



WPS

See. Click. Learn.

Washington Photo Safari's

Guide for Amateur Photographers



By E. David Luria
Director, Washington Photo Safari

*"At F2, you get 2 people in focus.
At F22, you get 22 people in focus!"*



Dedication: this guide is dedicated to:

- *our clients, and to all amateurs who take pictures for the pure joy of photography!*
- *the late Melanie Otto, one of our most beloved photography instructors, who passed away at the young age of 49.*



Cover photo: *The United States Capitol in Spring, taken by E. David Luria with a used \$40 point and shoot “Konica Big-Mini” film camera, to make the point that one can take good (or bad) pictures with any camera, that skill is more important than equipment, that you go into photography with the camera you have, not the camera you WISH you had!*

Inset Cover Photo: *WPS Founder and Director E. David Luria at work, by WPS client Janis Stone, with a 70-200mm F2.8 lens*

Front Cover Design: *Robert Porter*

“If your pictures aren’t good enough, you’re not close enough.”
Robert Capa, Magnum Photos

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Introduction:

WASHINGTON PHOTO SAFARI'S GUIDE FOR AMATEUR PHOTOGRAPHERS

“At F2, you get two people in focus. At F-22 you get 22 people in focus.”

That clever little ditty, a very helpful way to remember what f stops are all about, was given to us in 2002 by one of our most famous clients, Tom Korologos, former US ambassador to Belgium and Deputy Counselor to President Richard Nixon. We have used it thousands of times to explain the mystery of aperture to clients learning photography.

This book is dedicated to any amateur photographer who enjoys taking pictures, whether it be with a smartphone, a film camera, a digital single-lens reflex camera or a mirrorless camera. It's not the camera that takes the picture, it is the photographer!

The joy of photography is now universal. Smartphones have made that possible, hundreds of millions of people are now experiencing the joy of capturing life's important moments, stopping time, taking you back like a time machine.

Your **camera is really a magic machine**, a device capable of doing things no human (or smartphone) can do! It makes you happy with yourself when you have taken a great picture! It can stop time, it can see in the dark, freeze the wings of a hummingbird, make all the moving people in a train station disappear, turn waterfalls into misty clouds or into a million little ice pellets, make small rooms look big, turn your kids into ghosts, move the moon across the sky, bring the beauty of nature into your home, and capture memories of your past in exquisite detail.



And **photo memories are REALLY important!** Think of it: when there is a fire in your home, you go for the kids, the spouse, the dog, and the PICTURES, because they are all irreplaceable. In short, cameras can move us to tears, to joy and to wonder, all with the click of a button. In an instant, the images they capture speak 1,000 words.

But, to become a photographer, you must know **HOW** to make these things happen by getting **OFF** of "Auto", by using F stops and shutter speeds, and learning how to use **ALL** the features you paid for in your camera, whether it is a new Smartphone or a fancy DSLR. **THAT** is what

we help you do in our photo safaris, with hands-on instruction in the field, not in a classroom, **WHILE YOU ARE TAKING THE PICTURE**, rather than critiquing the picture after the fact, when it is too late!! THAT is why our motto is: “**See. Click. Learn.**”

Founded in 1999, we have worked hard over the past 21+ years to provide a variety of hands-on learning experiences to help our clients increase their joy in many aspects of photography: travel, architecture, nature, portraits, pets, nighttime, and artistic composition. With decades of experience living and working in the DC area, **we know where all the good pictures are, how, and when to take them!** Visiting professional photographers also appreciate our site and “photo op” knowledge of the National Capital Area.

This book represents the accumulated wisdom of the 36 instructors who- at one point - have taught photography for the Washington Photo Safari over the years. As one of the nation’s first community-based photography training institutions, we have instructed tens of thousands of amateur photographers in all types of photographic technique. Many of them have even gone on to become professional photographers, doing weddings, portraits, exhibitions, and events.

In this guide, we list in alphabetical order 29 of the most common types of photography, providing basic tips in each of these areas. It does not pretend to be a manual for professional photographers. It is designed for amateur photographers who love to take pictures when they travel, for parents who want to get better pictures of their kids, friends and relatives. There are still many areas of photography we have not covered and hope to do so in future editions!
(All articles and photographs in this booklet are by Mr. Luria, unless otherwise indicated)

This guide will come in handy if you are planning a trip so that you will be better prepared to take good pictures that make you proud of your work. Should your travels bring you to the Washington DC area, come join one of our hands-on instructional safaris while you are taking the pictures, enabling you to get *better* pictures. Our motto is “**See. Click. Learn.**”



*About the author: **E. David Luria** is a Washington DC-based photographer specializing in architecture, art/still life, restaurant/ food, editorial/event, commercial, and landmark photography. A member of the **Society of Photographic Educators** and the American **Society of Media Photographers**, Mr. Luria has had his images appear in over 100 publications, He is a founding member of the **Association of Independent Architectural Photographers**, and has done over 3,500 apartment, hotel, restaurant , event, and real estate photography shoots .A frequent speaker at local camera clubs in the DC area, Mr. Luria describes himself as a photographer of "places and faces." Born in Hamburg and raised in New York City, he was trained in Paris at the **Parsons School of Design** by a protege of famed French photographer **Henri Cartier Bresson**, Prior to becoming a professional photographer, Mr. Luria was a senior executive with several international non-profit development and citizen exchange organizations. He is an honors graduate of Amherst College, a US Army veteran, and is fluent in Spanish, French, and German.*

Acknowledgements:

This book would not have been possible without the help of many people who have been involved with Washington Photo Safari since 1999.

First of all, let me thank the **36 excellent instructors** who- at one point - have helped us train almost 38,000 amateur photographers since 1999. They include:

Lauren Achill (Candid Kid Photography)

Eddie Arrossi (Buenos Aires, Annapolis Safaris)

Mark Baxter (Drone Photography)

Sherryl Belinsky (Scrapbooking and Photo Books)

Subrato Bhattacharya (New York City)

Andy Bittner (Cathedral Docent)

Robert Blanken (Portrait and Wedding Photography)

Neil Colton (Candid Child Photography)

Elody Crimi (Photoshop, Lightroom, Stained Glass Photography)

Stewart Davis (Boxing Photography)

Michael de Angelis (Fine Arts Photography)

James Duvall (Model Railroad/ Stacked Focus Photography)

John Egan (Photography in Paris)

Gwen Flowers (Photography as a Second Career)

Julie Gould (Pet and Zoo photography)

Alain Gutierrez /Thru Alain's Eyes. (Street Photography in Cuba)

Kevin Hacker (wedding photography, Calatrava IST Building and Gatorland, FL)

David Heckman (Travel, Capitol Hill Photography)

Marketa Jirouskova (Prague and Amsterdam Safaris)

Donna Jones (Ellicott City, Fells Point, Locust Grove)

E. David Luria (Travel, Architecture, Food, Nighttime, Event, Fireworks, Museums, METRO, Sunrise/Sunset, Moonrise, Composition, F Stops, Filters, Abstracts, Ghosts, Story-telling/ Journalism, Snowfaris)

David Muse (Baltimore Photo Safari)

Paul Nelson (Annapolis, Underwater Photography)

Reb Orrell (Smoke, Waterdrop, Balt. Museums, HDR, & Bahamas Photography)

Melanie Otto (*Deceased*) (Digital and Camera-specific Photography)

Sean Quintilian (Nature and Wildlife, Eagles, Wolves, Elk, Swans Geese, Bears)

Judy Reisman (Frederick, Horses, Owls, Macro, Barns/ Farms, Shenandoah, Pets)

Michael Rosenberg (Alexandria Safaris)

Steve Rosenbach (Annapolis, Transcendental NYC, Phila., Scavenger Hunts)

Stan Schretter (Mirrorless Cameras)

David Sendzul (Zoo and Animal Photography)

Laurie Sennott (Abstracts and Product Photography)

Tamzin Smith (Lightroom)

Essdras Suarez (Street Photography)

Joe Tessmer (Beginner and Intermediate Portraits)

John Witschey (Shenandoah Safaris)

Next, I want to thank the many friends and relatives who were very helpful and encouraging to me in the establishment and maintenance of Washington Photo Safari over the years. In alphabetical order, they include: Saba Ahladi of **Boston Photo Walks**, Phyllis Abramson, Tom Blake, Miguel Blanco, Susan Bridges of **SCB Marketing**, Dr. Hollis Clayson, Anne Costello, Jennifer Costello of **Portland Photo Tours**, attorney Dennis Ettlin, Renee Gerber of **Dream Vacations**, Marie Joabar and Beth Haubach of **Capital Photography Center**, Tom Korologos, Chris Loomis of **American Photo Safaris**, David de Lima Luria, Rebecca Luria-Phillips, Estela de Lima Luria, Sarah Katherine Luria, Lulu Lyle, Angie McCrary, Robert Porter, who designed our eBook cover, Craig Otto of **MediaMakersUSA**, Zim Phan of **New York City Photo Safari**, Karen Stansbury, Marie Tibor, Debra Weiss of **DRW Design**, and of course our super-loyal customers **Mark Salo** and **Phyllis Maguire**, who have each attended over 60 of our photo safaris during the last 18 years!

Special thanks must also go to **Sherryl Belinsky**, who maintains our WPS website, Facebook and Twitter pages, takes pictures, wrote this guide's sections on flower photography and photobooks, and writes our newsletter, to **Fare Harbor** for designing and hosting our website and registration system, and to **Dr. Lynne McKelvey** for her years of support and friendship.

Last, but certainly not least, I want to thank the **38,000 participants** in our photo safaris over the years, 11,300 of who have come back for 2 or more safaris, and 700 of whom have thought well enough of us to have come on an average of 9 safaris apiece. And a special thanks to the 255

clients who have given us 5-star reviews on Trip Advisor, earning us two **Trip Advisor Hall of Fame Awards!**



Over the years I have often been asked by clients on our safaris: “Hey, David! Why don’t you compile all your helpful handouts into a book?”

So, I did! Here it is! Enjoy!

E. David Luria, June 2020, Washington DC.

All About Washington Photo Safari:

"Safari" is a Swahili word that means "journey."

And **Washington Photo Safari** has taken our 38,000+ clients on 5,600 incredible photographic "journeys" in the 21 years since DC-based architectural photographer **E. David Luria** founded it in 1999.

We have taught them how to use their cameras at all the most famous monuments, memorials and museums in the nation's capital, by day and by night, by foot, by car, by boat, by pedicab, by Segway, and by Circulator Bus! And they have rewarded us with annual Certificates of Excellence on Trip Advisor!

Our instructors have taken clients to barns and farms in Frederick County, to "snowfaris" on the National Mall, to fall colors & spring flowers in the Shenandoah Valley, to sunrises on the Potomac River, to Georgetown by land and by sea, to Roosevelt Island, to New York City, Annapolis, Alexandria, Ellicott City, Baltimore and Philadelphia, and even to Paris, Quebec, Buenos Aires, Cologne, Heidelberg, Rouen, Prague, Havana and the Normandy beaches!



We have shown our clients how to move the full moon across the sky, make people disappear or turn them into ghosts, how to photograph pets, eagles, horses, snow geese, wolves, and elk in Pennsylvania, Maryland and in Yellowstone, azaleas at the National Arboretum, and cherry blossoms on the Tidal Basin, We have guided them to action photography on 14th

Street at night, to abstract images in Adams Morgan, to elegant homes in Kalorama, and we have explained the mystery of f stops and shutter speeds at the National Building Museum, Union Station, the National Zoo, and in the gardens of the Smithsonian Castle!.

+

We have taught them how to use their flash, how to do stacked focus, model train, infrared, smoke, architectural, water drop, portraits, story-telling, candid kids, events, fireworks, food, product, and how to legally steal famous paintings from the National Gallery of Art! And we even found a two-time Pulitzer-Prize winning photographer, Essdras Suarez, to teach street photography techniques on the National Mall!

Working with our colleagues at **Capital Photography Center**, our safaris have also taken photographers to the gutters and stained-glass windows of Washington National Cathedral, to the National Shrine, the Hillwood Estate, and the Franciscan Monastery, to the interiors of Washington National Airport, the Willard Hotel, the Library of Congress, St. Matthews and St.

Nicholas Cathedrals. We've been to the Shakespeare Library, to George Washington's Mount Vernon, to Dumbarton Oaks, the Ronald Reagan International Trade Center, to Baltimore's Mt. Vernon, the Embassy of Italy, the Kennedy Center, New York's 5th Avenue at holiday time, to the top of the Washington Monument, and to the 400,000 holiday lights at the Mormon Temple !

We have shown clients how to photograph snowball fights, boxing matches, giant inflated bunnies, pillow fights, home interiors, and Marine Corps drill teams, to displays in DC's major art galleries, to the vaulted ceilings inside the METRO system, and to the flyover of vintage World War II fighter aircraft over the National Mall!

Coming from all 50 US states and from 53 countries, our "safarians" have brought us their Canon, Nikon, Sony, Olympus, Pentax, Fuji, and Panasonic DSLR's, smartphones, tablets, and mirrorless cameras and we have shown them how to use these complex digital machines. We have even given seminars on how to turn a photographic hobby into a second career, and we have helped professional photographers in 20 other US cities set up local workshop programs similar to Washington Photo Safari.



With volunteer help from its instructors, **Washington Photo Safari** has also conducted seven **fundraising benefit safaris** since 1999, bringing in over \$31,500 to assist disaster victims in Indonesia, New Orleans, Japan, Haiti,

Nepal, New York and New Jersey, and earthquake repairs at Washington National Cathedral.

In 2019 Washington Photo Safari was voted Runner Up in the Best Photography Services category by the readers of DC's City Paper. With 120 different itineraries, we have become one of the largest photography training programs in the country, training an average of 5 photographers every day, 365 days a year for 21+ years. Is this a great program, or what?

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E. David Luria, Director, Washington Photo Safari
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Abstract Photography

Tips On Abstract Photography

Think of the hotel rooms you have been in where the walls are decorated with framed prints that are nothing but a wash of color and patterns. The colors are nice, they match the drapes and the bedspread, and they give a lively look to the room.

Also, these images do not offend guests who might not appreciate more traditional scenes of elegant people riding horses with hounds, chasing foxes across the English countryside,

This art that you see on the walls is often called abstract art, and photography can produce the same kind of images. All it takes is an eye for color and patterns, which one can find in such diverse test subjects as tie- dye shirts, graffiti on the walls of buildings, shadows on the ground, patterns in Persian rugs, and any unusual grouping of colorful lines and circles and patterns.

One of the best places to do this in the DC area is the Adams Morgan neighborhood in Northwest Washington, where there are many walls covered with graffiti, and interesting patterns made by tapestries, rugs and African baskets for sale.

The best way to identify these kinds of images is to close your left eye, blotting out all your peripheral vision, and make a circle with your thumb and forefinger of your right hand across the right eye, thus blotting out any peripheral vision. Look at the world around you and you will see unique patterns that can make interesting photographs.

For example, most of the stained-glass windows in Washington National Cathedral are abstract designs of secular and religious images did they flood the cathedral with beautiful projected light in the early winter months. And there is



(photo by Dennis Ettlin in Adams Morgan)

definitely a market for these kinds of images, notably hotel hallways and bedrooms, Airbnb homes, and corporate interior decorators!

The technique is very simple. You just place your camera with its standard lens, or a smartphone, close to the image being photographed and click the shutter. Cloudy white balance generally gives the best color for outdoor images in abstract patterns. This kind of photography liberates you from always taking pictures of recognizable things. Suddenly you are producing beautiful images that make no sense at all!

Architectural Photography

Architectural Photography Tips

A. EXTERIOR ARCHITECTURAL PHOTOGRAPHY

1. Hold the Camera Correctly:

Architectural photographs are best done with a tripod or other immobile surface, using a bubble level to keep everything straight. But if one is not available, holding the camera correctly is important. Place your left hand under the camera, palm up. Rest the bottom of the camera on your left palm, cradle your left-hand fingers around the lens for focusing and zooming, tuck your elbows into your chest, hold the camera tight, push down on the shutter gently while pushing up with your left hand to steady the camera.

2. Determine the Best Angle and Time of Day for Shooting:

Buildings look best in the sun, for buildings, walk around to photograph the building from a corner angle to show two sides. Late afternoon or early morning sun always gives the best light. Check position of the sun: north-facing buildings are always in shade, south-facing buildings have sun most of the day; east-facing buildings get morning sun and west-facing buildings get afternoon sun. Leave enough room at the top and sides for the roof and walls. Shoot buildings at 45-degree angle, not straight on. **AVOID SHADOWS ON BUILDING FRONTS MADE BY OTHER BUILDINGS OR BY TREES. THEY CREATE AN UGLY DARK SWATH ACROSS YOUR PICTURE.**



Keep Your Verticals as Straight as Possible: The side walls of a building over 2 stories high will begin to converge towards the top of the building as you angle your camera up to include the roof. This is called “key stoning,” and it has an unprofessional look. Avoid this by getting further back and higher up, using your widest-angle lens

held vertically at a 90-degree angle to the ground and then cropping out the bottom half of the photo in processing. The goal is to have your vertical sides straight and parallel to the edges of the viewfinder. Do not tilt back or lean back. Just walk back until all vertical building lines are parallel to the edges of the viewfinder. For more professional looking architectural pictures, purchase or rent a Perspective Control or “Shift” lens.

3. Frame Your Photos with Tree Branches, Archways, Bushes and Flowers:

Use left-arching branches on the right side of your picture, right-arching branches on the left side of your image to make an interesting frame, or use arches and doorways to get the same effect. Get down low enough (knee-level or stomach-level) to have flowers provide color at the bottom of the frame.



5. Check Your Exposure before Shooting:

Remember that your camera meter is calibrated to give you the best exposure when it reads a reflectance level equivalent to 18% medium-gray. This works fine for most subjects, but for backlit or white subjects (such as snow) you need to open up (+)1 to 2 stops, and for dark subjects you need to close down (-) 1-2stops. In these situations, you can often fool the meter by pointing the camera at grass or trees, hold the shutter halfway down, recompose and shoot, or by using an 18% medium grey card. The best way to get the most accurate exposure is to shoot on Manual Mode. Take a picture. Look at the image on the LCD screen using a loupe to block out the sun's reflections on the screen, use the histogram as a guide, and adjust the shutter speed up or down until the correct exposure is achieved.

6. Check Your “White Balance” or Color Filtration:

For buildings with sun on them, use the “Cloudy”: setting of the white balance menu for warmer tones.

For buildings in shade, be SURE to use the “Shade” or “Cloudy” setting on white balance menu, otherwise your photo will have a bluish-tinge to it. On a sunny day, for a deep-blue and brilliant white-cloud sky effect, use a circular polarizing filter when the sun is behind you, especially when it is low in the sky and at a 45-degree angle behind you. The “golden hour” (one hour before sunset/ one hour after sunrise) is the best time for this photography.

B. INTERIOR ARCHITECTURAL PHOTOGRAPHY:

1. Use a Wide Angle Lens:

For digital cameras that have the smaller APS-sized sensors with a 1.5 (Nikon) or 1.6 (Canon) crop factor, use a 10 mm or 12 mm wide angle lens (or a 16-24mm lens on a full-frame camera) to obtain the widest angle of coverage inside the room, bearing in mind that these lenses might make the furniture look a bit elongated. Choose a high-quality wide lens that is rectilinear, one that does not show curved “barrel distortion” on the sides. The wider-angle lens also gives you most depth of field of focus.

2. Use a Good, Strong, Sturdy Tripod:



It is not possible to hand-hold a camera indoors with long exposures, the camera must be mounted on a tripod and the camera must be leveled perfectly with a bubble level, side to side and front to back. (Bubble levels are available as free Smartphone apps) Lower the camera to a position about 3 3 feet off the ground so as to minimize the amount of ceiling in the picture. For high-ceiling rooms, place the camera at a height equal to about 33% of the ceiling height. It is best to shoot room interiors at an angle, from a corner for more interesting composition.

3. Using Ambient Light Only: White Balance (Filtration) Settings

Turn on ALL interior ceiling, floor and table lighting. If the room is well lit with interior incandescent lighting and **no daylight coming**

in the window, put the camera on “Manual” exposure setting at 400 ISO and on “Tungsten” or “incandescent” white balance Take several test shots until the correct exposure is achieved. If your camera has adjustable white balance settings or a Kelvin Scale adjuster, take test shots until you achieve an image that most closely resembles the color balance you perceive with your eye.

If there is daylight coming behind you through the window, adjust the Kelvin Scale setting to a higher number or put the camera on the “Automatic white balance” “A”, or “AWB” setting which is generally good for mixed daylight-tungsten lighting. Low Kelvin is very blue, high Kelvin is very orange. Do your **interior shooting at dusk or twilight or on a cloudy day** so that you will have a deep blue light coming through the window.

4. Balancing Interior and Exterior Lighting When Shooting Towards a Window

One of the most difficult tasks in interior architectural photography is shooting from the inside of a room towards a window in the daytime. The slow shutter speed required to light up the interior makes the window look all blown out, or overexposed. This can be fixed by shooting on cloudy days or at twilight.

Another way to fix that, of course, is taking several images at different exposure values and merging them together in Lightroom or Photoshop., a process called HDR, or High Dynamic Range



A faster way to fix that is with an auxiliary flash or speedlight angled up at the ceiling

(as long as the ceiling is white or off-white) so that the light of the flash unit does not reflect in the window, and then setting the camera's shutter speed at its maximum synch speed for flash. On most cameras that is 1/250th of a second, but some cameras will allow you to synch at the even more desirable 1/320th of a second, which will provide enough light for the room but will darken the outside scene so that the green trees and bushes outside show up nice and green in the photograph instead of ghastly white. Set the flash on its Manual Mode and dial its power up or down until just the right amount of light is achieved.

A second speedlight, paired with your camera through remote control or with a slave unit attached, can be aimed at the lower portion of the room to achieve more even lighting on dark furniture

Candid Child Photography

BYOK (Bring Your Own Kid) Photo Safari Quick Tips

(By Lauren Ackil, Instructor)

Look like a pro: cup your left hand under the lens, rest your left elbow against your chest and use a leg to stabilize your body. Get a secure grip to prevent blur!

Plan the picture: Who is the picture for? Why are you taking this picture? What is it you like about this scene or subject? What is the subject? You must have a plan so that the picture comes out exactly the way you want. So, you need to ask these questions BEFORE you push the button!

Remove the distractions: check the background and make sure it is not cluttered. You want a clear subject. No more trash cans or other unsightly items!

Get low and get close: get in tight with your subject. Use your zoom to help eliminate distracting backgrounds and get low for a better angle. For children, stoop down to be at their eye level, or below.



Zoom In: the most flattering images of people are taken between 70-100 mm. Remember - when you zoom in it helps get rid of distracting backgrounds.

Wait for it: don't look at your camera screen (unless you are still making adjustments). That adorable smile or unexpected giggle will happen the moment you aren't ready.

Find nice lighting: people look best in shade. Direct sunlight in the eyes make for squinty faces. A fill flash can help brighten your subject.

Add lighting: use an auxiliary flash unit to capture action shots that need a bit of extra light, create softer indoor lighting or balance stronger lighting from another direction. The flash Manual Mode allows you to dial down the power rating to 1/4th, 1/8th, or 1/16th, so you can keep-up with the rapid continuous shooting and get that action shot even if it's a little dark. You can swivel the flash to face another direction so you can bounce light off white walls and create soft indoor lighting. Or, when the lighting is stronger behind your subject, use the flash to brighten your subject from the front.

Make it fun: the moment your child thinks getting their photo is the most important thing for you to do is the moment it's all over! So be sure to make it fun and then take photos. Play games and be silly.

*Play tag and make base that desired photo location.

