you add motion blur while keeping your main subject sharp.

Track the subject with your camera, pivoting from your hips



### HOW TO ADJUST SHUTTER SPEED

#### Use Shutter Priority mode

Select S or Tv on your camera's top dial or menu, then adjust shutter speed with the relevant dial (check your manual). You can go down to around 30 secs for traffic trails.

#### Set the right ISO

To access slower shutter speeds, use the lowest ISO setting (usually ISO100). If you need a fast shutter speed, you may need a higher ISO, such as ISO400 or above.

# Working with Digital Cameras

**WWW.DIGITALCAMERAWORLD.COM**  
**FROM THE WORLD'S #1 PHOTOGRAPHY WEBSITE**

## UNDERSTANDING THE ISO SCALE

These are the standard settings – the range available to you will depend on your camera



LOW

HIGH

50	100	200	400	800	1600	3200	6400	12800	25600	51200	102400	204800
<b>LANDSCAPE</b> ISO50-200 Low ISOs give the best quality, and using a tripod will mean you don't have to worry about camera shake.	<b>SPORT</b> ISO200-6400 The key to sports is capturing the action. Noise is secondary, so use whatever ISO you need if the light is low.	<b>ASTRO PHOTOGRAPHY</b> ISO800-1600 This allows a shorter exposure to reduce object movement across the sky.	<b>LOW LIGHT / CANDID</b> ISO3200-12800 The most important things are to get sharp shots and preserve the atmosphere.	<b>TWILIGHT/ WILDLIFE</b> ISO12800+ Modern cameras have revolutionised low-light wildlife photography.	<b>NOCTURNAL</b> ISO51200+ The sensitivity of many full-frame cameras means that you can now shoot things you can't see!							

## WHEN TO INCREASE YOUR ISO

When all other exposure options have run out you can increase the ISO, or sensitivity



### STRONG LIGHT PRODUCES A STRONG SIGNAL THAT DOESN'T NEED TO BE AMPLIFIED

**STRONG SUNLIGHT**



Bright light produces a strong signal

This doesn't need amplifying, so the ISO can be left at its lowest setting



The image gets the strong signal it needs and shows little or no noise



### LOW LIGHT PRODUCES A WEAKER SIGNAL AND AMPLIFYING IT WILL ALSO AMPLIFY THE NOISE

**WEAK CANDLELIGHT**

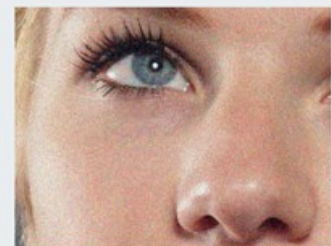


The signal from a very dim light source is very weak

The ISO has to be increased to produce a strong enough signal for the image



This also amplifies the background noise in the image, which is why high-ISO shots are noisy



# Working with Digital Cameras

Digital  
**Camera**  
KITBAG  
COMPANION

## Action

Use these tips to ensure you get the most out of moving subjects, whatever they are...

### ▶ Get it right... Motorsports



The action is often predictable in motorsport races – find the best corner and pre-focus on the spot the vehicles keep passing over. Switch focus to MF to 'lock' the setting and concentrate on panning and composition. **1** Be bold with framing –

here the crop adds to the excitement. **2** Finding a low shooting position can help the viewer feel closer to the action. **3** The sand clouds kicked up by the rear wheel give the shot an energy boost – the bike, and the photo, might look a bit static otherwise.

### ▶ Get it right... Flash



A bit of flash used in 'slow sync' mode will add definition and sharpness to an action shot that has been taken using a slow shutter speed. **1** Here, the dogs' faces and forelegs have been frozen by the flash while the rest of the scene is blurred due to the

longer exposure from the ambient light. **2** If the subject's moving across the frame, use the flash in 'rear curtain sync' mode, so any 'ghosting' appears behind the subject. **3** Tilt the camera so the horizon's on a jaunty angle. This can add dynamism.