*Ask them to complete a physical challenge so they stay still and you can adjust your camera settings: *How long can you stand on one foot? How many times can you jump on your other foot? Can you rub your tummy and pat your head? Can you curl your tongue?*

*Play games like Mother May I, Red Light/Green Light and Freeze Dance to slow down fast-moving little ones.

*Say no and don't to make them do! *No smiling! No hugging! No standing close to your sister! Don't sit there!* Nothing makes a child do like telling them not to.

*Animate a stuffed animal to make your photography requests. Your child may not let you put that bow in their hair, but if teddy asks, you will be surprised.



*Encourage them to show you what they do best - jump high, run fast, spin in a circle - all make great action shots.

*Capture silly faces and sweet ones. Both are important.

*Play whisper down the lane.

*Use bubbles to make everyone smile and they are pretty in photos.

Manage your photos: as soon as you load your photos, delete the terrible ones, star/flag/create a sub folder of your favorite ones, and print some to really enjoy them! You will thank yourself years later when you are trying to sort through them for that high school graduation slide show.

Photo by Lauren Ackil

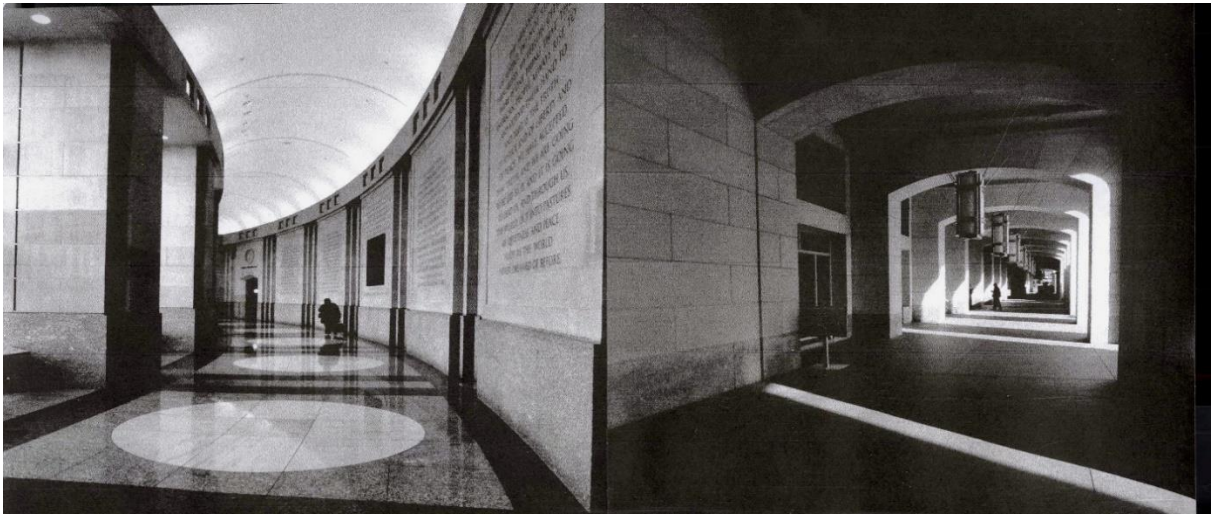
(Lauren Ackil is a professional child photographer based in Washington DC)

Composition: The Essence of Good Photography!

What is the difference between a snapshot and a photograph?

A **snapshot** is a picture taken without any thought or planning. The photographer aims the camera in the general direction of the subject, and pushes the button.

A **photograph** is taken by a person who makes a plan before pushing the button, a person who asks: “Why am I taking the picture? What am I trying to show? What is the point I am trying to make with this photo?”



(capturing that “decisive moment” when all composition elements line up nicely!)

That person then goes on to draw on experience and training to incorporate all the good elements of composition: rule of thirds, leading lines, framing, placement of a foreground element, framing, filling the frame with the subject, getting low and close, shooting at the decisive moment, symmetry and patterns, blurring or sharpening the background, stopping or blurring action, or taking a picture that tells a story.

All of which causes the photographer’s companion –perhaps a snapshot shooter – to utter: “Honey! Why is it taking you so LONG to take the picture?”

So, let’s examine all the elements that make up good photographic composition

Rule of Thirds: Avoid placing your subject right in the middle of the picture. Instead, place it in the lower right upper right lower left or upper left corner of a tic-tac-toe grid. The subject should be looking into, walking into, driving into, not out of, the picture

A foreground element.: Place an object, a person, a tree, a statue or any other object in the left or right foreground of the picture to give it depth and that three-dimensional quality called “repoussé” by French artists, or “a background pushed back.”

Framing the subject. Use tree branches, archways, doorways, or any other object to place a frame around the subject, making it more interesting, just as a woman uses hair to frame her face to enhance her beauty.



ordinary background.

Leading lines. Find straight lines that lead the viewer's eye right up into the subject.

Shooting at the decisive moment. Wait for a person, bicycle, car, or other moving object to appear at just the right point in your composition, breaking up an otherwise

Turn your subject sideways. People should always have their bodies turned sideways and look over their shoulder at the camera. Most people pictures should be taken from the shoulders up, unless the person's clothing is part of the subject, with rapid shooting to avoid eye blinks. Buildings, like people, should be photographed from a corner, not straight on.

Get low and close. The most dramatic pictures, especially those of people and animals, are done from a low and close angle. For example, statues are made to look much taller and more impressive when shot from the feet up.

Look for red. If you see a person dressed in a red article of clothing, follow that person and place them in the picture at some point. The red color draws the viewer's eye and gives an interest point to the composition.

Use aperture priority. To blur the background, go for the largest aperture, such as F 1.4 or F 1.8. The closer your lens is to your subject, the more of the background will be blurred. To sharpen your subject, use the smallest aperture, such as F-16 or F-22 for greater depth of field. Telephoto and macro lenses have very limited depth of field, and wide-angle lenses have extremely wide depth of field of focus. Use the lens that is appropriate for the picture you want to take. (Remember that at F2 you get 2 people in focus, at F22 you get 22 people in focus.)

Use Shutter priority. To stop action, use a fast shutter speed such as 1/250th or 1/500th of a second, or faster, depending upon the speed of the object. To blur action, use a slow shutter speed, such as 1/4 or 1/8th of a second. To make action disappear, use a tripod and an extremely slow shutter speeds such as 2 seconds, 3 seconds, or even 10 seconds, depending upon the speed of the objects that are moving through the picture. To achieve a ghosting effect, while using a tripod have your subject move quickly out of the frame at about 2 seconds out of a 4 second exposure



Fill the frame. Photographs are much more interesting when the subject takes up most of the frame. The difference between snapshots and photographs are that snapshots are generally taken from a distance too far away from the subject.

Use of light. The best daytime photographs are taken in the **golden hour**, which is the hour after the sun comes up, or the hour before the sun goes down. The light is softer, more golden, the shadows are longer, and the pictures- with that “National Geographic Magazine” look - are much more pleasing. When the sun is behind a person’s head, use a flash or reflector to put light on the person’s face.

Use the Sun. Buildings look better in sun. This means you should shoot east-facing buildings in the morning, west facing buildings in the afternoon, south-facing buildings all day long. North-facing buildings are generally always in shade. (For **nighttime pictures**, use a tripod, put the camera on manual mode, set an aperture of f8 or f11, and play with the shutter speed until you get the desired exposure

Civil Twilight shooting. The best time to do night time shooting is in the period that begins about 20 minutes after Sunset known as Civil Twilight, when the sky is still deep blue, not black. This

is especially useful for buildings, monuments and structures that are illuminated at night, because it is now just dark enough for those lights to show up



Straight verticals.

When doing buildings be sure to keep the vertical sides of the building perfectly parallel to the vertical edges of your viewfinder for a

more professional look of architecture that avoids the converging vertical appearance known as “key stoning.” This is easily done by using a wide-angle lens held vertically and, instead of leaning back, moving back until all the building sides remain perfectly straight.

Get accurate exposure Check your image on the digital camera screen to make sure that your image is not too dark or too light, adjusting the exposure compensation dial or by varying the shutter speed on Manual mode. On cloudy, gray days, point your camera at the green grass or trees, push down on the Exposure Lock button, reframe, and shoot.

Check your white balance Make sure that the color of the subject and its background in your digital screen exactly matches what you see with your naked eyes. Adjust the white balance settings accordingly, or use the Kelvin Scale if your camera is so equipped to get the most accurate color while taking the picture, instead of relying on your memory to correct the color later in your computer in Lightroom or Photoshop

Telling a story. What is the story you wish to tell with this picture? Make sure that what you see on your digital camera screen accurately portrays the story or message you are trying to tell with this particular picture. If it does not, take the picture again! Rinse, lather, repeat!

Before You Push the Button: Ask these 5 questions before you push the shutter button:

- What** is the subject of my picture? (person/animal/scene/event/thing/product?)
 - Why** am I taking this picture? (what is it I like about this scene/person/animal/thing?)
 - Who** is the picture for? (Me? My Family? Friends? Client? Audience?)
 - Where** do I stand/kneel/lie to get the picture? (camera and background placement?)
 - How** will I get what I want? (Lighting, focal length, ISO, white balance, speed, F stop)
 - When** do I push the button? (wait for that decisive moment of perfect composition!)
- And after pushing the button: Did I get what I wanted? If not, I can do it over!**

Event (“Grip and Grin”) Photography

Tips on Doing Event Photography



Events such as corporate meetings, conventions, award banquets, receptions, retirement parties, birthdays, bar mitzvahs, VIP visits, and exhibitions can be a good source of income for the serious amateur. Here are some useful tips to turn you into a successful event photographer:

1. Equipment: You need proper equipment to be a good event photographer. Here is what we suggest

A **DSLR or mirrorless camera body** that takes interchangeable lenses and lets you set aperture, shutter, and manual modes (the new mirrorless cameras and their families of lenses are smaller, lighter and often faster than their DSLR cousins and give you the option of silent shooting modes) If you plan to do events or weddings, you will need a second camera body too. Get bodies or lenses with **image stabilization**, a very good feature, and look for cameras with high ISO, low-noise capability, such as 3200 or 6400. Hold the camera tight, left hand under lens, elbows against your body. Monopods are also very useful for this work.

Use a DX body for long lenses, use an FX body for wide angle shots.

An External Flash Unit such as a Canon Speedlite or the Nikon SB series or the Sony flash units. These give your flash output much more power and - when dialed down to 1/8th or 1/16th power level on Manual Mode on the flash unit - the individual flashes can keep up with the continuous rapid shooting mode of your camera for action, events, and portraits. If you are using two camera bodies, use a separate flash for each body.

Fast lenses such as a 50mm F 1.8 or F1.4, or a 35 mm F1.8, plus a 70-200mm F2.8 for those subjects too far away for your flash to reach, or when flash is not desirable. The Tamron 18-400mm is a VERY versatile lens for event work.

Make lenses easily accessible (in your pockets) for quick lens changes, or use 2 bodies.

1. **Settings:** Set white balance to cloudy for flash shots, incandescent or fluorescent for existing light shots. Use high ISO 3200 or 6400 for non-flash shots, 400 for flash shots. If your camera has Kelvin temperature scale, take pictures of your own hand’s skin color until you get the correct color temperature for the existing lighting in the room.
2. **Composition:** To paraphrase a famous politician; “It’s the Composition, Stupid”

Get in tight and close, that's what makes good pictures. Faces tell the story, just get in tight with the faces, from waist up, or from shoulders up. Turn your posed subjects **SIDEWAYS**, bodies facing each other, heads turned to the camera. Make sure the background is clean. If not, move yourself or your subjects. Make your pictures tell a **STORY!** Always photograph people in bursts of 3-4 exposures to avoid closed eyes.

- 3. Formal group shots:** all shoulders to the camera, half the group facing right, half facing left. Full body shot if clothing (wedding dresses, uniforms) are important, otherwise from waist up. Bounce flash off ceiling for even lighting. Shoot in burst of three or four shots, one of them will be good.



Individual or couples – candid's: get in tight, from waist or shoulders up, get expressions of interaction with each other

Speakers: get in tight, head only, or from neck up, or show hands gesturing. Get company logo or sign in picture if

necessary, to show context. Shoot from behind with wide angle to get audience looking at speaker, with speaker on right or left side of the frame talking to audience. Always shoot in bursts of 3-4 frames

Award presentations: Shoot from the waist up, get award in the picture, careful not to have flash bounce off glass frame, get expressions on faces, shoot bursts, get company logo or name in background if possible

Workshops: Get whole room shots, speaker close-ups, interaction of panelists with each other, audience reacting to speaker, participants speaking up

Exhibitions; Shoot from behind people looking at exhibit, shoot from behind exhibitor talking to people, get wide shot of exhibit, all company logos, have your pictures tell a story

General tips: Check your work as you go, make sure color and exposure are right, if not then do them over right there on the spot. Avoid having to fix shots later in Photoshop, do it right the first time. Work fast, stay out of the way, wear black to be unobtrusive. Look for opportunities that tell a story of the event, get close, get close!



Getting clients:

Do volunteer work first with any civic or religious organization with which you are already affiliated, develop a portfolio of your work. Develop a website of your event photography work. Go to local convention

and visitor bureaus to find out what conventions/meetings are taking place in your community. Ask your network of friends and business contacts about meetings and events they may be holding. Make your bid estimates based on time spent at the event.

Faces And Places Photography

Faces, Not Places,

Ten Steps For Capturing Good People Photos!

Travel is fun, dramatic, and life-changing. It erases long-held stereotypes, and it, helps you realize that people are just people, the world over.

Therefore, it is very important that the images you bring back in your camera should be as good as the trip experience itself! Good images not only bring joy to your new friends and family, they also make you proud of yourself for having taken them!

Listed below are ten steps to help you capture the people on your trip, in pictures!

Step 1: Pause, Why Are You Doing This?

Before you raise the camera to your eye, pause and ask yourself: “Why am I taking this picture?” “What am I trying to show?” and “For whom am I taking this picture?” It is very important to THINK about the reason for the picture BEFORE you take it. Is it for yourself? Your hosts? All of the above? How can my picture tell the story I want to tell?

Step 2: Planning: How to Get the Story-Telling Picture That You Want: The next step is to



figure out HOW to get what you want. First of all, for a picture to tell a story, do NOT have people looking at the camera! Let me repeat: **do NOT have people looking at the camera!** Posed pictures in which people are looking into the camera are very nice souvenirs of your visit, and you should take many of these, but they do NOT tell a story.

To dramatize, for example, how the trip helped you explore new things, new foods, or new customs, get in LOW and CLOSE on the face of your traveling companion tentatively sampling, for the first time in her life, an exotic dish in her host’s home. Snails? Snakes? Sushi.? Her mouth is slightly twisted, her eyebrows raised. Does she like it? Slightly blurred in the background are the faces of her bemused hosts, watching this dramatic moment. A service-oriented picture could be taken from a low angle behind a traveler teaching a class in a host country school, with fascinated, curious (or perhaps skeptical!) children looking up at him.

Step 3: Hold the Camera Correctly:

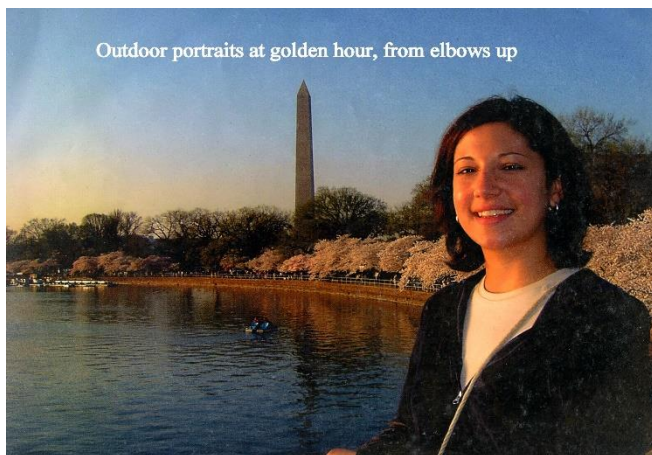
For sharper pictures, place your left hand under the camera, palm up. Rest the bottom of the camera on your left palm, cradle your left-hand fingers around the lens for focusing and zooming, tuck your elbows into your chest, hold the camera tight, push down on the shutter gently while pushing up with your left hand to steady the camera. For vertical images, place the shutter on top of the camera, elbow against chest, camera against nose, and press gently.

Step 4: For people you know: pose your subjects correctly, and get CLOSE: _

Turn your portrait subjects so that their legs face sideways and then have them turn their faces to the camera. Get close to portrait subjects, 3-4 feet away, and only shoot head and upper torso. Clean up any distracting background. Avoid placing portrait subjects in direct sunlight. Place subject's back to the sun to get nice backlighting effect on the hair, use fill-flash or a reflector to light up the shadowed face. Get down LOW and look UP at your subject.

(Looking UP is a sign of respect, looking DOWN is not.)

Look at the Picture Again Before Pushing the Shutter Button! Then, get CLOSER



Step 5: Adjust your aperture or shutter speed to get the effect you want:

Adjust your "A" or "Av" lens aperture setting (F stops) to either blur or sharpen the background. (Remember: at F2 you get 2 people in focus, at F22 you get 22 people in focus!). Adjust your "S" or "Tv" shutter speed setting to either stop action or to blur moving objects

Step 6: For people you do NOT know:

Be VERY careful and considerate in photographing people you do not know. It is best to ask for their permission first. If this is not possible, use a LONG telephoto from a great distance and shoot quietly and quickly. Use a traveling companion as a blind, hiding behind that person and pretending to shoot him, then while your companion steps aside for an instant, you take the picture of your intended subject, then your companion quickly moves back to block your subject's view of your camera. For any commercial or public use of people's faces, be sure to get a model release to avoid privacy invasion lawsuits.

Another technique, helpful in marketplaces and bazaars, is to use a wide-angle lens, hold your camera at waist level and shoot blindly from the waist while looking in the other direction or talking to your traveling companion, or use a camera with a twist/tilt screen.

Step 7: Use the flash when necessary:

Take the camera off of the little green or red “auto” setting and use the intelligent side of the dial, called “A” or “Av” for aperture-priority, “S” or “Tv” for shutter priority, or “P” for Programmed Auto. These allow you to turn the flash on or off and use Cloudy white balance for good skin tones. (“Auto” does not allow you to do that.) Use “Force Flash” or



“Fill flash” to fill in the dark shadows on people’s faces, especially outdoors! For best results, use an auxiliary shoe-mounted flash that you can bounce off the ceiling or walls.

Step 8: Adjust the White Balance to get good color:

The White Balance menu allows you to set the color filtration in the camera, to Sunny, Cloudy, Shade, Flash, Fluorescent, or Tungsten/Incandescent light, depending upon the light you are in. Take a picture and check the skin tones. You will find that Cloudy works well most of the time, even with flash. Indoors, at night w/o flash, use Tungsten/Incandescent. In mixed lighting, use “Auto White Balance.”

Step 9: Use the Rapid Shooting Feature of Your Camera:

The human face while talking or eating CAN be quite ugly! Also, people blink. Shoot a burst of 3-4 pictures to get one good one. Auxiliary flashes can handle the burst, built-in flashes cannot. And remember to get LOW and CLOSE!

Step 10: Avoid “Faith-Based Photography!”

If you go on a trip saying that you will take 500 pictures, praying that TEN come out, that is what will happen! It means you do not have confidence in your technique. Plan your pictures, read the camera’s hateful manual, and shoot carefully, low and close, so that they ALL come out! That’s called “Confidence-Based Photography!” Good luck!

Fireworks Photography

Eleven Fireworks Photography Tips

Here some tips to help you get fabulous fireworks photos:

- 1) Do NOT try to hand-hold your camera, do NOT use a flash
- 2) For best results, find a location where you will see the fireworks bursting over a recognizable landmark, such as the Washington Monument, the Statue of Liberty, the New York skyline, the St. Louis Arch, the Eiffel Tower, or the Golden Gate Bridge. If you can also find a body of water that reflects the glow of the fireworks in the sky, even better!
- 3) Use a camera with an adjustable zoom lens, such as a 70-200 mm, that lets you go quickly wide to get the whole scene, or lets you zoom in on a burst.
- 4) Use a camera with adjustable F stops and shutter speeds, and a Manual setting that allows you to vary the shutter speed. Put camera on manual focus



- 5) Place your camera on a strong, tall, sturdy tripod and attach a cable release or use a remote sensor to trigger your shutter. All of this contributes to the sharpness of your photos. Bring a flashlight so that you can see your controls.
- 6) Before the fireworks display begins, practice shooting on Manual mode to get the right combination of shutter speed and F stop for nice twilight shots of the scene. Use Manual Focus, not Autofocus, aimed at the distant landmark.
- 7) Set the white balance to Auto, or Cloudy Mode, set your ISO to 400
- 8) Set your camera on Manual mode, set it for continuous or rapid shooting, set the F stop at F11 or f 16 for maximum sharpness of the bursts. When the first burst occurs, shoot it at 1 second, try the next one at 2 seconds, the next one at 3 seconds, the next ones at varying speeds of 5 to 10 seconds.
- 9) Open your aperture to F5.6 and try shooting at ½ second and ¼ second to get tighter bursts as they explode in the sky. Try Tungsten/Incandescent or Fluorescent White Balance modes for color variations.

- 10) Place your camera on the Bulb setting in Manual Mode and cover the lens with a piece of dark cardboard. Leave the shutter open for a full minute or two while covering and uncovering the lens with the cardboard, in order to get multiple bursts in the same frame. Again, be sure to use Manual focus.

- 11) . For really wild and crazy shots, take the camera OFF the tripod, shutter open for 2 seconds, and wave it in circles while pointing at the fireworks!



F Stops and Shutter Speeds Explained

Guide to F Stops and Shutter Speeds

F Stops: The F stop on a camera indicates the width of the aperture of the lens' shutter, or how large an opening is provided for light to enter while taking a picture. Camera lenses were designed to work like the human eye: wide open eyes blur the background; squinted eyes sharpen the background. Like the pupils of our eyes, the camera shutter gets wider when entering a dark room, it gets smaller when entering a brightly lit place.

The size of the lens opening is measured in strange illogical numbers called F stops, which go from a low F1.4 (really BIG opening) to a high of F36 (really SMALL opening). Doesn't make much sense, does it? Sorry, that's the way it is!

The thing to remember here is, the **smaller the F number, the larger the size of the lens opening, and conversely, the larger the F number, the smaller the lens' opening.** Most lenses allow for a wide aperture of F2.8 or F3.5, some even "faster" lenses have an F stop of F1.4 or F1.8. (they are called "fast" because they let in more light, which allows for a faster shutter speed. A lens with a maximum aperture of F5.6 would be considered a "slow" lens.) Each successive reduction in F stop numbers doubles the amount of light coming through the lens, thus you double the light by changing your setting from F5.6 to F4.5, or from 1.8 to 1.4 . Confusing, right?



The **width of the lens aperture also has a strong effect on depth of field**, i.e. the number of subjects in focus from front to back. The numbers are crazy: a big number is a small hole; a small number is a big hole. So, the fast way to remember the effect of aperture on depth of field is this very handy memory device which comes to you with the compliments

of the Washington Photo Safari: **“At F2 you get 2 people in focus. At F22, you get 22 people in focus.”**

If you want to make the foreground subject sharp and the background blurred, you use a wide aperture like F2 or F2.8. If you want to have both foreground and background sharp, you use a small aperture like F 16 or F22 or F32. In this way YOU, not the camera, determine how the picture will look. Many cameras allow YOU to set the aperture by putting it on “A”, which is aperture-priority. (Canon cameras use the term “Av” which is “aperture value.”)



BUT you pay a price! A wider aperture results in a faster shutter speed. A smaller aperture results in a slower shutter speed. WHY? BECAUSE THERE IS ONLY ONE CORRECT COMBINATION OF F STOP AND SHUTTER SPEED FOR THE AMOUNT OF LIGHT FALLING ON THE SUBJECT. If you close the aperture from F3.5 to F4.5 you are letting in

only half the amount of light. Therefore, the camera doubles the amount of time the shutter is left open for proper exposure, such as going from 1/250th down to 1/125th of a second.

Then doing portraits of people, you usually want the face to be sharp, and the background blurred, thus emphasizing the face. Same thing for flowers, birds, or still life objects, sharp foreground, blurred background. That's f1.8 or f 2.8.

But if you are doing pictures of people in front of a noted landmark, you want the foreground sharp AND the background sharp. That's F16 or F22. Remember this: **“At F2 you get 2 people in focus. At F22, you get 22 people in focus.”**

Shutter Speeds: We use F stops to control depth of field. Why control shutter speed? To stop a fast-moving object, we use a fast shutter speed, such a 1/2,000th of a second. To blur the water in a waterfall we use a slow shutter speed, such a 1 second or 2 seconds. You can determine shutter speed by putting the camera on “S” (Tv, or “time value” on Canon cameras). You set the shutter speed; the camera sets the corresponding F stop to give you the correct combination. You want fast shutter speed? Great! The price you pay is a wider aperture and less depth of field.

ISO Setting: The ISO setting of your camera determines the sensitivity of your camera to light. ISO 100 is low sensitivity, and is used when you have bright sun. ISO 3200 is high sensitivity and is used when you have low light, as in church interiors. A higher ISO setting gives you a faster shutter speed, very desirable when using smaller apertures

Other Doodads: Many cameras have ikons that do this job for you. A “Portrait” ikon gives you a wide aperture and faster shutter speed combination for a blurred background. A “Sports” ikon gives you faster shutter speed and wider aperture combination to stop action.

A “landscape” ikon gives you a smaller aperture and slower shutter speed combination for more depth of field. A “night shooting” ikon slows down the shutter speed when taking flash pictures to allow more ambient light in the background the show up in your flash photo.

A “P” or “Program” ikon allows the camera to choose the best combination of aperture and shutter speed for the existing light. And finally, the “M” or “Manual” ikon allows you to set both the aperture and shutter speed at whatever values you choose, which is fine as long as you know what you are doing, and why!

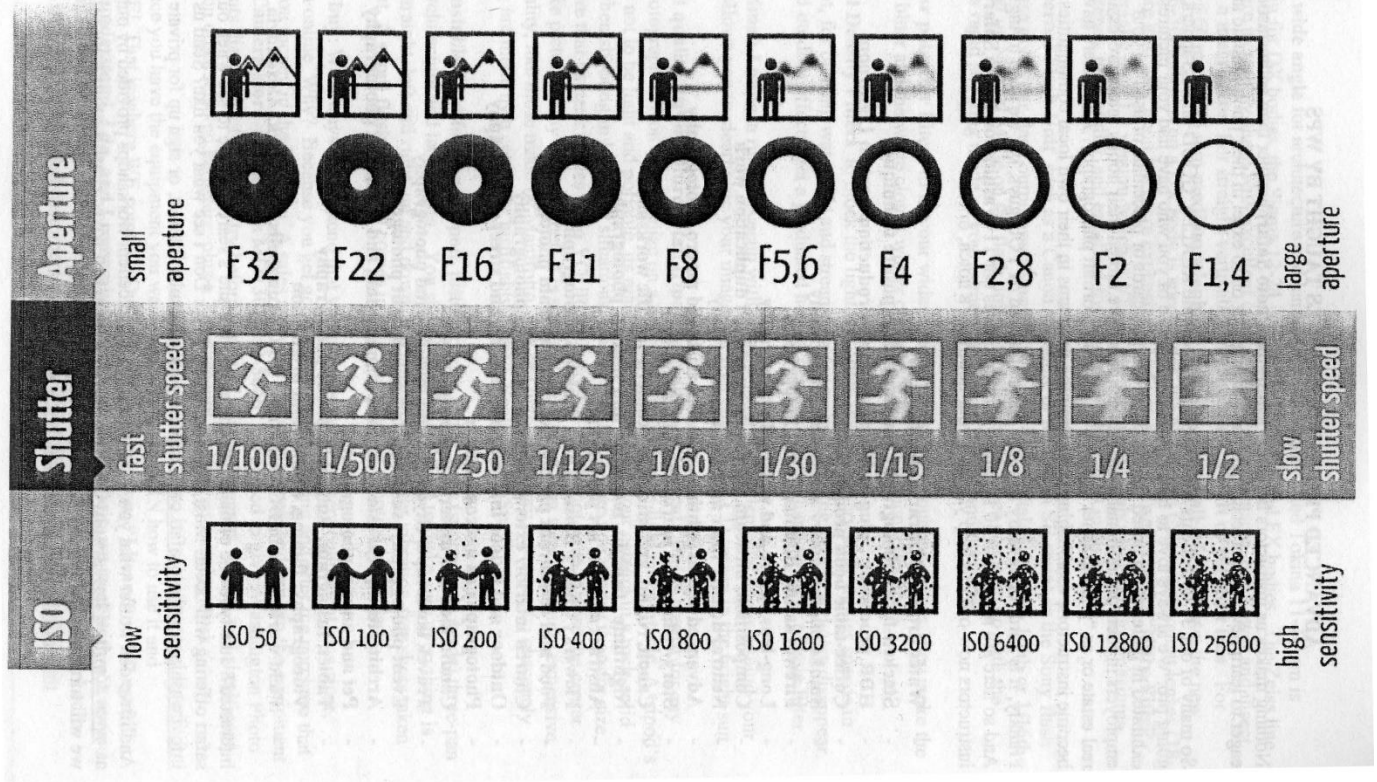


$1/4000$ second

Exposure: The key to unraveling the mystery of F stops and shutter speeds is to understand exposure. Exposure is the amount of light falling upon a subject, whether it is artificial light, strobe, or daylight, or a combination of any or all of these sources.

THERE IS ONLY ONE CORRECT AMOUNT OF EXPOSURE FOR THE LIGHT ON ANY SUBJECT AT ANY GIVEN MOMENT. THIS EXPOSURE IS DETERMINED BY THE COMBINATION OF F STOPS AND SHUTTER SPEED.

DIGITAL CAMERA BASICS



This is a great little chart that visually shows:

- 1) the effects of different F stop on the amount of background blur;
- 2) the effects of different shutter speeds on stopping or blurring motion, and
- 3) the effect of higher ISO's on digital noise

Filter Usage

Filters and White Balance Facts

The only reason to use a filter or the white balance setting of your digital camera is to make your picture more interesting, improve the color, or make things disappear.

Filters are generally used for color correction and cloud enhancement. They can also be used to block light, allowing for slower shutter speeds.

Digital cameras have many filters built into their software. (Film cameras needed to have filters screwed on to the front of the lens to correct the light that falls on the film.)

Circular Polarizing Filters make blue skies bluer, white clouds whiter, (as in the picture below) takes reflections out of glass and the surface sheen out of water. Generally, they are best used on sunny days, at an angle to the sun, especially when the sun is low in the sky. Don't use on cloudy days, or in the shade. Don't use on flowers, it dulls their color.



Tungsten/ Incandescent WB: Use indoors to take out yellowish cast made by tungsten light. Good for nighttime outdoors or windowless rooms.

Fluorescent WB Use indoors to take out greenish cast made by fluorescent light, usually in an office, gym, pool, arena.

Shade/Warming WB: Takes out bluish cast made by shade or snow. Adds warmth to skin tones in portraits, gives "late afternoon look" to landscapes.

Automatic White Balance: AWB very good for mixed indoor/outdoor lighting situations.

Red, Yellow, Green Filters enhances whiteness and contrast of clouds on B & W settings or black and white film

Neutral Density Filters ND: blocks light, allowing slower shutter speeds. (i.e. blurred water or to make moving cars and people disappear with a No. 8 ND and 3-4 seconds shutter speed

Graduated filters gradually increase filter effect from bottom to top, useful to darken skies or give warming effect to buildings in midday sun.

Flowers and Macro Photography

(All text and photos by Sherryl Belinsky)



Cherry Blossoms, Washington, DC

Panasonic Lumix G85, 14-140mm Zoom at 125mm, f/8, 1/100 sec, ISO 1600

There is never a bad time to photograph flowers, although in terms of “photogenics”, some times are better than others! When shooting outdoors, early morning and late afternoon produce softer light, as does an overcast day – the clouds are Mother Nature’s way of creating a diffuse, soft light that is perfect for photographing flowers. No harsh shadows or bright spots! If the only time available is on a bright and sunny day, use a diffuser to soften the light. In a conservatory such as the Botanic Garden, most of the time the light is diffuse and sometimes too dark, so a reflector is useful to illuminate your subject.

Any camera and lens can be used to photograph flowers, but to get really close and produce stunning results, zoom and telephoto lenses work well. There are also art lenses such as Lensbaby, which makes a whole line of lenses that create artistic effects. Dedicated Macro lenses also take awesome photos, but usually the flowers need to be really close to the camera for a Macro lens to work well. As with most genres of photography, there is a whole line of accessories that can be purchased to assist with photographing or enhancing those images.

Equipment: *Recommended Lenses:*

- **Zoom**, such as 50-200mm: A Zoom lens allows magnification of the subject without having to actually be really close to the flower. The zoom lens also compresses the distance between the subject and the background, and produces a nice blurred background known as a Bokeh when using a larger aperture (smaller f-stop number).
- **Art Lenses** such as Lensbaby Velvet 56 or 85 (and the new 28): These lenses are manual focus and have a Macro setting. The aperture ring controls the amount of sharpness in the photo. F/16 is the sharpest, F/2.8 has a much softer look, which Lensbaby calls a “glow”.
- **Macro lens:** This type of lens is available in auto-focus or manual focus formats, depending on the price. It is also available in different lengths: 35mm, 60mm, 80mm, 100mm, etc. and offers a minimum of 1:1 magnification, which means that the subject is reproduced as life-size.

Additional accessories:

Extension Tubes (12mm, 20mm, and 36mm): Shortens minimum focusing distance of a lens, and can be stacked. The tubes sit between the camera and the lens. Make sure to get tubes that have the electrical contacts to facilitate communication between the lens and the camera. They are more expensive, but worth it, since auto-focus is enabled, etc.

- **Closeup Macro lenses** (+1, +2, +4 and +4 strengths): Magnifies the image, screws on the front of the lens, just like a filter would. Not quite as good as other options because they sometimes cause distortion
- **Tripod:** While not always necessary, it helps when shooting with a manual focus lens. It allows fine-tuning of the focus while the camera remains stationary. The tripod also helps to keep the camera steady during shooting, especially when using longer zoom or macro lenses.
- **Remote Release** (wired or wireless): Used to prevent camera shake when using a tripod. The 2 or 10-second timer can also be used.
- **Magnification Loupe**, such as Hoodman: Assists with fine-tuning the focusing when using a manual focus lens. Many cameras also have a feature known as “Focus Peaking”. When a portion of the image is in focus, the camera will highlight the outlines in the in-focus area in a color such as red or blue. The loupe works great when used in conjunction with Focus Peaking.
- **Reflectors/Diffusers:** A Reflector is used to illuminate the flower by holding it at an angle and reflecting or bouncing the light toward the flower. The difference is subtle but noticeable, especially in the details of a flower. Diffusers are used to shield the flower from direct sunlight. Reflectors are available in gold and silver finishes and Diffusers are available in black and white. Both are available in various shapes and sizes.
- **Flash:** “Fill flash” is used to compensate for under-exposed areas when a reflector is not sufficient, or to compensate for harsh shadows if a diffuser is not available.
- **Off camera lighting:** LED lighting provides a constant light for focusing and exposure purposes that a flash cannot. Two types of LED lighting are a light ring which fits on the front of the lens using a special screw-on ring or a small panel, both of which mount on the hotshoe and have adjustable brightness.



Basic Principles to keep in mind while photographing flowers:

1. Set the White Balance to AWB. This setting allows the camera to adjust to changing lighting conditions.
2. Study the flowers carefully before starting to photograph them. Look for nice groupings or individual flowers. Select flowers that are in good condition and as “blemish-free” as possible.
3. Pay careful attention to the background and around the edges of the photo. Look through the viewfinder of the camera and check the edges and the background for any unusually bright or dark areas or other distracting items.
4. Study the composition in the photo, using the Rule of Thirds, the Golden Ratio, leading lines, repeating patterns or geometric shapes such as a triangle. Adjust the perspective – moving a little to the left or right or up or down can make all the difference!
5. When adjusting the camera settings, set the aperture (f-stop) first, deciding on how much of the flower or background should be in focus. If the flower is relatively flat, then it is easy to get most of the flower in focus, since all of the flower is on the same focal plane. However, if the flower is deep or complex like an orchid or a lily, keeping the background blurred while keeping all of the flower in focus becomes more complicated.



- The f-stop determines the depth of field in your photo – how much of the photo is in focus from the foreground to the background.
 - A smaller number such as f/5.6 produces a larger opening in the lens and a more out of focus background.
 - A larger number such as f/16 produces a smaller opening in the lens and a more in-focus background.
- Experiment with the various aperture settings, while adjusting the shutter speed (and possibly the ISO if not using a tripod) to achieve the proper exposure. To photograph the entire flower in focus, include as little of the background as possible, since it will also be more in focus.
 - Using the aperture priority setting (A) will allow the camera to adjust the shutter speed for proper exposure and may simplify the process.
6. Use additional lighting if necessary – a reflector, LED lighting or a flash, adjusting the exposure settings accordingly.

7. Don't forget to experiment with a smartphone, too!

Suggested Shooting Techniques:

(Note: Most images were taken with a Panasonic mirrorless camera, which has a crop factor of 1.5.)

Isolate



Love in the Mist (Nigella)
Meadowlark Gardens, Vienna,
VA
Panasonic Lumix G85,
Lensbaby Velvet 56 (56mm),
F8, 1/320 sec, ISO 200



Flower in Monet's
Garden Giverny, France
Panasonic Lumix G85,
14-140mm zoom at
46mm, F/5.0, 1/640 sec,
ISO 200

Photograph details



Waterlily
Longwood Gardens, Kennett
Square, PA
Samsung Galaxy S8, 4mm, f/1.7,
1/90 sec,
ISO-50, Exposure Bias -0.4 step



Blooming Lily
Panasonic Lumix G9,
Lensbaby Velvet 56
(56mm), F/18, 2.5 sec,
ISO 200



Magnolia
George Washington's
Mount Vernon
Mount Vernon, VA
Panasonic Lumix G6, 14-
140mm Zoom, at 109mm,
f/5.6, 1/25. sec, ISO-200

Fill the frame



Dahlia
Longwood Gardens,
Panasonic Lumix G85,
14-140mm zoom at 140mm,
f/10, 1/160 sec,



Peony
Meadowlark Gardens, Vienna, VA
Panasonic Lumix G6, 14-140mm
Zoom, at 77mm, f/10, 1/125 sec,
ISO-160

Photograph a grouping



Sunflowers
Burnside Farms,
Nokesville, VA
Panasonic Lumix G85,
14-140mm zoom at
55mm, f/8, 1/160 sec,
ISO 250



Virginia Lilacs
South Riding, VA
Panasonic Lumix G9, 14-
140mm zoom at 55mm with
Extension Tubes 16mm +
10mm, f/7.1, 1/400 sec, ISO
1000, Exposure Bias -0.3 step



Dahlias at the
American Dahlia Society Show
Longwood Gardens, Kennett
Square, PA
Panasonic Lumix G85, 14-
140mm zoom at 102mm, f/10,
1/80 sec, ISO 640

Use unique angles and viewpoints



Agapanthus
Ladew Topiary Gardens,
Monkton, MD
Panasonic Lumix G6, 14-
140mm Zoom, at 140mm,
f/8, 1/25 sec, ISO-160



Azaleas
Hillwood Museum and
Gardens
Panasonic Lumix G85,
Lensbaby Velvet 56 (56mm),
f/8, 1/80 sec, ISO 3200



Dogwoods
Ox Hill Park, Fair Oaks, VA
Panasonic Lumix G85, 14-
140mm zoom at 120mm,
f/7.1, 1/250 sec, ISO 800

“Shoot through”



Tulips
Brookside Gardens, Wheaton, MD
Panasonic Lumix G6, 100-300mm Zoom, at
300mm,
f/5.6, 1/200 sec, ISO-160



Spring Flowers
18th & E Sts., Washington, DC
Panasonic Lumix G6, 14-140mm Zoom at
140mm,
f/5.6, 1/125 sec, ISO 160

Get low and close – à la E. David Luria! – include the sky!



Tulip Library
Tidal Basin, Washington, DC
Panasonic Lumix G6, 14-
140mm Zoom, at 88mm, f/18,
1/50 sec, ISO-160



Squirrel Corn
Potomac Heritage Trail,
Leesburg, VA
Panasonic Lumix G85,
14-140mm zoom at
97mm with Extension
Tubes 16mm + 10mm,
f/7.1, 1/125 sec, ISO
320



Virginia Bluebells
Potomac Heritage Trail,
Leesburg, VA
Panasonic Lumix G85, 45-
200mm zoom at 200mm with
Extension Tubes 16mm +
10mm, f/6.3, 1/160 sec, ISO 200

Use “Layering”



Tulips
Brookside Gardens,
Wheaton, MD
Panasonic Lumix G6, 14-
140mm Zoom, at 100mm,
f/5.6, 1/160 sec, ISO-160



Pansies
George Mason Memorial,
Washington, DC
It was taken in the 1980s
with a Pentax K1000 most
likely a telephoto lens of at
least 100mm f/8 or less,



Tulips
South Riding, VA
Canon Powershot Pro1, 28-
200mm Integrated Zoom at
46mm, f/4, 1/400 sec, no ISO
listed

Use backgrounds such as a black cloth to create a dramatic photo or a softly patterned image to create a more uniform background



Orchids
Longwood Gardens,
Kennett Square, PA
Panasonic Lumix G85, 14-
140mm zoom at 46mm, f/8,
1/50 sec, ISO 800



Tulips,
Panasonic Lumix G85,
45-200mm zoom at
175mm, f/5.6, 1/640 sec,
ISO 4003



Freesia
Longwood Gardens,
Kennett Square, PA
Panasonic Lumix G9, 14-140mm
zoom at 125mm, f/8, 1/250 sec,
ISO 400,

Include insects with your flowers



Bumblebee and a Dahlia
Longwood Gardens, Kennett
Square, PA
Panasonic Lumix G85, 14-
140mm zoom at 140mm, f/8, 1/80
sec, ISO 200



Dragonfly and a
Waterlily
Panasonic Lumix G6,
100-300mm Zoom, at
269mm, f/9, 1/1600
sec, ISO-160,



Monarch Butterfly and Dahlia
Longwood Gardens, Kennett
Square, PA
Panasonic Lumix G85, 14-
140mm zoom at 140mm, f/13,
1/320 sec, ISO 1250,

Use fill flash to illuminate dark areas in a photo



Sunflower in the afternoon
Burnside Farms, Nokesville, VA
Panasonic Lumix G85, 55mm,
f/8, 1/50 sec, ISO 250, fill flash



Sunflowers at Sunset
Burnside Farms, Nokesville, VA
Panasonic Lumix G85, 14mm,
f/8, 1/60 sec, ISO 640, flash

Spend time photographing one area or grouping of flowers in a variety of different ways. What appears to be the best image when it is taken may not be when all the images are reviewed later!

Have fun and be creative! Check the list of DC area flower photography locations in the Appendix!

(Sherryl Belinsky is a website administrator and a specialist in floral photography)

Food and Restaurant Photography

Introduction: For those of us who love to travel and take pictures, it is VERY hard to be confronted with a visual culinary delight in a fancy restaurant and not take a picture! You've been there, right? Food presentation has now become an art form. That gorgeous dessert dripping with sauce and calories just HAS to be photographed before it is eaten, right? Here are some tips on how to do it right:

Equipment: Any camera can be used to do informal food and restaurant photography: a DSLR, an ILC (interchangeable lens compact), a mirrorless camera, or even a cell phone camera.

But for best results we suggest a camera or lens that has Macro capability, adjustable white balance and ISO settings, a "fast" 50mm F1.4 or f1.8 lens, a 60mm or 105 mm Macro lens, the ability to operate on Manual exposure and Manual Focus modes, and we highly recommend a tabletop tripod or "Gorillapod", plus an auxiliary flash or Speedlight unit with bounce and swivel capability.

Technique: raise the ISO to the highest level at which you are comfortable (1600, 3200, or 6400) without producing too much digital noise;

- 1) **set white balance** to Incandescent/Tungsten for tabletops lit with pure incandescent light, or to Auto White Balance if there is a mix of window daylight on the tabletop.
- 2) **use a tabletop tripod** to steady camera, or the rim of a wine glass or beer stein to keep camera steady. If hand-holding, rest elbows on table for maximum stability of the camera. (The photo below was used by an Alexandria restaurant in its ads for 20 years)



3) Place napkins, sugar packets, or other objects under the end of plate you are photographing, to tilt the plate towards the camera.

4) Remove distracting backgrounds, or place black, red, or green cloth in background behind plate to enhance color of the foods or drinks

5) Set camera on manual exposure, aperture on F8, take

test shot and then adjust shutter speed up or down until ideal exposure is achieved in screen.

6) For close-up food or drink shots, use Macro lens, set at min. focus distance and on Manual Focus mode, then look through viewfinder and move your head back and forth (body focusing) until ideal focus is achieved in viewfinder.

- 7) **Fine-tune white balance settings**, using Kelvin temperature scale on upscale Canon cameras or white balance color screens on Nikon and Sony SLR's, to achieve accurate color rendition of food or drink subjects.
- 8) **Arrange food plates** so that most photogenic side of the food presentation faces the camera.



glass rim, aim at diners and shoot while you look away in opposite direction, talking to your own dinner companion.

- 9) **To project cocktail colors** onto white tablecloth, shine a high intensity light directly down into the heart of the cocktail
- 10) **Try shooting food without flash, and then with flash**, preferably bounced off of ceiling or wall and with diffuser.
- 11) **For wider shots of table**, use wider angle lens with F stop at F16 or F22, and tabletop tripod.
- 12) **For pictures of your fellow diners**, taken without their knowledge, place camera on tabletop tripod or on top of wine
- 13) **For interior shots of restaurant**, go to distant corner, brace camera against column or railing, holding it perfectly straight, use slow enough shutter speed to capture the lighted interior, no flash, and make sure you have corrected white balance and high ISO settings
- 14) **To eliminate moving people** in the restaurant, use tabletop tripod and VERY slow shutter speeds (2 seconds or 3-4 seconds) at lower ISO; to blur moving people use shutter speeds of 1/2 second or 1/4 second

Ghost Photography

Tips On Turning People Into Ghosts, Or Making Them Disappear!

Are there people that YOU would like to have disappear, or at last turn them into ghosts? Of course, there are! Your kids! Your colleagues at work! We can show you how to do it!

CREATING GHOSTS:

- 1) You **MUST** have a strong, sturdy tripod to do this, and dark light (evening, night, or twilight, or indoors), or a solid fence, banister or column on which to rest the camera. If it is not dark enough, use a Neutral Density filter
- 2) You must have a camera with adjustable shutter speeds, and put it on the “S” or “Tv” shutter priority mode.
- 3) Place your subject dressed in a sheet in front of the background that you want, such as a cemetery, a haunted house doorway, a hallway, or other eerie place
- 4) Set your shutter for 4 seconds, indicated by 4”, NOT by 4 (which is just $\frac{1}{4}$ of a second)



(photo by Angela Giusto)

- 5) Tell your subject that you are going to shout “Ready! Set! PUSH!”, at which point you are going to push the shutter button
- 6) As soon as you shout “PUSH!” your subject must count out 2 seconds by saying “One Thousand One, One Thousand Two “
- 7) On the count of “Two” your subject must run quickly out of the picture frame

Look at the picture. You will have a ghost, caused by the fact that your subject stayed in the picture for only half of the 4 second exposure time.