### ▶ Get it right... Family



The best subject to hone your action photography skills may be sat right under your nose (or on your sofa, watching TV). **1** Even if there's plenty of light, don't be afraid to increase the ISO to get action-stopping shutter speeds – a noisy but sharp picture of your kids

having fun is preferable to a blurred one that you bin. **2** Give the subject plenty of room in the frame – compose the shot to give more 'active space' in front of them than behind them. **3** Get down to kids' level with a wide-angle lens to make the action seem larger than life.

### ▶ Get it right... Creative blur



Leave the camera locked on a tripod and allow the subject to move across the frame during a slow exposure. You're not trying to capture detail, but the mood of the moment. **1** A zoom burst effect can add an additional energetic twist – simply zoom the lens out or in during the

exposure. **2** This shot works because some detail is still retained – the player, ball and parts of the crowd provide entry points into the picture for viewers. **3** When taking motion blur shots, consider over-exposing slightly to create a more painterly effect.

## Digital Camera KITBAG COMPANION

# Action

Make sure you keep up with fast-moving subjects with our quick reference guide

### Shutter speed

The key to successful action photography, apart from composition, is selecting the right shutter speed. To freeze fast action you need a fast shutter speed; to add motion blur you need a relatively slow one, so use Shutter Priority mode to put you fully in control of this selection.

The shutter speed necessary to freeze the moment will depend on four things: 1. How much light is available. 2. How fast the subject's moving. 3. How 'fast' your lens is (the



wider its max aperture, the faster the shutter speeds). 4. The ISO that's set (high ISOs give faster speeds).

### DON'T FORGET TO...

**Use Aperture Priority (Av)**  
If shooting at the fastest shutter speed for a given situation, select Av and dial in your lens's widest aperture. Increase ISO as light levels decrease.

### Autofocus

When you're shooting moving subjects, use your camera's continuous autofocus (aka AI Servo) setting. This will track the action and is particularly good for erratically

moving subjects. To reduce the chance of the lens 'hunting' (rocking in and out of focus as it tries to lock in) focus manually roughly at the distance the action will take place.



### Drive mode

Although you should time your shot for the peak of the action, a frame a fraction of a second before or after the moment may lead to a better shot. To ensure you get it, use your

camera set to its continuous burst mode, rather than single shot mode. Fire in short bursts so that the buffer doesn't take long to clear and you're always ready to fire.



### Panning

By selecting a slow shutter speed and panning your camera, you can get a sharp subject and blurred backdrop that gives a real sense of motion. Face the direction you want to take

the shot and twist from your waist to track the subject. Keep panning after you've pressed the shutter. If the movement's predictable, pre-focus on a spot the subject will pass.



### Don't go without...



**Extra memory**  
You'll always need more, especially if firing off multiple shots.



**Battery grip**  
For more power when shooting in your SLR's continuous mode.



**Monopod**  
Great for supporting long lenses when using panning techniques.



**Image stabilisation**  
Whether it's lens or camera-based, set stabilisation to 'panning' mode if possible.



**Flashgun**  
A powerful add-on flash is key to creative slow-sync action shots.

SEE OVER FOR MORE TIPS >>>

## CAMERA HEIGHT | Flattering angles

It's not just your subject who needs to know where to stand



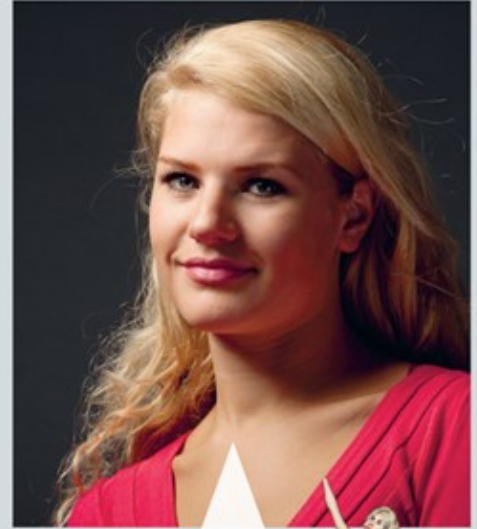
### 01 High

Positioning your camera slightly higher than the subject's eyes can often produce a more flattering image. It generally creates a slimming effect. Notice how the neck recedes and the jaw looks more defined. But don't go over the top – go too high and your subject will look like they're in some strange yoga position.