- 8) Try again and again until you get it right. The shorter the time your subject stays in the picture, the more you will see through his/her body. The longer your subject stays in the picture, the less he or she will look like a ghost.



- 9) You take your kids on a tour of a haunted house. NOBODY else sees real ghosts in a haunted house, right? But, with this trick, you can show your fellow tourists that YOU saw a ghost! It was your kid, dressed in a sheet

How To Make Moving People and Objects Disappear!

Yes, you can make all the moving people in a busy train station, airport or historic place disappear, or you can eliminate all the moving cars on a busy street:

- 1) You **MUST** have a **strong, sturdy tripod** to do this, and dark light (evening, night, or twilight, or indoors), or a solid fence, banister or column on which to rest the camera. If it is not dark enough, use a Neutral Density filter
- 2) You must have a **camera with adjustable shutter speeds**, and put it on the “S” or “Tv” shutter priority mode, or on the “M” for Manual mode



(Lincoln Memorial, at 1/100th of a second)

Lower your ISO setting to the lowest number, such as 80 or 100.

- 3) Set your shutter for at **LEAST** one second, **2, 3, 4, or 5 seconds** is even better. (The longer your shutter speed, the more people and/or cars will disappear.)

- 4) Focus your camera on the background, and push the shutter gently, it is preferable to use a shutter release cable or put the camera on Self Timer with a 2-5 second delay to avoid blur caused by camera shake

During the daytime you will need to use a **Neutral density filter**, such as an ND8 or an ND9 to keep the light out and slow down the shutter, otherwise your photo will be greatly overexposed, and a tripod.

It all goes to show that you cannot believe **ANYTHING** you see in pictures!

(By the way, a **VERY** slow shutter speed of 4-5 seconds is **GREAT** for smooth, silky water shots)



Lincoln Memorial at 4 seconds with ND filter)

Holiday Photography

Five Tips For Holiday Photography

1. Use Your Smartphone AND an Adjustable Camera! The two devices can work holiday magic together: the smartphone is great at spontaneous shots, excellent depth of field and instant sharing. The adjustable camera gives you many more options, longer zoom, blurred backgrounds, rapid shooting with flash. And the newer model cameras now have instant Wi-Fi capability to send pix instantly to your smartphone for sharing on social media!

2. Get in Low and Close! The best pictures of your friends and family are taken in close, good and tight, on the faces. That's where the expressions are, especially with kids. Get the look on their faces as they see or open presents. Zoom in tight on family members locked in conversation or playing with kids.

3. Avoid Cluttered Backgrounds: People pictures are best when the background is nice and clean (curtains, walls, sofa backs, trees, bushes) rather than messy tables, white tablecloths and dinnerware or busy backgrounds which distract the viewer's eye. Check the background **FIRST** and position yourself or your subjects against clean backgrounds



whenever you can.

3. Use an All-Purpose Lens like an 18-200mm, 16-300mm or the excellent 18-400mm made by Tamron, to avoid the hassle of changing lenses when you are in a hurry to get that cute shot of the kids across the room

4. Use a Tripod for Family Selfies: You get better quality pictures of yourself with your family when the camera is mounted on a tripod,

mantelpiece, or other solid platform placed far enough away to get the whole family in the picture, with the camera on its self-timer setting.

5. Use an Auxiliary Flash on Manual Mode: Dial the flash down to 1/8th or 1/16th power level and put your camera on continuous rapid shooting to get family or individual face shots with rapid bursts. In a burst of three shots, properly lit with accompanying diffused flash angled up at the ceiling as a reflector, one shot will be a keeper.

Museum and Gallery Photography

Nine Tips on Photography Inside Museums

Here are 10 tips that will allow you to capture museum artwork in your camera, without the use of flash or tripod which are generally not allowed in museums:

1. **Use a High ISO** Set your digital camera to its highest allowable ISO sensitivity, 800 is OK, 1600 is even better, some cameras go to 6400 with very little digital noise.
2. **Use Tungsten/Incandescent White Balance Setting**, or an 80A or 80B tungsten filter for a film camera. Because a tungsten filter blocks light on a film camera by 2 stops, a 1600 speed film becomes 400 speed, and 400 speed becomes 100.
3. **Use a Mini-Tripod.** Full length tripods are not allowed in most museums, but a hand-held mini tripod can be braced against the chest or against door jambs.
4. **Use a “Fast” lens**, such as a 50mm 1.2 or 1.4, whose wide aperture allows for a faster shutter speed (less camera shake) in low light.



5. **Check the Light Sources Around the Artwork:** If there is any daylight falling on the object, do NOT use tungsten setting or filter, it will cause a bluish cast. If there is ONLY tungsten light on the object, use the tungsten setting/filter. In mixed lighting, try the “Auto White Balance” setting.

6. **Do NOT use Flash:** In many galleries, flash is not allowed, but in all cases, flash provides an unattractive white light on artwork, washing away the carefully placed shadows and spotlighting set by the

museum exhibitors. Shooting without flash provides a natural light on the painting.

7. **Observe Museum Restrictions:** Most permanent collections in museums allow photography, but some do not. Temporary or loaned exhibits generally do NOT allow photography. Observe the signage on the entrance to EACH exhibit or ask the guards.
8. **Avoid Getting Picture Frames in The Photo:** Your photograph becomes much more alive if you EXCLUDE the picture frame. Even a section of the painting, or a detail of a sculpture, provides an exciting photograph, and there is no law against your enlarging the photo, framing it, and hanging it in your living room! It’s called “The Art of the Steal!”

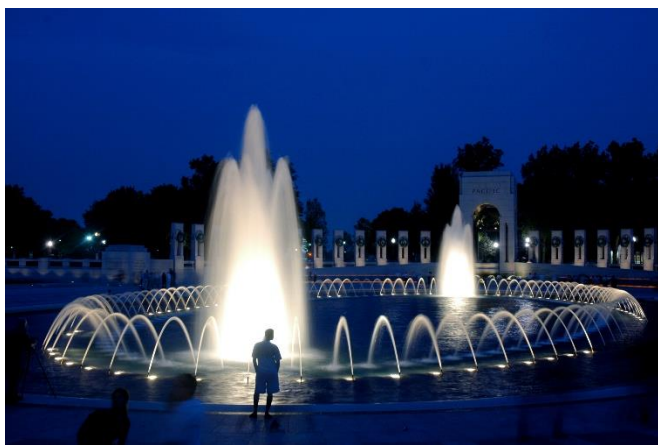
- 9. Hold the Camera VERY Tightly**, elbows against your chest, for maximum stability.
And be sure to stand where your camera lens is in the exact middle of the painting!

Nighttime and Moonrise Photography

Six Nighttime Photography Tips

1. **Use a STURDY Tripod:** Nighttime pictures SHOULD be taken with a tripod because of the low light and the slow shutter speeds. When buying a tripod, do NOT skimp or try to save money – a good tripod strong enough to hold your camera and its heaviest lenses will last you for many years, through many cameras. Find one that is tall enough for your height, with its neck (where the three fully extended legs come together) is as high as your own neck. Use a sturdy tripod with a detachable head for easy movement and flexibility. Lightweight sturdy tripods made of carbon fiber or basalt are better, and quite expensive.
2. **Shooting at “Civil Twilight”:** Civil twilight takes place in that half-hour after sunset. There is still light in the sky, but the sky, not yet black, becomes a lovely dark blue, a very nice backdrop for city scenes, illuminated monuments, buildings and landscapes (*the deep blue is made even bluer by using a “tungsten” or “incandescent” white balance setting on your digital camera*). This lighting at twilight also help to minimize flaws on a building’s exterior, such as water stains. Work fast, twilight only lasts about 20 minutes.

3.



Flash, and Smartphones at Night:

In general, nighttime shots are best done WITHOUT flash, especially if the scene is too large or the subject too distant for the flash output range (about 5 to 20 feet). Use of existing light is MUCH better on statues that are professionally lit with spotlights, whereas flash only reaches about 5-10 feet and creates a white, pasty look that washes away the nice artificial

light. However, flash IS useful at night for photos of your friends or relatives standing in front of an illuminated skyline, but you MUST use the “Night Flash” feature of your camera or slow the shutter speed down to 1/15th of a second, or slower, to let in the background light. Use Auto White Balance for this shot.

Late-model Smartphones, held tightly or on a tripod, also do a pretty good job on nighttime photography

4. **Correct White Balance:** Look at the light on the subject. If it is only moonlight, then use the “Shade” or “Cloudy” setting on the white balance menu of your digital camera. If

the subject is lit in tungsten or incandescent light, set the digital's white balance to "tungsten" or "incandescent" or even to "Auto" white balance. Otherwise, your pictures will have a yellowish cast. If the subject is lit in fluorescent light, set the white balance to "fluorescent". Otherwise the picture will have a greenish cast. (*Do NOT use these settings if the moon is in the picture, otherwise you will have a blue or magenta moon!*)

- 5. Exposure Settings:** Exposures at night are tricky. Many nighttime scenes are overexposed because the camera meter thinks the black sky is grey, makes it grey, and washes out everything else. Here is where working on Manual (M) comes in handy. Set the Camera on "M", set the ISO to 400, and set the aperture at *F8* to *F11*. Take a test shot with your digital camera, if it is too dark move your shutter dial to the left for a slower shutter speed, if it is too light, move your shutter dial to the right, for a faster shutter speed. It is as simple as that! To make street lights look pinpoint sharp, set your aperture to *f16* or *F22*. To get streaking car headlights and taillights, use shutter speeds of 3-5 seconds. Low ISO settings help reduce noise.

- 6. Fly Me to the Moon:** Nighttime scenes that are properly exposed usually have a pretty skyline but a washed-out moon, too bright, like a lamp in the sky. This is because the moon is lit by the same bright sunlight that lights up the earth in the daytime. The only way to correct this is through photo editing like Photoshop or Aperture, or double exposure on a



multiple exposure camera; that is taking two pictures on the same frame, one exposed for the nighttime scene, the other for the moon.

In order to show the features hills and valleys of the moon, you need to set the camera on Manual, use a shutter speed of about 1/60th of a second at *F11* with an ISO of 100, or about 1/250th of a second with the ISO at 400. Put the moon in one upper corner of the picture, take one picture at the fast shutter speed, then take a second picture of the same scene on the same frame, at about 1-2 seconds. Try it several times, speeding up the shutter until you can see all the features of the moon's surface.

Nine Tips For Shooting and Moving The Moon at Night

Use a long lens, like 300 mm, on a DX cropped sensor body, or a tele-extender;

- 1) Use a good strong sturdy tripod, strong enough to hold your heaviest telephoto lens
- 2) **Put camera on Manual Mode.** Put F stop on F11 and take several pictures of the moon surface at increasing shutter speeds, even up to 500th or 1,000th of a second until you can clearly see all hills and valleys and geography of the moon surface. (The moon is lit by same sun that lights up earth in daytime, so shutter speed needs to be daytime-equivalent)
- 3) **Play with White Balance,** using Auto, Cloudy, or Shade to get the moon the color you wish it to have, or play with Kelvin temperatures of 4,200-7,000 degrees
- 4) **Use Auto Focus** to focus on the edge of the moon, then, once it is focused, switch to Manual Focus to keep it locked at that reading. (Do not use Infinity for the moon)
- 5) **Take several pictures** of the moon until you get it right. Write down the shutter, aperture and white balance settings you have used.

The moon is generally not in the position you would like to have it, such as over a monument or landmark. **To move the moon, you need to have a Multiple Exposure option in your camera**



- 6) To place the moon over your landmark, first **take a test shot** of the landmark, in Manual Mode, writing down the shutter and white balance settings at F11 until landmark is properly illuminated
- 7) Now, set camera **on Multiple Exposure**, for two pictures. Take picture of landmark
 1. Move camera to take picture of moon, placing it in upper right or upper left corner of your frame, leaving room for the landmark. Use moon settings you got in Step 6
- 8) Take the 2nd picture. Magically, the landmark will pop into your picture of the moon. Rinse, lather, repeat, you will need to do it several times to get it right!

Pet Photography

Pet Photography Tips

(All texts and photos by Julie Gould)

I. PET PHOTOGRAPHY BASICS

❖ Quick Camera Settings:

- **Continuous Focus Mode** (AI Servo-Canon, AF-C-Nikon)
- **High speed continuous shooting**
- **Matrix metering**
- **Aperture Priority** (start at f4)
- **Use Exposure Compensation** to increase/decrease aperture f stops)
- **ISO** (400—1600 depending on getting shutter speed to at least 1/500th second)
More often 1/1000-1/2000th
- **White balance:** cloudy or shade
- **Single-point focus:** on the animal's eyes! Toggle to move focus point.
- **Image Quality:** RAW or JPEG high quality

❖ Camera Settings review: Aperture, Shutter Speed, ISO, & White Balance

- **Aperture & Depth-of-Field (DOF):** more light & more in focus: the larger the f-stop number; less light & blurred foreground and background: the smaller the f-stop, thereby controlling **DOF—the range of distance in the photo that is sharp.**
 - **For pets, generally use smaller f-stops to blur background & focus on pet: f2.8-f4.**
 - You can also impact DOF by moving your subject closer to the camera & DOF decreases; by moving further away, the DOF increases.



- **Shutter Speed:** Generally, you will get a sharp image if your shutter speed is the reciprocal of the focal length of the lens. If you shoot at 100mm then your shutter speed should be a least 1/100.
 - **Pets move quickly even when seemingly still. Outdoors the shutter speed range should be a minimum of 1/500th and more often 1/1000-2000th!**

- **ISO:** The ISO setting measures light sensitivity based on the available light. The smaller the ISO (100), more light is available as in a bright, sunny day. Higher ISO's are needed the lower the light becomes (1600+).
 - **For pets, you will be adjusting this setting more frequently as the light changes while keeping the aperture and shutter speed constant. Outdoors on a sunny day, start out with ISO 400 when shooting in open shade and increase to 800-1600 as the light dims and/or you venture into a heavily shaded or forested place. ISO 100-200 in full sun.**
- **White Balance:** set for type of day per camera menu choices: Cloudy or shade best.

❖ **Camera Mode: Aperture priority, Shutter priority, Manual**

- **Which should I choose?** Ideally, Manual as you are in full control of the camera. But, juggling all 3 camera settings is often difficult with dogs running around you! So, if you're not comfortable adjusting on the fly then...
- **For pets, I primarily use Aperture priority outdoors (and manual indoors) to first, control DOF; second, adjust the Shutter Speed as high as it needs to go for the shot (action, portrait, etc.) to be sharp; and third, adjust the ISO.**

❖ **Camera Image Quality**

- **JPEG vs RAW:** For pet photos outdoors, you will have a wide range of lighting conditions to balance. Aim to get the shot correctly rendered in the camera. However, this is not always possible and thus the image quality settings become important in post-processing. RAW offers the most dynamic range to bring up details in highlights and shadows. JPEG is much more compressed with fewer details in the image. If you do shoot in JPEG, aim for the **High-Quality** setting.



PET-SPECIFIC PHOTO EQUIPMENT:

❖ **Cameras:**

- **DSLRs** are excellent; full-frame (FX) DSLRs are the best quality and cropped sensor (DX) cameras are not far behind.
- **Mirrorless** cameras are excellent too: they are lighter and often capable of faster frames per second than DSLRs. Full-frame and APS-C (like the DX with smaller sensors)
- **Point & Shoot** cameras will frustrate pet photographers mainly for a lack of control over camera settings and difficulty achieving sharpness especially for dogs in action.

- **Smartphone** cameras are getting better but they only produce acceptable sharpness with still subjects. This rules out animals-in-motion. The current crop of smartphones does have a “burst” feature to try to capture movement.

- ❖ **Lenses:** Zoom lenses are most helpful to capture a variety of poses of pets. For movement and isolating the dog (by blurring the for-and background) is the **70-200mm f2.8 lens**. But it is a heavy beast and takes practice to hold and stabilize hand-held. The **24-70mm f2.8 lens** is a workhorse lens for pet images for its versatility in getting wide angle and medium zoom ranges. Wide-angle lenses are used for specific purposes and may distort the dog which may or may not be “the look” you are going for. The **14-24mm f2.8 lens** is an excellent example. The lenses just cited are professional level, high quality, and expensive. All major camera brands have f4 and/or f4-5.6 versions of these 3 zooms which are good quality for amateurs and beginning professionals! Two excellent prime lenses known for their sharpness are the **50mm f1.8 and 85mm f2.8**.



- ❖ **Helpful Pet Photo Accessories: TNT!**

- **TREATS:** think Vienna sausages, cheese cubes, peanut butter, Zuke’s bites
- **NOISEMAKERS:** kazoo, duck (or any) whistle, any type of squeaker
- **TOYS:** favorite toy of pet, e.g. tennis ball, frisbee, rope toy
- **Lens hood:** a lens hood not only helps avoid sun flare; it helps avoid dog slobber!
- **Belt pouch/Fannie pack:** to carry treats and toys, etc. on your waist
- **Reflectors:** nice to have to block sun, fill in light
- **Long leashes:** for the dog’s safety, keep on leashes. Consider investing in a long (30 ft) leash and stake to let your dog run with the safety of the leash.
- **Lens cleaners:** wet and dry tissues/cloths for cleaning up dog drool and slobber on your lens!
- **Portable pet water dish**
- **Poop mitts 😊**

II. Pets in Outdoor Natural Light

- ❖ **Best hours of the day:** the same for pets as other outdoor photography: 2 hours after sunrise and 2 hours before sunset.

❖ **Position of Sun:**

- Best position in sun: Sun BEHIND dog & people so that faces are SHADED. In this position, squinting is avoided too.
- Avoid side-lighting on dog; very unattractive and hard to edit.
- Find constant, even, open-to-the-sky shade; not splotchy shade.
- avoid, harsh direct sunlight; use a diffuse reflector to block sun as needed
- an exception to direct sunlight: action shots!

❖ **Capturing action!**

Check this out by Charlotte Reeves, one of my mentors:

<https://www.learnpetphotography.com.au/topics/action/>

❖ **Color Contrast:**

- **Black and white dogs:** These dogs present a challenge to capture their fur in all its detail. Your camera meter will be tricked by the extreme colors as the meter is set to recognize 18% gray. For **white dogs**, overexpose ½ to 1 aperture stops for the whites without blowing out the background highlights. For **black dogs**, underexpose for the blacks by the same amount also being careful not to blow out the background.
- **For B&W combinations in the same photo:** Expose for the **whites but check to ensure that you do not lose details in the darks!** Best to photograph in softer light and not direct sunlight.



❖ **Backgrounds:**

- Look for backgrounds to use your telephoto lens. The lens at wide apertures (f2.8) will create a shallow DOF to blur backgrounds and merge colors!
- **Look for backgrounds that emphasize the dog's fur colors:** trees, greenery, leaves, flowers, doors.

III. PAWFECT POSES WITH PATIENCE

❖ **Safety first:**

- Always have the dog on a leash! Some free leash removal editing tutorials by C. Reeves: <https://www.learnpetphotography.com.au/topics/free-editing-tutorials/> or send to a lab to remove: www.retouchup.com .
- Watch for dog body language for anxiety and fear. Dogs may be fearful of your camera as well as you. Stop and play with dog until calmed down.
- For a dog at ease, look for **perked up ears and tongue out = smiling!**

❖ **Spirit in the Eyes!**

- **The Eyes have it!** Focus on the eyes and you'll be capturing their personality!
- **Capture the catchlights in the eyes:** You may need to try different angles—above & below and/or side-to-side—to find the catchlights in your pet's eyes. Have the dog look up (dangle a treat over your lens!) to capture catchlights in darker areas.
- When using a wide aperture like f2.8 you need to be “spot on” the eyes for them to be in sharp focus. Use **Single Area Focus Point** to achieve this. I leave this setting on all the time (the dog will have moved away if you try and use Focus/Recompose!).

❖ **Change perspective: get on the ground to your dog's eye level:** capture motion at their level!

❖ **Use leading lines in your composition:** bridges, fences, gardens, pathways to lead your eye to the dog.

❖ **Framing:** use framing objects such as rocks/boulders, tall grass, trees/tree branches, doors/doorways, walls, entranceways to draw the eye to the dog.



❖ **Headshots:** looking down into dog's eyes, eye level from ground, profiles.

❖ **Between the legs of your Human(s):** standing, sitting.

❖ **Dog in foreground in sharp focus and Human in background out-of-focus.**

❖ **Dog sitting on object:** shooting looking up with dog on bench, side of hill, tree stump/fallen tree, crate, wall.

❖ **Small dogs:** in the Human's arms and lap, over human's shoulder; kneel/sit with large dogs.

(Julie Gould is a professional pet photographer and owner of Bright Eyes Studio)

PhotoBooks: Putting It All Together

Creating a PhotoBook

(All text and photos by Sherryl Belinsky)

Photo books are a wonderful way to showcase those amazing photos that you took of a

favorite subject, a special event (such as a wedding, a birthday, or a family vacation) or that once-in-a-lifetime trip! If you have thought about creating a photo book but didn't know where to start, this class will provide tips and techniques for creating a photo book, including:

- **Vendor Selection** and the applications that are used to create the book - stand-alone vs. on-line
- Photo selection and preparation
- Importing photos & graphics as a page background or as accents
- Selecting a "Theme"
- Cover layout and design
- Page Templates
- Fonts, Font sizes and Captions
- Creating a proof
- Submitting the finished product for printing

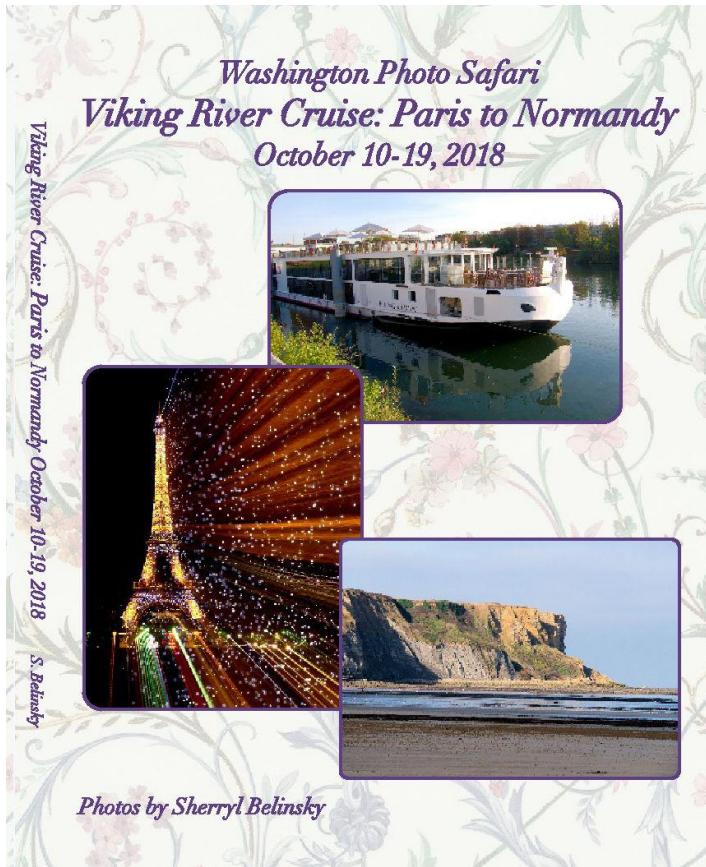
- **Vendor Selection:** See attached list of possible vendors. Create an account on the vendor's site if necessary, download software, or use on-line software

- **Select photos** and start thinking about the

order in which they are to be displayed in book. (Also note the number of photos of each orientation - landscape and portrait, thinking about possible page layouts)

- **Prepare the photos** based on finished size and resolution needed for printing. Check with book manufacturer to see what is recommended. Example: Shutterfly recommends the following resolution in Pixels: o 8x8, 8x11, 7x9 book dimensions – minimum number of pixels: 1600 x 1200 o 12x12, 11x14, 10x10 book dimensions: minimum number of pixels: 2000 x 1600

- **Start building the book:** o Import: photos image(s) for custom background(s), if allowed (& desired). graphics as accents (if allowed) o Select: A theme or create your own if the software allows A Cover Templates based on the orientation of the photos, the number of photos to be placed on the page and caption positions. Fonts, Font sizes and Captions if desired. The selected theme and the nature of photos (as well as personal preference) will help to guide this process. o Add pages if necessary, to accommodate all the photos. o Make sure to save your work regularly!



- **Create a Proof** – if the book was created on the desktop, upload it, then generate a “preview”.
- Make final adjustments based on review of the proof • Submit it for printing!

Vendor List (alphabetical order)

- BayPhoto.com Desktop Software; large number of customization options – sizes, paper options, finishes, covers, etc.; templates available; images can be imported and used as backgrounds.
- Blurb.com Desktop software, Adobe InDesign plugin, online creation, upload a PDF, included in Adobe Lightroom, App for iPhone & iPad; templates available.
- Collage.com Design online only, templates available.
- MailPix.com Design online only, templates available.
- MixBook.com Design online only, templates available, can create a custom book “from scratch”.
- Mpix.com Design online only, templates available, can create a custom book “from scratch”.
- PhotobookAmerica.com Desktop Software with templates; Design Online, some customization available such as adding a customized background; phone app.
- Picaboo.com Online creation only, phone app, templates available.
- Printerpix.com Design online only, templates available.
- Shutterfly.com Design online only, templates available; can create a custom book “from scratch”; mobile app (phone, tablet, windows, etc.).
- Snapfish.com Design online only, templates available; mobile app (phone, tablet, etc.).
- Yorkphoto.com Design online only, templates available.

(Sherryl Belinsky is a website administrator and a photobook specialist)

Portrait Photography

Informal Portrait Photography

(All text and photos by Joe Tessmer)

There are two styles of portraiture. **The traditional/classic** portraiture style and **avant-garde** approach. There are several techniques to produce portraiture in the traditional/classic style which can be taught.

The avant-garde style is free of the restrictive guide lines of the traditional/classic approach.

Expression is more important than getting all of the technical techniques correct.

When photographing a standing full-length adult, the camera should be about waist high, not at eye level. When photographing children, get down to their level. The camera should not be pointed up or down.

The subjects should have their shoulders/bodies turned to the either the left or right. You do not want shoulders/bodies square to the camera.

There should be a single direction of light.

Studio lights are not necessary, high quality portraits can be made by using the light from a window. The subject is placed near a window. The camera is placed close to the wall and pointed at the subject. Don't photograph the window. The window is the source of light, not the subject of the photograph.

The human eye can see a much broader range from dark to light than can be detected by a digital sensor. To avoid harsh shadows when photographing subjects in bright sunlight, a reflector or a flash, at reduced power, can lighten the shadow area. Do not use the flash as regular power. The flash is not the main source of light, it is the "fill" light.



(photos by Joe Tessmer)

There should only be one direction of light. Fill lights and reflectors are used to lighten the shadow areas. To highlight the femininity of women, for example a bride, one should place the subject and light so that the light crosses the front of the subject.

The left and right sides of the face are not mirror images of one another. One side is always slightly smaller than the other. For portraits where the subject is not looking directly at the camera, turn the face so that the smaller side of the face is closer to the camera, which minimizes the differences between the two sides.

Seated subject should sit up straight, no slouching.

When photographing men or women in a business pose, the head should be perpendicular to the shoulders.



For blurred backgrounds, use a wide-open F stop like F2.8 or F1.8.

For more details check Joe's web page at

http://www.tessmeroffairfax.com/tof_rag_workshops_classes_portraiture/Adobe%20Web%20Gallery/index.html

Snow Photography

Five Tips For Taking Pictures In The Snow!

Pictures taken in the snow can be beautiful, but snow poses special challenges for the photographer. Here are some tips to make your camera give you pictures that are as beautiful as what you see with your eyes.

1. Hold the Camera Correctly:

For sharper pictures, place your left hand under the camera, palm up. Rest the bottom of the camera on your left palm, cradle your left-hand fingers around the lens for focusing and zooming, tuck your elbows into your chest, hold the camera tight, push down on the shutter gently while pushing up with your left hand to steady the camera. For even sharper images, use a tripod, monopod, or other immobile surface. If it is still snowing, protect your camera from moisture with a lens shade or a clear sandwich bag.

2. Determine the Subject of Your Picture and Get CLOSE to It!

Is it a building? A statue? A person's face? Are you trying to pose a friend in front of a monument? Are you trying to show a relationship between two people? Make a separate decision for each picture and just shoot that. Ask yourself: "What am I trying to show with this picture?" Then, get CLOSE!



3. It's the Composition, Stupid!

You can take good – or bad – pictures with any camera! The key to a good photograph is its composition, the placement of elements in a scene that results in a visually appealing photograph that is interesting, one that captures and HOLDS the attention of the viewer. An all-white snow scene, as pretty as it is to your eye, CAN be

boring in a photograph. Break up the whiteness with fenceposts, trees, statues, colorful objects or clothing, to give contrast against the snow. A person walking away from your camera carrying a red or yellow umbrella is a great shot, for example. Follow people in red jackets, get them in your frame. Get out there while the snow is still on the tree branches, it looks much prettier.

Adjust your "A" or "Av" lens aperture setting (F stops) to either blur or sharpen the background. (Remember: at F2 you get 2 people in focus, at F22 you get 22 people in focus!). Adjust your "S" or "Tv" shutter speed setting to either stop action or to blur moving objects.

4. Adjust the Exposure and White Balance for the Snow!



Because camera meters think everything, they see is medium grey in reflectance, snow scenes often come out too dark. The camera thought the snow was medium grey and it gave you what it thought you wanted! The way to fix that is a) open up your exposure compensation dial to +1.5 or + 2 stops; or b) shoot in manual “M” mode and move your shutter dial to the left to let in more light. Set white balance

on “cloudy” or ‘shade” to remove the bluish cast snow can make in your pictures.

5. Frame Your Photos with Tree Branches, Archways, and Bushes.:

Use left-arching branches on the right side of your picture, right-arching branches on the left side of your image to make an interesting frame, or use arches and doorways to get the same effect. For a deep-blue and brilliant white-cloud sky effect, use a circular polarizing filter. On white-sky snow days, use a graduated neutral density filter to darken the sky.

Sports Photography

10 Amateur Sports Photography Tips

We are often asked to photograph the amateur sporting events in which our children or friends participate: hockey basketball, soccer, football, baseball, Lacrosse, snowball fights, swimming, tennis, and ballet.

Here are some tips to get the best shots:

- 1) **Lens: you need a telephoto lens.** An ideal lens is the very expensive but excellent quality **70-200mm F2.8** made by all major lens companies. The wide-open aperture gives you more blur in the background. (You can get good bargains on the used camera market, such as www.keh.com). Mounted on a cropped sensor body, the lens becomes a 105-300mm on Nikon/Sony, a 112-320mm on a Canon body. Another good option is the very versatile **18-400mm F3.5-6.3** made by Tamron for all camera mounts, which becomes a 27-600mm in Nikon/Sony, and a 29-640, mm on Canon bodies. For really tight close-ups, a prime **500 or 600mm** lens is ideal, but very heavy and expensive. A couple of manufacturers (Sigma, Tamron) make a very good **150-600mm zoom** lens available for less than \$1000.
- 2) **A tripod** is best, but unwieldy at sport events and sidelines. A second-best option is a **monopod** which at least holds the weight of the lens and is easily moved around.



- 3) Get in as **low and close** to the action as you can. A low angle, shooting up at an athlete, produces a more dramatic photo
- 4) Set your shooting mode to Continuous high speed or servo shooting, at least 4 frames per second. Set your autofocus mode to continuous mode with multi-point tracking.
- 5) For outdoor shots use **Cloudy White Balance**. For indoor shots with mixed lighting (daylight and tungsten or fluorescent), use **Auto White Balance**. For nighttime shooting indoors, or where there are no windows, use **Incandescent or Fluorescent White Balance** to achieve accurate color.

- 6) **Shutter priority:** set shutter speed to 2,000th of a second or faster to stop action, set shutter speed at 1/60th or 1/125th to give a little blurred motion effect. Lowering the ISO



will open up the aperture to give more background blur, if that is desired.

- 7) **ISO Settings:** Set 1600 for outdoor shooting, 3200 or 6400 for darker indoor shooting in order to achieve the fastest shutter speeds

- 8) **Composition:** get in tight on the athlete you are photographing (your child?), then pull back to get a wider shot and show interaction between athletes. Anticipate the key moments: the kick, the leap, the catch, the hit, the dive, the pass.

- 9) **Team Shots:** other parents will appreciate a person who does good posed

team shots, athletes turned sideways, posed, with captain or leader in the middle. Use flash to take away shadows, try shooting these pix in shade, not in the sun which causes people to squint.

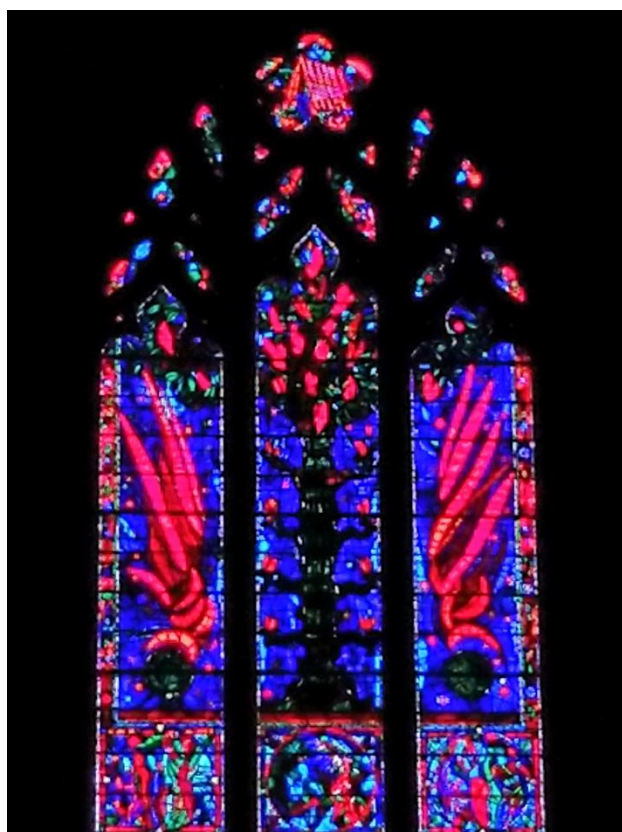
10)Permission: make sure you have permission of the soccer league, basketball team, school authorities, or other parents to do this kind of work.

Stained Glass Window Photography

by Elody R. Crimi

Camera Settings

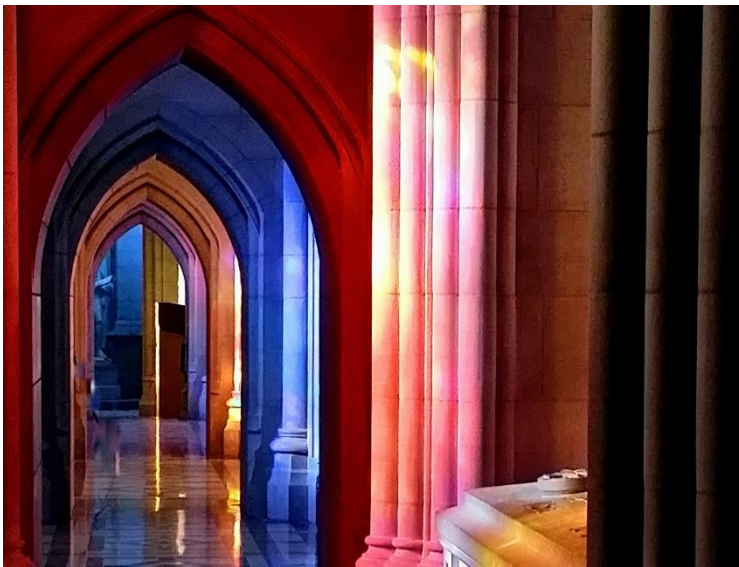
- Shoot in RAW mode so you can adjust in post-processing.
- Use Aperture Priority (or Manual) Mode.
- Use a small aperture (i.e. f16, f22) setting for your camera to ensure that the entire stained-glass window (top, bottom, sides) is in focus.
- Start with an ISO of 800 and work from there. If you're planning to handhold the camera, your shutter speed should be greater than 1/30 of a second. If it isn't, then you'll need to increase your ISO (or go to a larger aperture).
- For your White Balance setting - Select Daylight or Cloudy, depending on the light outside. But you can also select AWB and adjust in RAW later. NOTE: There is no precise color temperature (the color of the glass is dependent upon the light source illuminating it from behind). The light is constantly changing - every hour, every day, and every season.



- IMPORTANT. You'll need to use an exposure compensation of approx. -1 EV to -2 EV
- Use spot or center-weighted metering on a mid-tone color of the glass (perhaps a yellow or a gold or even a red/green if not too dark) for better exposure.
- Use matrix metering, especially if you are shooting fine detail and the entire frame is taken up by the stained glass. Small sections of the window can provide exciting, colorful details.
- OR, you can also use the HDR technique and spot meter for both the stained glass and the architecture in 2 (or more) shots. First, take a properly exposed shot of the stained glass. Then, move your metering spot to the stonework and take a properly exposed shot of that. Combine the 2 in post-processing (Photoshop, etc.)

Tripod/Self-timer

- Use a tripod, if possible or a rolled-up jacket, soft camera bag, etc. Or lean against a pillar, a wall, etc.
- Create distance. Stand back from the window, and use a long lens to zoom into the detail. Try to get as square and straight on as possible to reduce distortion.
- Set your camera's self-timer for taking photos of the stained glass to avoid any movement of the camera.
- Turn around: look at the light projected by the stained-glass window onto the walls of the cathedral!



Post-processing Adjustments to RAW Images

- Color, hue, saturation
- Temperature and tint
- Brightness and contrast
- Shadows, highlights and mid-tones
- Sharpness
- Transformation of angles (to reduce distortion)
- HDR – combining 2 images with different exposures

(Elody Crimi is a professional photographer, a stained-glass docent at Washington National Cathedral, owner of Davanti Studios, and co-author of Stained-Glass Light)

Story-Telling/Journalism Photography

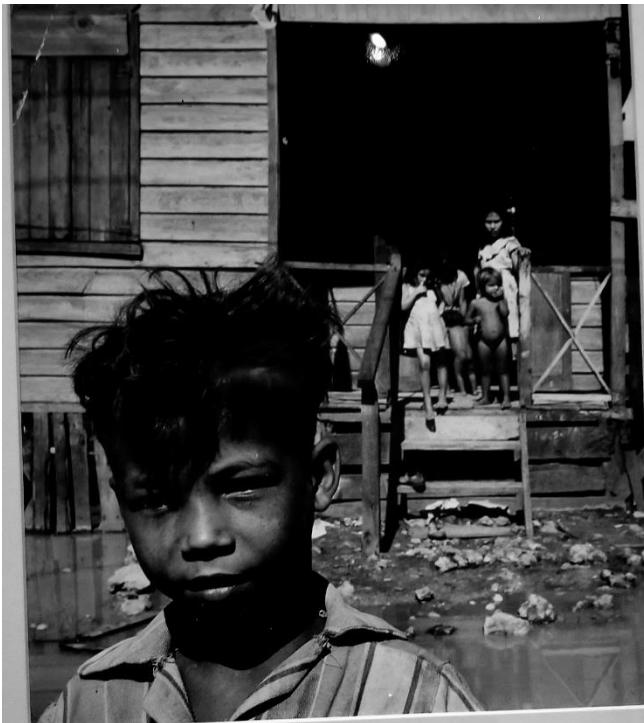
11 Tips For Story-Telling/Journalism Photography

Introduction: This section of our manual is dedicated to “good ole’ Dave” or “good ole’ Mary”, the one person in your organization (you?) who has the fancy camera and knows how to use it! This is the go-to person for pictures of the organization’s work, office parties, receptions, or projects in the field, whether they be local, national, or international

For example, there is a church in the DC suburbs that has 350 social service project committees, all staffed by volunteers doing the Lord’s work by assisting other people in need. Several church members are volunteer photographers who help the church raise money for these projects by documenting the activities with pictures. Many international and domestic non-profit organizations use their own staff members to take pictures for fund-raising purposes.

If you are one of these people, here are some tips for YOU:

- 1) **Equipment needed:** These photos can be done with a smartphone, but for best results we suggest a DSLR or mirrorless camera with a long zoom and wide aperture lens such as a 50mm F1.4 and a 70-200mm F2.8, or a very versatile 18-400mm F3.5-6.3



- 2) **Plan your picture:** Why are you taking it? What are you trying to show? How will this picture help your organization tell its story and raise money? For example, the stark pictures in this essay were taken by the famous African-American photographer Gordon Parks, who documented scenes of postwar America in the 1940’s for LIFE Magazine.

- 3) **Get low, Get Close:** Position yourself so that your subject (i.e. a boy in a slum? a dog being treated? A group of people in training? A little girl reading a book?) fills the frame of your picture. Kneel or lie down for a
(Photo by Gordon Parks)

more dramatic, more interesting angle. It was Robert Capa, a famous World War II photographer for Magnum Photos, who coined the phrase: “**If your pictures are not good enough, you’re not close enough.**”

- 4) **Avoid distracting backgrounds:** position yourself in a place where the background does not distract the viewer's eye away from the subject. Use a big aperture (f1.4, F2.8) to blur the background as much as possible and make the subject stand out.
- 5) **Wait for the right moment:** move around and position yourself to get the best angle, look through your viewfinder and then wait for the right moment, when the expression is right, when the hands are raised, when the person is smiling or grim, when the relationship between two people, or between a teacher and her students, is clear.
- 6) **Use rapid-shooting:** set your shutter on continuous shooting mode, preferably at 5-7 frames per second, and shoot in bursts to capture that one shot when people are not blinking or looking like they are asleep.
- 7) **Use flash when necessary:** mount an external flash on your camera's hot shoe, dial its mode to Manual, set the power ratio to ¼ or 1/8, angle it up towards the ceiling on indoor photos to even out lighting on faces, or outdoors to remove harsh shadows on faces made



by sun or when shooting into the sun. Most pictures should be done without a flash, but there are many times when a flash can bring out facial expressions, especially when the subjects have darker skin tones

- 8) **Use the correct white balance:** Use **Cloudy white balance** for all outdoor shots and for indoor shots done with a flash, it gives warmer skin tones. Use **Auto** for indoor shots done in mixed (indoor lighting mixed with outdoor sunlight) lighting

situations, use **Incandescent/Tungsten or Fluorescent** for nighttime or indoor shots when there is no daylight coming through the window

- 9) **Set a higher ISO:** move your ISO to 1600 or 3200 for low-light situations in order to achieve faster shutter speeds that will reduce the possibility of blurred photos
- 10) **Use F stops and shutter speeds:** On aperture priority mode use a wide aperture (F2) to blur the background, a small aperture (f22) to sharpen the background. Remember: “at f2 you get 2 people in focus at f22 you get 22 people in focus.” On shutter priority mode use a fast shutter speed (1/250th of a second or higher to stop action, ½ second to blur action, 2-3 seconds (with tripod) to make moving people or objects disappear.



(photo by Gordon Parks)

- 11) **Check your work as you go:** Did you just get the shot you wanted? Look at your LCD screen, check your work right there on the spot, not after the photo shoot. If you did not get it right, do it over!

Street Photography

12 Photo Tips For Street Photography

By Essdras Suarez, Pulitzer-Prize Winning Photographer

Caveat: You do not need a street in order to create a “street photography” style photo!

What you do need are people ambulating through a space, and the ability to create a visual record of how they interact with said space or surroundings and how they interact with each other.

Hopefully your “street photo” has some of these: great light, great composition, and decisive moments. If you can put these all together then you have a masterpiece in hand.

1. **Always be ready and on the lookout.** Once you leave your door and you have a camera or photographic device in hand and you are on “street photographer hunting mode” you need to vigilantly be “on” and ready for whatever you might see or whatever you might encounter on your path.
2. **Have your camera settings ready to go** and set up for the light situation in which you find yourself at that moment and in that specific place. Develop such familiarity with your photographic gear that it simply becomes an extension of your persona, thus you simply and naturally keep adjusting your camera settings to meet the needs of the environment.



by Essdras M Suarez ©

While walking around and hunting for images, I stumbled upon this unique scene of a conversation between a churchgoer, who regularly would pull weeds from around the fence surrounding this neighborhood church before attending Sunday services, and his pastor. This is a clear scenario where being ready for anything and having your photographic device ready to go paid off.

3. **Always pay attention to the light** and how it hits your subjects and the surroundings. **As photographers we are slaves to light. Our goal should be that of becoming masters of light.**

Become so familiar of how light behaves, it becomes second nature to use it to your advantage when making photos.



In this photo it was the fiery sky that made the photo. But it was the juxtaposition of human figures against the beautiful light that brings it all together.

4. **Don't be afraid of "shooting from the hip."** This technique which entails shooting while not looking through your viewfinder or your back-of-the-camera LCD can be applied not only

for shooting from hip level but from any other point you think would help you create a better composition. Be it from the ground, behind the legs of a table, from above, etc. This technique is all about practice, practice, practice.

A visitor of the National Gallery of Arts in DC walks through an installation that also serves as a bridge between two buildings. This photo is a good example of shooting from the hip. I placed the camera almost at ground level without seeing through the viewfinder and waited for the right moment to make this image.



2. **Try to anticipate the actions of your photo subject** whenever possible. We all possess a certain modicum of human behavior knowledge based upon our own behavior and experiences. This means for example; you might innately already know how two people who haven't seen each other for a while might behave during an encounter. Depending on who they are, they might jump in each other's arms or shake hands, or if it's an adult and a child. The adult might tussle the child's hair etc. So, by relying on this kind of knowledge you might be able to position yourself in the best possible place in order to increase your odds of getting a better shot.

In the case of these two men walking in opposite directions in a cemetery in Havana, I saw their paths would collide and I expected one of them to move or yield to the other. As luck has it, they both stayed the course and narrowly missed each other. This created an echo of movements in their bodies, which made them end up mirroring each other's body movements.



6. Develop a habit of reacting quickly and practice honing your skills in boring situations so you can be ready for when the real interesting situations and subjects come along. Only through practice will you create the muscle memory necessary to make your movements more like reflex than thought- out deliberate movements. Street Photography is all about quick reaction. And just like an athlete you need to practice in order to get better at it.

On a Halloween night, I saw these three kids running towards me. I got down on my knee and started shooting right away. But it is only because I have so much practice that I was able to capture such an unexpected instance as when the kid in the front looked back in mid stride after realizing he'd just lost his Batman cape.