### 02 Eye level

With the right lighting eye level should be fine in most situations. Be aware that your camera height will affect how the portrait looks. Your LCD screen will be vital in helping you assess this. If you're shorter than your subject, consider using a box or step ladder to reach the right height.

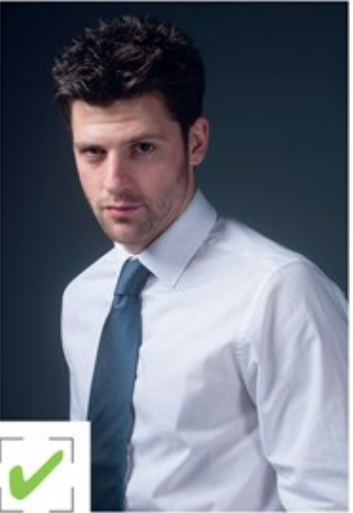
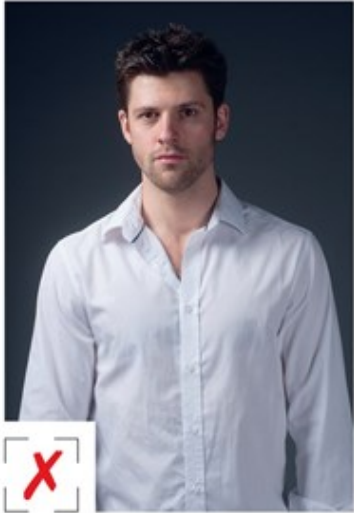
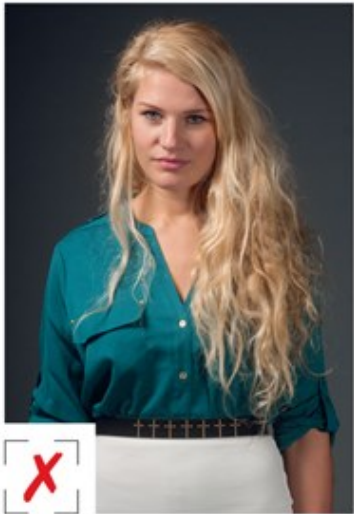


### 03 Lying down

Generally, the lower you go with your camera angle, the less flattering the photo. It certainly won't make large folk look any slimmer. It does, however, create a striking effect and your subject will seem important. Corporate shots of business leaders are often shot from a low angle to create precisely this illusion.

# Portraits

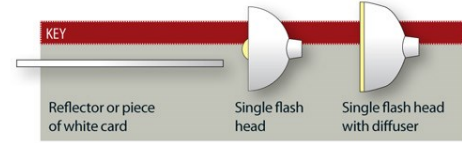
## Three classic portrait poses





## Simple lighting techniques

Start your projects off with these effective lighting recipes



### HIGH CONTRAST LIGHT AT 90°



A striking result achieved with minimal kit. Using a single flash head at this angle can give an unflattering result, though. The light will show up bumpy skin textures and create stark shadows and bright highlights. Without a diffuser, the quality of light will be high contrast and if placed near the subject will create problems with fall-off where light is spread unevenly across the face. By not using a reflector, shadows will be deep.