7. Try to get up close and fill the frame whenever possible. Our western civilization requires we keep a certain “comfortable distance” between each other when we talk. This distance is defined by our cultural biases and customs. However, most amateur or beginning photographers tend to quadruple this distance when they have a photographic device in hand. By being mindful and aware of this built-in biased, you'll be able



overcome it, thus giving you the ability to create more interesting images. Images where the viewer will feel more as if they are part of the scene instead of an outsider or observer.

Among the many aspects of this photo that makes it work so well is that of having filled the frame with as many compositional elements as I could, which included the dangling feet in the

foreground. Also, by shooting this close to the feet, I provide the viewer a sense of being there amidst the other subjects in this photo.



8. Shoot first and then ask for permission later. I know this is a stretch for a lot of people. But, in reality, the majority of people truly don't mind being photographed. And if they do bother to ask what you are doing, they usually just want to know why you took their photo. Be honest and tell them you found them interesting enough for a photo.

This young woman taking a selfie was so absorbed in the act. She didn't notice I had my telephoto pretty much on her face until she was done. Afterwards, she looked at me. I smiled and showed her the pictures I'd just made. I also explained to her the way the waning sunlight was hitting her and how it reflected off her golden phone made her stand out from the other hundreds of people doing the same on this day at the Cherry Blossoms Festival in DC.

A bit of good will and honesty go a long way with strangers. If that doesn't work then apologize and walk away. Don't take it personally if they become upset. Always use common sense and don't get yourself in a dangerous situation by pushing the boundaries too far.

9. Try new angles and new perspectives. Standing somewhere and seeing something and then simply clicking away without giving it much thought. Not only will you be creating boring snapshots. But most importantly, you are not earning the right to spend people's most valuable asset: their time.



By clicking without thinking you are doing what I call "blinking with your camera." The audience tends to regard these types of images the same way it regards blinking: They get ignored.

I saw this man walking towards me and I immediately noticed his Union Jack shoes. However, it is only because I decided to get low and wait for him to pass by me that the shoe became one of the main highlights in this composition.



By trying new perspectives or angles, you are forcing your audience to do a double take on your images. **Your goal as a photographer should be that of making people spend more time looking at your images than all the other images out there.**

10. **Find a great background** and stake it out until the right subject(s) walks into your frame. This might be one of the easiest ways of making a good street photo. When photographing people, one must pay attention to the colors and patterns being worn by them and how these complement or contrast with each other and with the background. Nowadays, there are so many interesting types of wall art, graffiti and alike out there that all you have to do is to simply wait in order to make an interesting photo.

10. **Find a great background** and stake it out until the right subject(s) walks into your frame. This might be one of the



While visiting Manhattan, I noticed a crimson red wall across the street. It was only a matter of waiting for someone to either do something interesting while in front of the wall or for someone wearing the right colors to walk by.

11. **Pay attention to funny situations** and try to capture these with your photographic device. Observe human behavior long enough and you'll be able to predict patterns and reactions. I.e. if you see a character dressed in a costume walking down the street and you see people reacting to them follow them and be ready to capture the reaction they elicit from those walking by. If you find a funny background or situation where you think people might react to it then stake it out.

11. **Pay attention to funny situations** and try to capture these with your photographic device. Observe human behavior long enough and you'll be able to predict

One of the first times I drove through Harvard Square in Cambridge, MA I'd noticed this mural depicting Charlie Chaplin and other silver screen icons. So, one day when it was raining and I was tasked to get a "weather feature," I drove back there and it was only a matter of time before I captured this funny scene.



12. **Whenever possible shoot in continuous shooting mode** since this will give you the most opportunities of capturing something extraordinary.

Much to the chagrin of the Leica- shooting- single- frame- at- a- time Street Photography purists who swear one should only follow the example of the great masters of the past in this genre. I urge you to take advantage of what modern camera technology offers us by being able to shoot as many frames in a row as possible. You must remember, at times the difference between an okay photo and a great photo is just hundredths of a second.

And as always, I leave you with my shooting mantra:

“Keep shooting, keep moving, keep adjusting!”

(Essdras M. Suarez is a Pulitzer Prize-winning Photographer and Founder, EMS Adventures)

Sunrise/Sunset Photography

Seven Sunrise Photography Tips

Equipment needed; camera, 18-105 lens, sturdy tripod, flashlight

1. **Scout out a location** where you will have some objects in the foreground of your scene, such as tree branches or a boat or a person. A sunrise sky all by itself might be a little boring. If on the beach try to get a boat or a dock or some other object in the water to break up the monotony of gray water.

2. **Get up 90 minutes** before sunrise and check the sky. A partly cloudy day gives a more interesting pattern in the sky than a clear blue sky.



3 Arrive at your location at least 50 minutes before the sun comes up to find the best angles, making sure that you have some overhanging tree branches or buildings or buildings or docks, or sailboats, or people to give a foreground element to your photo.

4. At approximately 30 to 40 minutes before Sunrise you should begin to see a pink sky that is broken up by low- hanging cloud formations.

5 **use a STURDY tripod** and set your camera on its Manual mode, set the f-stop at approximately 8 and take some test shots, varying the shutter speed until you get an exposure that you like. Set the white balance to cloudy, or, if you like to have a redder sky, set the white balance to shade or to a high Kelvin number like 8,000.

6 **take several shots** as the sun gets a little higher below the horizon and begins to pink up the sky. Keep varying your shutter speed to get the maximum color in your picture. Do not rely on the camera's light meter for these exposures, just rely on your own judgment looking at the LCD screen. The best shots will probably be about 15 minutes before sunrise. After that, the sky will be too bright

7. Pictures not good enough today? Come back tomorrow!

Six Sunset Photography Tips

Equipment needed; camera, 18-105 lens, sturdy tripod, flashlight

1. **Scout out a location** where you will have some silhouetted objects in the foreground of your scene, such as tree branches or a boat or a person. A sunset sky all by itself might be a little boring. if on the beach try to get a dock or a tree or some other object in the water to break up the monotony of gray water.



2. Get to your location a few minutes **BEFORE** sunset to set up your tripod and camera and check the sky. A partly cloudy day gives a more interesting pattern than a clear blue sky.

3. **Wait for the sun to get close to the horizon**, or even just as it setting behind the horizon so that it is not too bright. Put the camera on cloudy or shade white balance, or 6,000 Kelvin. Put camera on Manual Mode, do your own metering, do not let the meter be fooled by the bright

sun, it will underexpose the picture. Work fast, the sun moves quickly.

4. For the next 5-8 minutes after the sun sets, the sky will have deep shades of orange and red, maybe even blue. broken up by low- hanging cloud formations.

5. **use a STURDY tripod** and set your camera on its Manual mode, set the f-stop at approximately f8 and take some test shots, varying the shutter speed until you get an exposure that you like.

6. **take several shots** as the sun gets a little lower below the horizon and begins to pink up the sky. Keep varying your shutter speed to get the maximum color in your picture. Do not rely on the camera's light meter for these exposures, just rely on your own judgment looking at the LCD screen on Manual Mode. Sailboat masts and other foreground objects make the picture more interesting. The best shots will probably be about 5-8 minutes after sunset. After that, the sky will be too dark



(photo By MaryAnn Miller, Clearwater FL)

Travel Photography

12 Tips for Better Travel Photography

INTERMEDIATE TIPS;

1. Look like a Pro: cup your left hand under the lens, rest your left elbow against your chest, and thrust your left leg out to stabilize your body. Better yet, use a tripod!

2. Plan the Picture: Who is the picture for? Why are you taking this picture? What is it you like about this scene or subject? What IS the subject? You must have a plan so that the picture comes out exactly the way you want by asking these questions BEFORE you push the button! Check the background first, make sure it is not cluttered and that the image you see in your viewfinder tells the story you are trying to tell with your picture.



3. Get Low and Close: get in tight with your subject, use your zoom to eliminate distracting backgrounds, get in low for a better angle. For children or pets, you should always stoop down to be at their eye level, or below. **Get low, get close!**

4. Shooting Wide:: make your wide angle shots more interesting by putting a foreground element in the foreground, such as a person, a

tree, a fence, a statue, a flowerbed, or any other object that separates the foreground from the background. Use a focal length of 12 to 18 mm and a F stop of F 11, F16 or F22 for maximum depth of field when incorporating a foreground element in your picture, Use a circular polarizing filter on sunny days to make the blue sky bluer and the clouds whiter, and you can also use it to reduce reflections on water.

5. Shooting long: use your telephoto (100 mm or higher) to zoom in on your subject, open up aperture (F2 or f 3.5) for blurred background, F 16 or F22 for a sharper background. For focal

length of 200 m or longer, use a tripod to steady camera. Avoid hand-holding camera at shutter speeds under 1/30th of a second.

6. Photographing People: always put people in the shade, never in the sun, make them take off of their sunglasses so that you can see their eyes, turn them so that their left or right shoulder faces the camera and have them turn their heads to face the camera. Use a fill flash or reflector to put more light on their faces if necessary. Photograph them from the waist up, or from the shoulders up, full body shots only if they are wearing uniforms, wedding dresses, or tuxedos. If small children are in a group shot, they should be raised up to adults' eye level.



7. Photographing Buildings: Buildings, like people, should be shot at an angle, from a corner, not straight-on. Always photograph buildings in the sun, east-facing buildings in the morning, west-facing buildings in the afternoon, south-facing buildings all day long. (North-facing buildings will always be in shade) Late afternoon or early morning "golden hour" sun or civil twilight are the best times of day for building shots. Use

tree branches, archways and doorways to frame your building shots. Keep your camera perfectly straight, do not tilt back, just walk back to keep your building's vertical lines perfectly parallel to the right and left edges of the viewfinder. For best results, use a super wide 10-20mm or an 11-16mm, or a 12-24 mm lens held vertically and straight. Use a powerful strobe at maximum flash synchro speed, or HDR, to balance indoor and outdoor lighting.

8. Depth of Field: use your aperture setting to blur or sharpen of the background. Wide angle lenses are best for a sharp background, telephoto or macro lenses or fast 50mm lenses (F. 1.4 or F 1.8) are best for a blurred background. Remember: "at F2 you get 2 people in focus, at F22 you get 22 people in focus!"

9. Freeze or Blur the action. Use the shutter priority mode at 1/125th of a second or faster to stop fast-moving objects, people, or animals. Slow down the shutter to 1/4 or 1/2 a second to blur the action... Use a very slow shutter speed, one second or even slower, to make moving people or cars disappear. A # 8 or # 9 neutral density filter (w/tripod) permits VERY slow shutter speeds in bright light.

10 .Nighttime and Indoor shooting: always use a tripod, set aperture at f/8, set exposure mode on Manual, adjust the shutter speed until you get the correct exposure as shown by the picture on your LCD screen. Ignore histograms and meter readings at night. Set White Balance to Auto, Tungsten/Incandescent or Fluorescent, according to light on the subject. For the most accurate results use Kelvin color temperature scale (2,500-10,000) if your camera offers that option.

11.Auxiliary flash: for the best people, family and event shooting, mount an external flash on to the hot shoe of your camera, angle its head with a diffuser up to the ceiling, set flash mode on to



Manual, dial its power down to 1/8 or 1/16, put camera on continuous shooting, and the flash will light up every image.. Use cloudy white balance when on flash, for warmer skin tones.

12. The Decisive Moment: Wait for somebody to walk into the picture at just the right location to make your composition more interesting. A person dressed in red or yellow and located just in the right spot gives your picture a punch of color.

Before You Push the Button: Here are 5 questions to ask before you push the

shutter button:

What is the subject of my picture?

Why am I taking this picture?

Who is the picture for? (Me? My Family? Friends? Client? Audience?)

Where do I stand/kneel/lie to get the picture? (camera and background placement?)

How will I get what I want? (Lens, focal length, , ISO, white balance, speed, F stop)

When do I push the button? (wait for the decisive moment of perfect composition)

And after I push the button: Did I get what I wanted? If not, I can do it over!

Advanced Travel Photography Tips

- For **low-light situations** (i.e. sports venues, museums, nightclubs), use fast “Nifty Fifty” (50 mm F1.4) lens to give yourself fastest shutter speed;
 - For **distant subjects** use telephoto lens (i.e. 200-400mm) lens at max. zoom;
 - For **wider coverage in small space** (i.e. interiors), use wide angle (10-20mm)
- Camera Use: Shutter Speeds, ISO and White Balance Settings**

- **To stop fast-moving subjects**, use fast shutter speeds on “S” or “TV” mode, (1/100 to 1/8000th sec.) and put camera on continuous (rapid shooting) mode; If picture is too dark, raise the ISO to 400, 800, 1250, 1600 or 3200.
- **To blur moving objects**, use slow shutter speeds. (1/4, 1/2 or 1/8th seconds);



- **To make moving objects disappear**, use VERY slow shutter speeds such as 1”, 3” or 4” with camera on a sturdy tripod, no flash;

- **To capture nighttime cityscapes or to paint with light**, use VERY slow shutter speeds (i.e. 2”, 5” or 8 “or 30 “) on a sturdy tripod, no flash;

- **To shoot in tricky exposure situations (i.e. nighttime,**

building interiors), set camera on “M” Manual mode, set aperture at F8 and vary shutter speed (faster = darker, slower = lighter) until picture looks good on LED screen

- **Use Exposure Lock button on camera by** aiming the camera down at grass on days with white overcast sky, this will lighten up an otherwise dark photo;
- **To get brighter picture in low light when hand-holding camera**, raise the **ISO setting** to 400, 800, 1250, 1600 or 3200, which also gives you a faster shutter speed and sharper capture of moving objects or people;

- **To get accurate color settings**, set the **White Balance** menu to the light you are shooting into, such as Cloudy, Shade, Daylight, Fluorescent, or Tungsten/Incandescent. In mixed lighting situations (i.e. daylight plus room light,) use “A” or “AWB” the auto white balance setting.
- **For indoor portraits and family photos**, you **MUST** use **auxiliary flash** bounced off ceiling or reflector, set on Manual Mode, dialed down to low $\frac{1}{4}$ or $\frac{1}{8}$ th power settings to keep up with camera’s rapid-shooting mode;



Holding the camera correctly

Whoosh! Panning Photography

You've seen the ads: the sleek Mercedes sedan is racing along a street, tack sharp, and the background is a whooshy blur, giving that sense of forward motion.

How do they DO that kind of picture? They photograph the Mercedes from the window of an adjoining car, travelling at EXACTLY the same speed as the Mercedes, and **they use a slow shutter speed to blur the background, which - in relation to the camera - is moving!**



(1/15th of a second at F11, 46 mm lens, ISO 200)

So here are the 7 steps involved in panning shots, try them yourself on your own street with cars passing by, it is NOT easy:

1. Put your camera on a tripod. **You cannot do this without a tripod.**
2. Put your camera on **Shutter Priority** ("S", or "Tv"). Get close to the street.
3. Autofocus at a point on the street where the cars will be, then **switch it to Manual Focus** so that the camera does not have to autofocus each shot.
4. **Set the shutter speed to 1/20th of a second, rapid shooting at 5-6 fps.**
(Also experiment with shutter speeds of 1/10th, 1/15th, or 1/30th of a second)
5. Aim at a car that is coming from your left or right, focus on the door handle.
6. As the car passes, **swivel your camera to keep following it.** Check your work. Try different shutter speeds. Too fast is too sharp, too slow/ too blurry

Rinse, lather, repeat about 300 times in order to get 2-3 good shots!

Wedding Photography

Wedding Tips for Amateur Photographers

(All text and photos by Kevin Hacker)

Introduction:

As many people know, weddings are not cheap. And often times, a family member may need to find a way to make their wedding more affordable. This is where you come in, the



photography guru of the family that has the equipment to take professional level photos, but you don't necessarily have the experience to pull it off. Now, you can always go into this wedding swinging from the hip, but by just doing a little bit of pre wedding research you will be able to come out of this with something the family and you will be extremely proud of.

This guide will focus on the main challenges you will face as a photographer with little wedding experience. And at the end of the day this is ultimately a guide, not a rulebook. Not every wedding will have all of the events that are listed here, but it's a good summation of what you may expect at your next wedding shoot.

Before the Wedding

Acquire the Wedding Plans

When photographing the wedding of a family member, there may not be a coordinator or wedding planner available to give you an itinerary of the weddings events. Either way, it is important to understand when an event will happen during the day, and what shots you want to take at different times. For this reason, you must be in communication with the Bride and Groom as to how they think events will play out, and if there are any special moments they may want to have photographed (i.e. the cake cutting, toasts, bridal An example of a typical wedding itinerary is shown below

- 2:30 Bride in Hair and Makeup
- Coordinator Arrives
- Wedding party pictures
- Bride and Groom having First Look Photos
- 3:45 Violinist starts
- 3:50 Everyone in the wedding party gathered for line up
- 4:00 Procession begins
- Officiant and Groom,
- Groomsmen enter
- Ceremony
- 4:30 Cocktail Reception for Guests
- 5:30 Doors open and guest are seated
- Introductions
- First Dance
- Toasts
- Blessing
- Dinner
- 7:25 Parent Dances
- 7:45 Special guest
- 8:00 Cutting of the Cake
- 9:20 Last Dance
- 9:30 Sparkler Exit



Grab Wedding Photos for Reference

Send some photos back and forth with the married couple to be, see what interests them and what you think you can pull off as well. You can create a shared album of wedding inspiration pictures that you find on the web, and the couple can add photos that they are interested in as well. A great online tool for this is Pinterest, but you can do this with other web sites as well. The best part is, if you are having trouble thinking of poses during your wedding shoot, you can find your web album on your phone and then reference the pictures you see there. This has saved me on quite a few shoots where I liked what I saw, but I knew I could take it up a notch if I used my reference.

Location Scout

If you can do so, visit your wedding venue before the big day. This ideally would be some day before the ceremony, but if you don't have that time you can always arrive to the venue an hour early to get a feel of the place. Test your lighting in the ceremony space. If it is indoors will you need a flash? Are there nice shaded places outdoors where you can take portraits of the Bride and Groom? What angles will look good considering where the aisle will lead? If the reception is in another location, will that bring other potential time issues into play? These are all considerations that will help you be more prepared the day of the wedding.

Equipment Needs

To know exactly what equipment you need at a wedding, it is ideal to know the location you will be shooting and what the lighting situation is there. Regardless of this though, here is the absolute minimum list of equipment that I recommend.

Suggested Equipment:

- DSLR or mirrorless camera
- 50mm f/1.8 lens
- 18-55mm f/3.5-f/5.6
- Any speedlight (I personally recommend the Flashpoint Zoom TTL R2)
- 24-70mm f/2.8
- 85mm f/1.8
- 80-200mm f/2.8
- 15-30mm f/2.8
- Flash stand
-

The DSLR or mirrorless camera is the current norm in a professional wedding photographers kit. It is necessary as it allows the photographer to adapt to any photographic environment they find. The 50mm lens is an ideal (and cheap) lens to have in your kit. The f1.8 aperture allows photographers to shoot in most lowlight environments, as well as creating a nice bokeh (blurry background) effect in the photos. The 18-55mm is great as it comes with most DSLR's as the default kit lens, and its wide range allows for photographers to capture nice wide shots of the wedding. The speedlight is a wedding photographer's best friend. It allows them to capture action in lowlight scenarios, and help compensate for light where shutter speed and ISO normally would. They become especially handy in receptions where people are dancing and you want to capture that action, without blurring it with a low shutter speed.

Payment

The age- old question for newcomers in the wedding industry, "How much do I charge for my photography services"? And the answer here is, it depends. There are so many factors that go into setting your rates for your photography. A few of them could be equipment cost and upkeep, travel expenses, editing software, the time it takes to edit and deliver all of the photos, etc. I would recommend learning the rates of local wedding photographers to get a feel for it, and seeing what seems reasonable for your own personal needs. If you are photographing your own family, maybe don't charge as much as the local photographers, but I would still recommend charging something. I usually ask for a deposit of ½ or 1/3 of my total rate to reserve a day, but this probably won't be needed if you are photographing a trusted family members wedding.

During the wedding

Bride and Bridesmaid Prep

If it was planned and there is enough time, the first thing a photographer will typically do is visit the bridal suite and take pictures of bride prep. I usually instruct brides to have a list of items ready for me to photograph, these are usually called “details”. Some examples could be their heels, the jewelry the bride is going to wear, the custom-made champagne cups for a toast. If you don’t know what to photograph, a safe rule of thumb is if they spent money on it, take a picture of it. Photograph the details at a low aperture and shoot them tight to get a nice blurry background effect. Also make sure to get a shot of the dress and shoes on their own. I like to utilize window light to create a natural and soft effect in the lighting. If there is bad window light, I try to bounce my flash off of a wall or ceiling to get the best possible lighting on the fly.



The next step in bridal prep is, you guessed it, the preparation photos. Usually the bridal suite is a mess of hairspray and half opened bags, and a lot of people are coming in and out all of the time. In other words, its chaotic. So just embrace it.

Take photos of what you see: candid of the maid of honor getting her hair done, mom drinking an early glass of wine, the kids running rampant. It’s

all memories in the end and its usually a very loose atmosphere (depending on the group). If anything, make sure to get photos of the bride to be getting her makeup and hair done. This all leads to the last big part of bridal prep, the bride putting on the dress.

How do I photograph the bride putting on the dress? Start by making sure that wherever you put her, the background is clear. We don’t want half opened suitcases and plastic bags ruining the grandeur of the moment. Just ask a few people to help you out and clean the area and you should be good. Once her bridesmaids start helping her get dressed, make sure to tell the story with your angles. Get wide shots to give context as to what’s happening, get a medium shot to see everybody’s expressions, and get tight shots of zipping up the dress, placing the jewelry on the bride, etc.



Ceremony

This is the big moment, the moment everybody was waiting for. Just breath though. If you get the chance to talk to the officiant before everything starts, be sure to introduce yourself and ask if they have any specific things you should look out for. Maybe there was a pouring of the sand ceremony you didn't realize would be a part of the ceremony's events. Or perhaps there is a phrase they'll say to clue you in that

the couple is about to kiss and you need to be at the center of the aisle. Either way they run the ceremony, so it's good to make friends with them.

If you get to the ceremony site early, try to grab some photos of the aisle when the seats are empty. Get some wide shots, see if there are any cute signs or significant décor. Also set your gear in a convenient spot that isn't in the way. The last thing you want is to need a lens in your bag, and realizing your bag is up front right next to the couple during the ceremony. Next, stake out your shots. What looks good at these angles? Am I allowed to sneak behind the couple to get a shot from the backside? Where does the couple enter from, what is the best shot of that? These are all questions you should be asking yourself before the ceremony starts.

During the ceremony, don't just focus on the bride and groom. Just as important as them is the guests. Shoot Mom and Dad's reactions as their all grown up kid says their vows. Capture the flower girl standing at the side of the altar, the way a bridesmaid is quietly tearing up. The little moments are just as important as the big ones.

Speaking of big moments, here comes the big moment that everybody in the ceremony was waiting for, the kiss. Make sure to have your focus point set and ready, and definitely take test shots to get your framing right. You can choose to zoom in to the kiss, or capture it wide and safe. Whichever you choose, make sure to set your index finger on rapid fire and take as many as you can get before, they stop. Sometimes couples will do a quick kiss and you may miss it. If you miss the kiss and they haven't left, sometimes you can ask the couple to do another kiss but make sure it counts. As they leave the aisle make sure to get shots of their exit, but this isn't the end of everything. Family portraits (formals) are coming up right around the corner.

Formals

To tackle the big family pics, the first thing you need to do is prevent immediate family and the bridal party from leaving right when the ceremony ends. Everybody is right there and once they've gone to cocktail hour, you lost them. Next, find a nice space with even or shaded light. You will need to fit a lot of people here so make sure it's open enough for them and that you have enough space to fit everybody in the frame. Center the bride and groom, and ask everybody to get on either side of the bride and groom. Brides family and friends on one side, grooms on the other. An easy pose to have everybody do is to have them hold their hands right over left, and angle their bodies towards the bride and groom at 45 degrees. Once we have the serious photo down, take a silly photo. Hype the crowd up, tell them this is such an exciting moment everybody cheers! And capture what you get. Break the family into sub groups, aunts and uncles, grandparents, etc.



Bridal Party

Time for the pics with their best friends. One of my go to shots is super simple, just have everybody in their respective bridal party walking down an evenly lit path, smiling and laughing. It's usually silly enough that you can get fun reactions out of everybody in the shot.



You can set up a shot where both bridal parties are cheering on the bride and groom in the front while they kiss, or a fun variation on it is to have everybody act grossed out while they kiss. For the guys, one of my prompts I always use to get everybody in the right mode is “act like you are on a GQ cover”. They always step up to the challenge and will give you some killer expressions. Overall, this is one of my favorite parts of the shoot because you really get to see the bride and groom in their element hanging out with their best friends.



Portraits

The highlight reel photos. To get these right, the first thing you need to do is be relaxed and comfortable around the newlyweds. If you are awkward and not prepared, this will sweep over to their body language and your shots won't come out well. For any couple that I recently met, the first thing I do in the portrait session to ease them up is

ask them to play hard to get with each other and attempt a kiss. This really lightens the mood, and you get really cute and personal pictures as well. You can always transition this into sweet photos of them kissing each other on the forehead, putting the ring hand on their spouse's chest while they kiss, etc. In this phase, it's always good to shoot with a low aperture around $f/2.8$ or lower. It really helps focus the attention on the couple in the photos.



Always have the camera ready when you are transitioning from spot to spot, couples will often be at their most natural when walking with each other, so try to capture those little moments.



Lastly, make sure to ask the couple if they had any shots in mind. You would be surprised by how many shots some people have in mind, and often they are ideas that you haven't explored yet or thought of. This is great for rounding out the shoot, and capturing the shots they were super excited for in the end.

Reception

This comprises a lot of big moments at a big wedding. The grand entrance, first dance, toasts, cake cutting, and wedding games all happen in this span. Before anything happens, get a shot of the empty room to help set the scene. Generally, the reception is going to be indoors, so make sure to have that speedlight ready. I recommend bouncing it off of the ceiling in general and you will have decent lighting in most spots at the reception. If you have trouble with the ceiling bounce, you can always use your flash card that comes with the speedlight to get more direct lighting. Either way, just travel fluidly throughout the reception and you will find the good moments as they come to you.



After the wedding

Culling

I always cull and delete pics in camera first during the quiet moments of the wedding. This helps me lighten the load later on, and save space immediately on my hard drives. Once the immediate bad shots and misfires are out of the way, I can use lightroom to quickly browse through my photos and reject the next set of bad photos that I didn't see on my initial cull. This will set you up for the batch editing process.

Batch Editing

You can batch edit photos in many software's, some that I have typically seen though were Adobe Lightroom and Bridge. This takes a lot of time out of the process and you can deliver the photos faster. I recommend batch editing in moments where the lighting is typically the same across the board for a set of photos. You can get through a lot of reception photos this way, although I still recommend paying extra attention to the portraits section as those are the photos you can put on your portfolio and such. Ultimately this will shorten delivery time and saves your own time as well.

Picture Delivery

How many photos should I deliver? Typically, from a wedding you can deliver 200-800 photos depending on how much you shot and also how many unique things you captured. This may seem like a lot, but at the end of the day the couple paid you a lot of money for these, and if you don't include a lot, they may ask you about a moment you didn't deliver after the fact. So I tend towards the generous side with my photo delivery personally.

How do I deliver these pictures? One great website that is free to a certain extent is www.wetransfer.com . It will send a zip file of all of your selected photos to any email address you want, and there is no cost. If you have an Amazon prime subscription, you can use Amazon Photos to upload the pics to a downloadable web gallery as well, with unlimited storage space for jpeg and raw images.

In conclusion, a wedding is a huge beast to tackle photographically, but as long as you are prepared and relaxed throughout the event you will come out on top. Not only that, you will have great portfolio pics to show off, and potentially land another wedding gig.

(Kevin Hacker is an Orlando- based wedding and portrait photographer, with over 10 years of experience. His work has also been published by National Geographic as well as several fashion publications. His most recent work can be found at khackervisuals.com)

Wildlife and Nature Photography

Wildlife Photography Essentials

(Text and all photos by Sean Quintilian)

Introduction: Because I have been involved with wildlife photography for 30 years now, as both an amateur and professional, I am often asked: “How did you capture the animals and get so CLOSE?”

And just as popular, “You must really have a nice CAMERA!” or “What LENS did you use for that picture” These notes will address both of these issues as part of the essentials of Wildlife Photography.

Know Your Subject: One of the most important skills in wildlife photography is getting to know your subject is an animal naturalist, whether it’s birds or mammals, bears or baboons.



Research! For example, some of my favorite subjects are bears, in particular North American **Black Bears and Grizzly Bears**. These two bear species can behave very differently and can both be found in a wide range of habitats, often quite different. So, the first step is to read up on each bears species, what do they eat, what habitat do they prefer in different regions of North America? What time of day are bears active, where are good places to find bears? What are the risks involved with photographing bears? The answers to each of these questions will vary with both Black and Grizzly Bears. (Always continue research to grow your skills!)

Where to Find Your Subjects Where is your quarry located?. In the U.S. there are fortunately plenty of parks and refuges that offer excellent opportunities to photograph wildlife, often close up and safely.

Many of the pictures I have taken over the years are of animals that are wild, yet they are accustomed to having people around and will behave in a natural way. In fact, animals often get

so used to people that you may have to wait a long time for the animals to lift their heads while feeding, or perhaps look your way.

(Please understand and learn the difference between wildlife that is habituated to human activity, and animals that have been fed. Feeding wild animals, especially bears, can become very dangerous, as animals see humans as a source of food. With the exception of feeding song birds, most animals that get fed by people end up with poor health and often end having to be killed because our bad behavior will lead the animals to bad behavior.)

Be Careful! Our National Parks provide excellent opportunities to view and photograph wildlife, often right from the safety of our cars. Please be sure to know all the rules that parks have for approaching wildlife. During the past 20-30 years photographers have gotten a bad reputation in a number of National Parks because they



have been approaching and disrupting wildlife. In Yellowstone and Denali, photographers have actually been killed by grizzly bears, because they approached the bear and got too close!

So, learn about your subjects, spend as much time researching as you do in the field. Oh, by the way, spend lots of time in the field! Wildlife photography is a practice in patience and repetition, and camouflage gear is helpful when you need to blend in to the landscape

Equipment Needed: Bodies: Without getting too much in depth on camera bodies, a **good digital camera body that has good resolution (16Mp and up)**, fast auto focus, and a fairly high frames-per-second rate (6fps and higher). Both DSLR and mirrorless systems, full-frame and cropped sensor, can meet the needs for wildlife. Most digital bodies produced since 2012 have very good image quality at ISO 2000 or even higher, and are capable of getting a shutter speed of 1/1000 or faster with a f5.6 lens. Be sure to set your camera's autofocus on multi-point tracking for fast-moving birds or animals, or on single-shot for wildlife that is not moving.

Equipment Needed: Lens Choices: The most important part of your equipment may very well be the lens! Most wildlife photographers do 75% or more of their wildlife shooting with one primary lens, enabling them to get **in low and close**. A sharp and fast telephoto lens is a must of wildlife. You want the animal to fill the frame of your picture as much as possible. Over the past 30 years, most of my best shots have been produced with a **400mm or 500mm telephoto** lens. This can be a pricy investment, with new lenses costing more than your first car, but you don't need to break the bank.

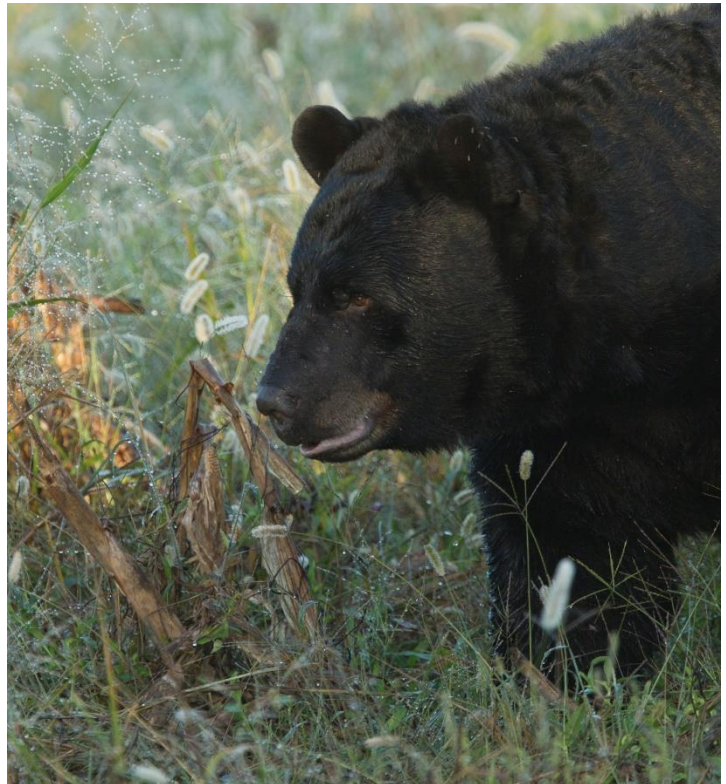
Here are some key features that should be considered: A **“fast” telephoto lens**, the word fast referring to the maximum aperture of the lens. The wider the lens aperture is the more light that can reach the AF sensor in the camera body and the quicker the camera can focus and maintain focus longer. **The wide aperture also allows for a shallow depth of field to help isolate the subject.** (For years it was considered necessary to have a lens with f4 or f2.8 maximum aperture for wildlife, but a 400 or 500mm lens of this caliber is big, heavy and above all expensive.)

All the major camera producers offer zoom lenses of 400 or 500mm with a maximum aperture of 5.6. Nikon has a wonderful 200-500mm f2.8 zoom, and Canon has a 100-400mm f5.6. Also, there are a number of Sigma and Tamron Zooms in the 500mm range, or even 600mm. Though I will suggest strongly that you keep to a maximum aperture of 5.6 or wider, many camera bodies will lose some AF function on the f6.3 lenses on the market.

Another option is to explore the used lens market. While a 200-500mm f5.6 lens will serve you very well and work for almost all situations, a 500mm f4 will allow your camera to perform even better. At f4 two times the amount of light will reach the camera's AF sensor than a f5.6 lens.

Most of the time with newer camera bodies this will not be a factor, but in low light situations and birds in flight, the use of an f4 lens may make a big difference. As I mentioned these lenses new can cost upwards of \$10,000, but the used market can find some bargains.

For instance, Nikon has produced 4 different AF-S 500mm f4 lenses, all 4 of these are very sharp and fast focusing lenses. The newest version of this lens is over \$10,000 but a first or second



generation lens can be found for under \$3000 and close to \$2400 for first generation, quite a savings! I currently shoot with a first-generation Nikon 200-400mm f4 lens that I purchased for about 1/3 of the original sale price, because it is 2 generations old. So, there are lots of options for purchasing your primary wildlife lens, read reviews and rent a few to see what you like. And please email me at sqphotography@yahoo.com if you need help making a decision.

A good one-time investment in the right tools for the job can give you years of use and excellent pictures.

Shutter Speeds: As camera bodies have improved over the years, primarily in higher ISO capabilities and better Auto Focus, the need for such big glass has been reduced. For most wildlife shooting a shutter **speed of 1/1000 of a second** or faster is nice to have, larger animals that are not moving much can be captured at slower shutter speeds, but 1/1000 is a good standard, coupled with rapid, continuous shooting of 5-8 frames per second.

(A good rule of thumb observed by serious photographers shooting hand-held is always to have the shutter speed be AT LEAST as high as the focal length, i.e. when shooting with a 500mm lens your shutter speed should always be AT LEAST 1/500th of a second or more. And remember that on a cropped-sensor body, a 500mm lens is equivalent to a 750mm - 800mm focal length. This is why we recommend a 1000th of a second or faster shutter speed)



Tripods: While not always possible, a tripod shot is always sharper than a hand-held shot. Get a good quality tripod made by one of the big tripod manufacturers; Manfrotto, Gitzo, Slik, Endro, or (if you can afford it) Really Right Stuff. The tripod should be strong enough to hold your heaviest camera body mounted with its heaviest lens without shaking, A pistol grip head is the fastest- acting head for fast-moving wildlife and birds, but a ball-head is very effective as well.

(Sean Quintilian has been a professional wildlife photographer for 30 years and has led dozens of WPS wildlife photo safaris of bears, elks, birds, eagles, gees, wolves, and bison.)

Zoo Photography Basics

(text and photos by Julie Gould)

❖ Camera Settings: Aperture, Shutter Speed, ISO, & White Balance

- **Aperture & Depth-of-Field (DOF):** lighter & more in focus: the larger the f-stop number; less light & blurred foreground and background: the smaller the f-stop, thereby controlling **DOF—the range of distance in the photo that is sharp.**
 - **For pets, generally use smaller f-stops to blur background & focus on pet: f2.8-f4.**
 - You can also impact DOF by moving your subject closer to the camera & DOF decreases; by moving further away, the DOF increases.

- **Shutter Speed:** Generally, you will get a sharp image if your shutter speed is the reciprocal of the focal length of the lens. If you shoot at 100mm then your shutter speed should be a least 1/100.
 - **Wildlife moves quickly even when seemingly still. Outdoors the shutter speed range should be a minimum of 1/500 and more often 1/1000-2000!**



ISO: The ISO setting measures light sensitivity based on the available light. The smaller the ISO (100), more light is availability as in a bright, sunny day. Higher ISO's are needed the lower the light becomes (1600+). Importantly, the higher the ISO, the more “noise” is present to reduce image quality.

- **For wildlife, you will be adjusting this setting more frequently as the light changes while keeping the aperture and shutter speed constant. Outdoors on a sunny day, start out with ISO 200 and increase to 400-800-1000 as the light dims and/or you venture into a heavily shaded or forested place.**

- **White Balance:** set for type of day per camera menu choices: daylight, cloudy etc. or Auto ISO.

- ❖ **Camera Mode: Aperture priority, Shutter priority, Manual**

- **Which should I choose?** Ideally, Manual as you are in full control of the camera. But, juggling all 3 camera settings is often difficult with wildlife on the move! So, if you're not comfortable adjusting on the fly then...
- **I primarily use Aperture priority outdoors (and manual indoors) to first, control DOF; second, adjust the Shutter Speed as high as it needs to go for the shot (action, portrait, etc.) to be sharp; and third, adjust the ISO.**

- ❖ **Capturing action!**

- **Auto Focus mode: Continuous action setting--** AF-C on Nikon and AI Servo on Canon
- **Shooting mode: High-speed continuous (CH on Nikon)**
- **Focus: Single point focus** (on the dog's eyes!)
- **Shutter speed** 1/1000+
- **Aperture** f2.8-4
- **ISO** whatever is needed to make Aperture & Shutter speed in ranges work!
- **Metering Mode: Matrix or spot metering**

- ❖ **Camera Image Quality**

- **JPEG vs RAW:** For wildlife photos outdoors, you will have a wide range of lighting conditions to balance. As much as possible, you should aim to get the shot correctly rendered in the camera. However, this is not always possible and thus the image quality settings become important in post-processing. RAW, shot by most professional photographers and advanced amateurs, offers the most Area Dynamic Range to bring up details in highlights and shadows. JPEG is much more compressed with fewer details in the image to resurrect. If you do shoot in JPEG, aim for the High-Quality setting.



IV. WILDLIFE-SPECIFIC PHOTO EQUIPMENT

- ❖ **Global comment about equipment: Excellent or poor images are all about the photographer, not the camera, lens etc. With experience, practice and training you too can be a dynamite image-maker!**

❖ Cameras

- **DSLRs** are excellent; full-frame (FX) DSLRs are the best quality and cropped sensor (DX) cameras are not far behind.
- **Mirrorless** cameras are excellent too: they are lighter and often capable of faster frames per second than DSLRs. Full-frame and APS-C (like the DX with smaller sensors)
- **Smartphone** cameras are getting better and better with each new release. However, they only produce acceptable sharpness with still and/or distant subjects. This rules out animals-in-motion. The current crop of smartphones does have a “burst” feature to try to capture movement.



- - ❖ **Lenses:** Zoom lenses are most helpful to capture a variety of wildlife shots. For movement and isolating the animal (by blurring the fore- and background) are the **Nikon 200-400mm f5.6 lens and Canon 100-400mm f4.5-5.6 lens.** Sigma and Tamron have similar high-quality zooms. But they are heavy beasts and need the support of a good, steady tripod. The lenses just cited are high quality, and expensive. All major camera brands have f4 and/or f4-5.6 versions of these zooms

❖ Helpful Wildlife Photo Accessories

- **GOOD STURDY TRIPOD**
- **Lens cleaners:** wet and dry tissues/cloths for cleaning
- **Use a lens hood:** a lens hood helps avoid sun flares.

III. WILDLIFE IN OUTDOOR NATURAL LIGHT

- ❖ **Best hours of the day:** the same for wildlife as other outdoor photography: 2 hours after sunrise and 2 hours before sunset.
- ❖ **Position of Sun:**
 - behind you (watch your shadow) unless you are doing backlit shots
 - look for constant, even, open shade, not splotchy, especially for animal faces
 - avoid, harsh direct sunlight
 - an exception to direct sunlight: action shots!

❖ **Backgrounds:**

- Look for wonderful backgrounds to use your telephoto lens. That lens will create a shallow DOF to blur the backgrounds and merge colors!
- **Look for backgrounds that emphasize the animal's fur colors:** trees, greenery, bamboo, leaves, etc.



❖ **Spirit in the Eyes!**

- **The Eyes have it!** Focus on the eyes and you'll be capturing the animal's personality!
- **Capture the catchlights in the eyes:** You may need to try different angles—above & below and/or side-to-side—to find the bright white spots or catchlights in your pet's eyes.
- When using a wide aperture like f2.8 you need to be “spot on” the eyes for them to be in sharp focus. Use **Single Area Focus Point** to achieve this. I leave this setting on all the time to be ready.

❖ **Change perspective:**

❖ **Use leading lines in your composition:** pathways to lead your eye to the animal.

❖ **Framing:** use framing objects such as rocks/boulders, tall grass, trees/tree branches, to draw the eye to the animal.



IV. TIPS & TRICKS

❖ **Fill the frame:** Zoom closer and fill the frame to get the most detail!

❖ **Quickly reviewing your focal point sharpness at 100%:** Nikon—Custom Settings menu > Controls > Multi selector button > Playback mode > Zoom on/off > 1:1 (100%) > OK

SIX STEPS FOR CAPTURING GOOD ZOO PHOTOS!

Step 1: Equipment needed:

- A good sturdy tripod, or, at the very least, a monopod
- A DSLR/ mirrorless camera with adjustable shutter speeds and apertures, extra batteries
- A telephoto lens of at least 150mm, preferably 200, 300, or 400mm equivalent
- Ideal lenses: Sigma or Tamron 150-600mm lenses on cropped sensor (DX) bodies

Step 2: Camera settings:

- Continuous focus mode (AI Servo (Canon), AF-C (Nikon))
- +High speed continuous shooting
- Center-weighted metering

- Center Focus point selected
- Aperture priority (at f2 you get 2 people in focus, at F22 you get 22 people in focus!)
- ISO high enough (1,000 to 1,600) for shutter speed of at least 1/250th of a second
- White balance: cloudy or shade
- Use exposure compensation to brighten or darken subject, or shoot on Manual Mode
Turn off Image Stabilizer if using tripod

Step 3: Choosing the Right Background:

The next step is to move yourself and your camera into the right position to get a nice clean background, so that the animal is posed against a clean, uncluttered backdrop: bushes, trees,



Step 4: Choosing Good Composition:

Try to get pictures that tell a story; two animals looking at each, two animals competing for a meal, an animal looking right into the camera. Your instructor knows which animals are the most photogenic, when, where and how to capture them. Try NOT to place your animal right in the middle of the frame but off-center, to the left or right of center. With a telephoto wide open, you CAN shoot right through wire fences. Backlighting on an animal highlights the hair on his back!

Step 5: Get in Tight and Close:

The most satisfying and interesting pictures are those that are really tight in on the animal's face, on his eyes, filling the frame as much as possible. With a high-megapixel camera and a good lens, you can always crop your image on the computer to get in even tighter.

Step 6: Check your work as you go:

Look at you pictures as you take them to be sure you got it right: color, speed, composition, it is much easier to do it right the first time rather than having to fix it in post-production

APPENDIX

EQUIPMENT RECOMMENDATIONS

THE TEACHINGS OF WPS MASCOT PHOTO PANDA

THREE-DAY SUGGESTED PHOTO TOUR OF DC

FLOWER PHOTOGRAPHY LOCATIONS IN DC AREA

TWENTY QUESTIONS AND ANSWERS ON PHOTOGRAPHY

A QUIZ TO TEST YOUR KNOWLEDGE OF PHOTOGRAPHY

WASHINGTON PHOTO SAFARI BY THE NUMBERS

**WASHINGTON PHOTO SAFARI LOCATIONS 1999-2019
LIST OF THE 186 LOCATIONS IN WHICH WPS HAS
CONDUCTED PHOTO SAFARIS**

NOTES

EQUIPMENT RECOMMENDATIONS

FROM
WASHINGTON PHOTO SAFARI'S MASCOT, PHOTO PANDA!



Clients often ask our WPS mascot, Photo Panda, what equipment he recommends for people who are serious about photography. Based on his many years of training tens of thousands of photographers and working with their cameras, here is what he suggests:

First, you need to consider

- 1) **how important a role does photography play in your life?**
- 2) **what kind of budget do you have available to support your photography habit?**
- 3) **what types of photography interest you the most? Nature? Kids? Portraits? Travel? Architecture? Macro? Food? Products? Pets? Flowers? Journalism? Nighttime? Landscapes? All the above?**

Answering these questions will help you determine your equipment needs.

Secondly, bear in mind that **good or bad pictures can be taken with ANY camera or Smartphone**. It's not the oven, it's the cook who serves up the meal. It's not the camera, it's the photographer who takes the picture!

Canon? Nikon? Sony? Fuji? Pentax? Olympus? Panasonic? They're ALL good! And they can be all BAD! To paraphrase a former President: "**It's the Composition, Stupid!**"

But if you have decided to whittle away your savings, your retirement money, and your kids' college educations on camera equipment, here is what we suggest:

- 1) A **DSLR or mirrorless camera body** that takes interchangeable lenses and lets you set aperture, shutter and manual modes (the new mirrorless cameras and their families of lenses are smaller, lighter and often faster than their DSLR cousins, but DSLR's may have the edge in quality and versatility and lens options.) If you plan to do events or weddings, you will need a second camera body too. Get bodies or lenses with **image stabilization**, a very good feature.

Before making this purchase, decide whether you need the **cropped sensor** DX format of a DX camera body (i.e. Canon Rebel series, Nikon D7000 series, Nikon 5200, Olympus Pen series) or the higher-resolution but more expensive **full-frame** FX sensor (Canon 6D, Nikon D750, Sony A99). The cropped sensor gives a longer throw to your telephoto lenses (i.e. a 200mm lens on a Nikon DX body gives you an effective focal length of 300mm) but a narrower width to your wide angle lens (i.e. an 18mm lens on a DX Canon Rebel body is only equivalent to a 29mm lens on a full-frame FX body) And be sure to check out the smaller, lighter excellent mirrorless cameras made by Sony, Fujifilm, Pentax, and the Olympus , Nikon and Canon. .