### DIFFUSED LIGHT AND REFLECTOR



This is a much gentler set-up where the same light source is softened with a diffuser and a reflector. Diffusers give the same effect as daylight cloud cover, spreading light from a tiny source into a larger area. The diffuser will reduce the intensity of your flash unit, so you may need to slide up the output of the flash head, but the effect will be more flattering. The reflector works by bouncing stray light back onto the unit side of the face.

### HIGH CONTRAST LIGHT AT 45°



With a similar effect to the first shot, this type of lighting reveals a bit more of the sitter's facial characteristics, but with the same pockets of deep shadow. Positioned at less of an acute angle, this light won't pick up so much skin texture but it won't show the face in any kind of flattering aspect, regardless of the pose. Only one half of the face will be illuminated and, without any reflector, the other half will become a silhouette.

### HIGH CONTRAST AT 45° WITH REFLECTOR



A much better kind of lighting set-up that reveals the three-dimensional characteristics of the face. Used in conjunction with an efficient sliver or bright white reflector, there'll only be a subtle difference between the lit and reflected sides of the face. This slight drop in brightness from one side to the other can start to mimic natural lighting. Much more flattering and a real starting point for most portrait photographers. To darken the shadows, pull the reflector away from the subject.

### LOW CONTRAST AT 45° WITH REFLECTOR



With the addition of a diffuser in the shape of an opaque umbrella, this kind of main light is much lower contrast than the previous five examples. This creates a bigger burst of softened flash, which makes this portrait much more evocative than descriptive. To further weaken visible shadows, place a warm-coloured reflector near your subject's face. An umbrella will create a similar effect to a softbox and can be partially obscured to give strips of light.

### RIM LIGHTING FROM BEHIND



The ideal method for emphasising the outline perimeter or shape of your subject's head. In this technique, the subject is not lit from the front but from behind to create a dazzling rim-light effect. Only a tiny light source is needed and care must be taken not to set the flash unit at too high a power. To prevent the face from recording as a silhouette, open up the aperture nice and wide and, if needed, use a couple of reflectors either side of the model to bounce light back into the face.

[www.digitalcameraworld.com](http://www.digitalcameraworld.com)

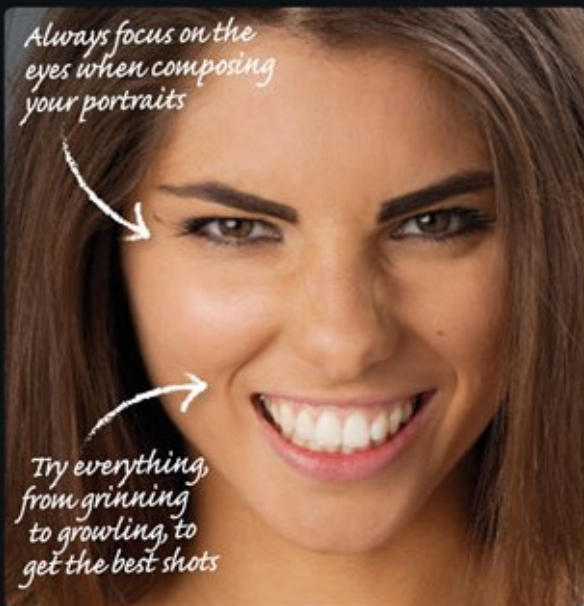
## Facial expressions

Zoom in for full-face shots and experiment with different looks

If you're shooting in a home or professional studio, why not try shooting tethered to your computer? We used Canon's free EOS Utility software and connected our Canon D-SLR to our computer with the USB cable that came

with our camera. Shooting this way enables you see your shots instantly on a big screen to review them more accurately – then you can instantly work out what to do to improve them, whether it's to move a light closer, to turn it up or down, to add a reflector, or

change your exposure for brighter or darker results. It's also very handy as you can give clear instructions to your subjects to pose in a different way by showing them on the monitor what you'd like them to do differently for the next round of shots.



[www.digitalcameraworld.com](http://www.digitalcameraworld.com)



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos



# Examples of Good Photos