2) **Lenses appropriate to the photography you enjoy.** You obviously need **telephoto** of at least 200mm or 300mm for distance, nature, sports, or any objects or people that are far away. The 70-200 F2.8 lenses made by Canon, Nikon, Sony, Tamron, Tokina and Sigma are excellent. Lenses of 400mm and 500mm are even better. Also check the newest Sigma/Tamron 150-600's! You need **wide angle** for architecture and landscapes (the highly rated Tokina 11-16mm is outstanding for DX bodies, the Sigma 12-24 is great for both DX and FX bodies. The Zeiss line of lenses are incredibly sharp with excellent contrast, and very expensive. For flower and insect close-ups: a **macro lens**. For straight verticals in architecture: a **shift or tilt-shift lens**. For portraits: an 85 mm F1.4 **medium telephoto lens**. For general **all-purpose use**, the new Tamron 18-400mm macro lens on a DX body is spectacular, the Nikon and Canon 18-300 lenses are excellent but heavier and more expensive. And you should always carry a “**Nifty-Fifty**” **50mm lens**, especially an F 1.4 version which is VERY fast for low-light shooting (i.e. gymnasiums, theaters, nightclubs) and excellent for blurring backgrounds in portraits.

3) **An External Flash Unit such** as a Canon Speedlite or the Nikon SB series or the Sony flash units. These give your flash output much more power and - when dialed down to 1/8th or 1/16th power level on Manual Mode on the flash unit - the individual flashes can keep up with the continuous rapid shooting mode of your camera for action, events, and portraits.

4) **Circular polarizer filters** to fit your widest-angle lenses. Like your sunglasses, they make the blue skies bluer and the white clouds whiter on sunny days and reduce reflections.

5) **Neutral Density Filters** to block the light and allow you to do very slow shutter speeds in bright light, for blurring waterfalls and streams, or for making moving people and cars disappear. For special outdoor effects, get a graduated neutral density or a graduated blue or orange filter.

6) **A Hoodman Loupe**, a rubber eyecup with an adjustable diopter lens that hangs around your neck and allows you to clearly see your images on your camera's LCD screen in the bright sun

7) **A good quality, strong, sturdy, tall tripod with adjustable head:** This is a must for any serious photographer. Don't economize on a tripod just because it is light and portable. A tripod's purpose is not to be light and portable; its main purpose is to hold your camera in a rock-solid position when shooting in low light situations. Buy it at a store where you can try it on for size, making sure that its neck comes up to YOUR neck, so that you do not have to raise the center stalk to take pictures. Buy carbon fiber: it is stronger and lighter than steel, and more expensive. Go for quality brands like Manfrotto, Slik, Gitzo, Benro, or Vanguard.

8) **An adjustable head for your tripod**, pistol grip for action shots (sports, kids, birds) three-pan head for architecture and landscapes. You should also have a **level** to make sure everything is perfectly straight, left and right, up and down, and a **remote or cable release** for vibration-free shots taken in low light. A **small flashlight** also comes in very handy when shooting in the dark

Where to buy: Unless you know absolutely what you want, we always recommend that you purchase your camera equipment in a store, rather than online. Why? Because you get good advice before, during and after the purchase that can save you money in the long run.

THE TEACHINGS OF PHOTO PANDA,

WASHINGTON PHOTO SAFARI'S MASCOT

(Tear this page out, or keep it on your phone while shooting!)

“What’s the subject of your picture? Find it, focus on it, and get CLOSE!”

“Don’t hold your camera like a teacup. Hold it like a pro.”

“F22 means you get 22 people in focus. F2 means you only get 2 people in focus.”

“Turn your subject’s body at right angles to the camera, face looking at the camera.”



“FIRST find the flowers and the frames. THEN see if there is anything behind them!”

“Get DOWN! Get down! Everything looks better when you are down on your stomach!”

“Buildings look better in SUN, flowers and people look better in SHADE.”

“Great pictures are made by photographers, not by cameras.

Remember: you go into photography with the camera you have, not the camera you WISH you had!”

“Be patient and wait for the decisive moment.”

“If you go on a trip hoping that 10 of your 500 pictures will be good, that’s what will happen! Shoot carefully, so that all 500 are good!”

“Look in the viewfinder, clean up the background, and remember WYSIWYG! **What You See Is What You’ll Get!**”

“Keep your worst pictures. They are your best teachers.”

“If your pictures are not good enough, you’re not close enough”

Robert Capa, Magnum Photo

“Get LOW! Get CLOSE!”

Suggested 3-Day Photo Tour of Washington DC

WASHINGTON DC: A THREE-DAY GUIDE

TO A PHOTOGRAPHER'S PARADISE!

Cradling the child in her arms, her left elbow thrust forward, the woman stands resolute, determined to protect the baby as she watches her home collapse in an earthquake.

This scene takes place 24 hours a day in Washington DC, one block from the White House, on the grounds of the headquarters of the American Red Cross. It is depicted in the “Motherland” statue by the Armenian sculptor Sacoyan, who crafted this dramatic statue as a gesture of thanks to the American people for the help they gave to Armenia through the American Red Cross during the severe earthquake in 1988.



And it is but one of hundreds of unique, often little-known, photo opportunities that exist here in the nation's capital, which we I call “a photographer's paradise.”

Washington DC offers more than famous landmarks and monuments. Like Paris, it is also a “City of Light” caused by the building height restrictions that allow light to flood the streets and parks and neighborhoods of the city. Often called “Paris on the Potomac,” Washington DC offers many monuments similar to those seen in Paris: Washington's gothic-style National Cathedral, for example, is reminiscent of Notre Dame Cathedral. Arlington Memorial Bridge on the Potomac is patterned after “Pont Neuf” on the Seine in Paris, and the US Capitol Building got many of its design cues from the Pantheon Dome in Paris.

The favorite tourist locations in Washington DC offer obvious picture possibilities: the Presidential memorials; the famous view down the Reflecting Pool, the awesome grandeur of the Lincoln statue, the pair of hands taking a rubbing off the Vietnam Wall, the grandeur of the US Capitol building, the fear etched on the faces of the soldiers at the Korean War Memorial, the Army nurse at the Vietnam Women's Memorial trying to keep a wounded soldier alive until a Medevac chopper arrives, or the magnificent view of DC's monuments from the Iwo Jima Memorial and Netherlands Carillon in Arlington.

But there is so much more to photograph at places often undiscovered by tourists: the tulip gardens at the Franciscan Monastery in northeast DC; the whimsical “Thinker on a Rock” statue at the National Sculpture Garden; the giant blue rooster on the roof of the refurbished east Building of the National Gallery of Art; the incredible stained glass windows of Washington National Cathedral; the men in the Depression-era breadline at the FDR Memorial; the reflection

pond at the National Museum of the American Indian in the golden glow of sunrise; the inlaid bas-relief depictions of famous battles at the Navy Memorial; the poignant vanguard of African-American soldiers protecting their families at the African-American Civil War Memorial in Shaw; and the little-known Titanic Memorial on the DC waterfront, a tribute “to the men of the Titanic, who gave their lives so that the women and children might be saved.”

Best of all, of course, is that once-a-year, 10-day long phenomenon of nature known as cherry blossom season. These blossoms that ring the Tidal Basin and Ohio Drive are just phenomenal in their pink and white beauty. The cherry blossom season stretches from the last weekend in March to the middle of April.



►Picture Perfect: A Photography Itinerary for Washington, DC

Do you love to take pictures? If so, Washington, DC is a photographer’s paradise. Whether you use a simple disposable or a complex digital camera, Washington, DC has it all: monuments, memorials, historic places, rushing rivers, stately mansions, sweeping vistas, gorgeous sunrises and sunsets, carousels, funky and kid-friendly sculpture, ethnic neighborhoods, colorful storefronts, mural art , and free-admission Smithsonian museums that let you photograph many of their exhibitions.

Here is a day-by-day guide to help you enjoy photography over three days in Washington, DC. It lists some of the most photogenic sites in town and suggests where to stand, lie, or kneel to get the best angles:

►Day One

Morning: Lafayette Park to Tidal Basin:

The White House: Walk right up to the fence on Pennsylvania Avenue and 16th Street , poke your camera through it and get a nice clean shot of the North Portico of the White House, with its



magnificent flower bed and fountain, especially at twilight when the lights are on in the White House. For the South Portico on E Street, you will need a telephoto of at least 150mm to frame the White House from this distant spot. (No tripods allowed)

Lafayette Park: Find the tree just north of the Andrew Jackson statue. Stand under it and use its branches to frame a “three-in-one” photograph of the Jackson statue, the White House, and the Washington Monument, all neatly aligned in your viewfinder.

Washington Monument: Go to the Annual Flower Library located in between the Washington Monument and the Tidal Basin, just off Maine Avenue and 15th Street SW, lie down next to the magnificent flowerbeds, putting them in the foreground, and shoot towards the Washington Monument. In the spring these flowerbeds show every variety of tulips. Take a picnic lunch and enjoy it under the cherry trees on the Tidal Basin. Take the elevator to the top of the Washington Monument for a spectacular 50-mile view of DC, Maryland and Virginia!

Afternoon: East end and center of National Mall

Jefferson Memorial: Go about one-quarter mile to the right of the paddleboat-rental boathouse on the Tidal Basin, at Maine Avenue and 15th St SW, find the exact spot on the path from which you can see the Jefferson statue outlined inside of the Jefferson Memorial across the Tidal Basin. (Best done at night with the beautiful illumination on the Memorial, using a tripod and a telephoto of 100mm or longer. If there is no wind, you will capture perfect reflections of the Memorial on the waters of the Tidal Basin.)

U.S. Capitol Building: Go to the intersection of First Street SW and Independence Ave SW, right behind the US Botanic Gardens,



kneel next to the colorful flowers and bushes you will find at that corner, and photograph the West Front of the Capitol from that southwest corner. Best done in the late afternoon sun.

Library of Congress: The Great Hall of the Jefferson Building of the Library of Congress, one of the most beautiful interior spaces in the world, is best photographed as the late afternoon sun comes

through its windows. It is located on First Street SE, just behind the US Capitol. Use fast film or a mini-tripod that you can rest on the marble balustrades for sharp pictures.

Evening (West end of the National Mall)

Monuments at Night: Go the pathway in back of the World War II Memorial and shoot over its magnificent fountains towards the illuminated **Washington Monument** at twilight.

►Day Two

Morning; West end of National Mall

Lincoln Memorial: Go to the patch of trees on the path leading to the Korean War Memorial just southeast of the Lincoln Memorial. Stand under the tree whose branch arches from right to left, using it to frame your view of the Lincoln Memorial in the early morning light. For an awe-inspiring shot of the Lincoln statue itself, stoop behind and include the shoulders and head of a 2-3-year-old child as he looks up at Mr. Lincoln. Best time: within 60 minutes after sunrise.

Korean War Veterans Memorial: In the morning sun, get in close with your telephoto to the fear-filled faces of the 19 soldiers on patrol in Korea. Point your camera at the black granite wall and capture the 19 soldiers and their 19 reflected images, making a total of 38 soldiers who symbolize the 38th parallel crossed by the United Nations troops in Korea. From the back of the Memorial, shoot over the shoulder of the man bringing up the rear of the squad as they make their way towards the billowing American flag. And use your long zoom to frame the battle-fatigued faces of the soldiers on patrol.



Vietnam Women's Memorial: This is one of the most poignant and powerful memorials in Washington DC. In the morning sun, do a tight close-up of the nurse cradling the dying soldier in her arms while she tries to stop the bleeding from his wound. Shoot from a low angle and you will also get the second nurse behind her as she looks to the sky for a helicopter Medevac. Best done in black and white in the rain, which brings tears running down the faces of the nurses.

Albert Einstein Memorial: You and your entire family AND your high school class can drape yourselves and be photographed on the huge whimsical statue of Albert Einstein, near the Vietnam Memorial on 22nd and Constitution Avenue NW.

Afternoon:

Vietnam War Memorial: In the late afternoon sun, find the spot on the Wall where you can see the reflection of the Washington Monument in the dark wall of the Memorial.

Photograph a child's hands taking a rubbing from the names on the Wall. If you have double-exposure capability with your camera, photograph a panel of names on the Wall, then, using the same negative frame, photograph the three soldier's monument. The resulting picture gives you the three soldiers with a ghostly image of names behind them.

Pennsylvania Avenue: The "Avenue of the Presidents" boasts some of the best architectural treasures in Washington, DC. Begin your photo tour at the US Treasury Building at 15th Street and Pennsylvania Ave NW and capture in your camera such unique delights as the Willard Hotel, the Wilson Building, the Reagan Building, the Old Post Office (with its tower that you can climb), the Navy Memorial, the glass-sheathed Newseum, the Canadian Embassy (with its great view of the Capitol), the East Wing of the National Gallery of Art, and, finally, the Capitol Building itself. Best done in the afternoon sun.

Evening

Sunset and Moonrise Over Washington: That postcard-view of the three monuments (Lincoln Memorial, Washington Monument, and the US Capitol), all lined up in a row can be captured from the stone plaza in front of the Netherlands Carillon, next to the Iwo Jima Marine Memorial in Arlington, Virginia. Late afternoon sun casts a beautiful golden light on the monuments. On full moon nights, the moon rises right behind the US Capitol.

►Day Three

Morning

Potomac River: Get up VERY early, stand on the pathway bordering the Potomac River just in back of the Kennedy Center, and wait for the pre-sunrise kayakers and racing shells to pass by your camera as the early morning mist envelops the river, with the Memorial Bridge looming in the background.

Photography Inside Museums: Most of DC's museums and art galleries DO allow photography without flash or tripod inside many of their galleries, allowing you to capture famous works of art inside your camera. Suggestion: Use a high ISO and a fast lens like a 50mm F1.4 on an SLR camera.

Cherry Blossoms at The Tidal Basin: In late March and early April, cherry blossoms burst into full flower along the banks of the Tidal Basin. In the early morning light of sunrise, they have a golden hue. Use the blossoms to frame views of the Jefferson Memorial, the Tidal Basin, and the Washington Monument.

Afternoon

Mural Art: Some of Washington’s most photogenic art is on the walls of our buildings. The most famous of these is the portrait of **Marilyn Monroe** at Connecticut Avenue NW and Calvert St NW. You will also find a portrait of **Duke Ellington** at 13th and U Street NW, all best photographed in the afternoon sun.



And you can do some great abstract photography by shooting portions of the huge “United We Stand” wall mural in **Adams Morgan** on 17th Street and Kalorama Rd NW

Neighborhoods of Washington DC: Any of our neighborhoods offer a beautiful palette for your photography skills. Try the colorful architecture of the homes on **Capitol Hill**, or the **Shaw**



neighborhood that was home for Duke Ellington, or the colorful street scenes in the revitalized **Chinatown/Penn Quarter** area. In the springtime see the magnificent azalea bushes of the homes in **upper northwest DC** or the tulip beds in **Georgetown**. On any afternoon go to 18th Street and Kalorama Rd NW in **Adams-Morgan** and shoot the colorful storefronts, signs, canopies, and restaurants of our entertainment neighborhood in the afternoon sun.

Houses of Worship: Washington DC has many picture-perfect churches. Be sure to photograph the **National Shrine of Immaculate Conception** (Michigan Avenue and 4th St NE) with its picturesque basilica in the morning sun. Not far away is the little-known treasure, the **Franciscan Monastery** at 14th St and Quincy St NE, a beautiful working monastery with magnificent flowerbeds that show off best in the afternoon sun.

Then take your camera and drive along upper 16th Street NW, also known as “Ecumenical Alley,” where you will find architectural marvels in houses of worship of almost every religious

denomination, from Greek Orthodox to Buddhist to Presbyterian to Christian Science, as well as the Freemason's **Scottish Rite Temple** made famous in Dan Brown's popular novel, "The Lost Symbol."

Also do not miss the magnificent **Washington National Cathedral** on Wisconsin Avenue and Macomb Street NW, especially its stained-glass windows and the adjoining Bishop's Garden.

Funky and Famous Memorials: A tall draped figure with arms outstretched (bearing a remarkable resemblance to Leonardo di Caprio!) stands on a pedestal at P St SW and Water Street SW, right on the Potomac, the **Titanic Memorial**, dedicated "to the men of the Titanic who gave their lives so that the women and children could be saved," and the Depression breadline at the **FDR Memorial**. And be sure to photograph **Thinker on a Rock** (a contemplative rabbit) in the **National Sculpture Garden** at 7th St and Constitution Avenue NW, across from the West Wing of the National Gallery of Art.



Flower Photography Locations, DC/MD/VA Areas

Photographic Locations for Flowers in the Washington Metropolitan Area

(by Sherryl Belinsky)

(This is just a partial listing of all the wonderful gardens, parks and farms in the area!)

Maryland

- Brookside Gardens
1800 Glen Allen Avenue
Wheaton, MD 20902
<https://www.montgomeryparks.org/parks-and-trails/brookside-gardens/>
- Ladew Topiary Gardens
3535 Jarrettsville Pike
Monkton, Maryland 21111
<https://www.ladewgardens.com>
- Sherwood Gardens, Baltimore, MD
Bordered by East Highfield Rd.
Underwood Rd., Stratford Rd. &
Greenway Rd.
<https://www.sherwoodgardens.org>
- Howard Peters Rawlings Conservatory and Botanic Gardens
3100 Swann Dr.
Baltimore, MD 21217
<http://www.rawlingsconservatory.org>
- Lilypons Water Gardens
6800 Lily Pons Rd.
Adamstown, Maryland 21710
<https://www.lilypons.com>
- Soleado Lavender Farm
23611 W. Harris Rd.
Dickerson, MD 20842
<https://soleadolavender.com>

Virginia

- Green Spring Gardens
4603 Green Spring Rd.
Alexandria, VA, 22312
<https://www.fairfaxcounty.gov/parks/green-spring>
- Meadowlark Botanical Gardens
9750 Meadowlark Gardens Court
Vienna, VA 22182
<https://www.novaparks.com/parks/meadowlark-botanical-gardens>
- Netherlands Carillon
U.S. Marine Corps Memorial
Arlington, VA
<https://www.nps.gov/gwmp/learn/historyculture/netherlandscarillon.htm>
- Burnside Farms
11008 Kettle Run Rd.,
Nokesville, VA 20181
<https://www.burnsidefarms.com>
- Seven Oaks Lavender Farm
8769 Old Dumfries Rd.
Catlett, VA 20119
<http://www.sevenoakslavenderfarm.com>
- George Washington's Mount Vernon
3200 Mount Vernon Memorial Highway
Mount Vernon, Virginia 22121
<https://www.mountvernon.org>
- Potomac Heritage Trail (runs along the Potomac River from Alexandria to Leesburg)
<https://www.nps.gov/pohe/index.htm>

Washington, D.C.

- U.S. Botanic Garden
100 Maryland Ave SW
Washington, DC 20001
<https://www.usbg.gov>
- U.S. National Arboretum
3501 New York Ave NE
Washington, DC 20002
<https://www.usna.usda.gov>
- Kenilworth Aquatic Gardens
1550 Anacostia Avenue, NE
Washington, DC 20019
<https://www.nps.gov/keaq/index.htm>
- Hillwood Estate, Museum & Gardens
4155 Linnean Ave NW
Washington, DC 20008
<http://www.hillwoodmuseum.org>
- Tidal Basin/Tulip Library
Independence Ave SW
Washington, DC 20024
<https://www.nps.gov/subjects/cherryblossom/tidal-basin-loop-trail.htm>
- Enid Haupt Garden
1050 Independence Ave SW
Washington, DC 20560
<https://gardens.si.edu/gardens/haupt-garden/>
- Kathrine Dulin Folger Rose Garden
900 Jefferson Dr SW #922
Washington, DC 20560
<https://gardens.si.edu/gardens/folger-rose-garden/>

The Bishop's Garden at the National Cathedral
Pilgrim Rd. <https://cathedral.org/gardens>.

Twenty FAQ's and Answers on Photography

Twenty Photography Questions and Answers!

Here are answers to the 20 most commonly asked questions we get on our photo safaris:

- 1) **How do I get the correct focus?** The camera often seizes and won't focus, or it focuses on something I did not want.
This often happens when aiming the camera towards the sky or over water, where there is no defined vertical line onto which the autofocus system can focus. Solution: switch to Manual Focus

- 2) **How do I keep my pictures from being blurry** when I put them on the computer? They looked great on my little LCD screen!
Most likely your shutter speed was too slow, especially if the picture was taken on a dark day or indoors. Solution: raise the ISO

- 3) **How can I keep the flash from popping up** when the museum sign says I am not allowed to use the flash?
This happens when you leave your camera on the "Auto" mode. Solution: use the Aperture, Shutter, Program, or Manual Mode

- 4) **How can I make my landscape pictures as pretty as what I saw?** I love to do landscapes and mountaintop views, but these pictures are often boring, they do not capture what I saw!
Camera images are two-dimensional and flat. They need a foreground and background. Solution: Next time incorporate a foreground element into one side of your picture, such as a person, a tree, a statue, an archway, or overhanging tree branches.

- 5) **What is ISO** and what does it have to do with shutter speed and why do I have to worry about it?
The acronym ISO stands for International Standards Organization, it is a measurement of how sensitive the camera is to light. Low ISO's are good for bright scenes, high ISO's for dark scenes. A higher ISO increases the shutter speed of the camera.

- 6) **How can I get the background to be really blurred?** Or sharp? Is there an easy-to-remember way to understand F stops?
Solution: put the camera on Aperture Priority (“A”, or “Av”) A low number like F1.8 will give a blurred background, a high number like F22 will give a sharp background
- 7) **Why are my indoor pictures too yellow,** and my outdoor pictures too blue? And what does the Kelvin Scale do?
Solution: Take the camera off of “Auto: mode and adjust the white balance. For indoor pictures at night, use Incandescent/Tungsten. For indoor pictures by day, use Auto White Balance. For outdoor pictures by day, use Cloudy or Shade White Balance
- 8) **Why are my pictures on overcast or cloudy days always too dark?**
Because the camera meter is fooled by the white or gray sky. Camera meters are all calibrated to measure medium gray, halfway between black and white, in reflectance value. Because, a gray/white sky is much lighter and brighter in reflectance than a blue sky, this causes the meter to underexpose. This also happens in scenes with white snow or ice. Quickest Solution aim the camera down at the grass or flowers first, push the Exposure Lock button and then refocus.

Slower solution: Adjust the Exposure Compensation button to +1 or +1.5. Slowest solution: put camera on Manual Mode and play with shutter speed until you get a good exposure.
- 9) **Why does my camera offer all these focus and metering modes** and what do I do with them?
The choice of focus modes depends on the subject to be photographed. Solution: use spot focus for faraway small objects or animals; center-weighted for capturing what is in the middle of the frame, multi-frame for capturing animals, children, athletes, and cars moving through the frame. The same holds true for metering.
- 10) **How do I stop fast-moving kids, people, birds, and cars?**
Solution: use Shutter Priority (“S”, or “Tv”) and set shutter speed to at least 150th of a second, much higher for fast-moving objects or people, such as 1/500th or 1/2000th of a second.

11) Do I really need to take a tripod when I travel! It's so HEAVY and BULKY! *Yes, definitely, otherwise you are missing out on half the shooting time of your travels, low-light times like evening and nighttime, sunrises, sunsets. There are many excellent quality lightweight tripods on the market. Make sure the one you buy is tall enough so that its neck, with the legs fully extended, comes up to YOUR neck, and make sure it is strong enough to carry the weight of your camera mounted with its heaviest lens. A good quality, strong, sturdy, tall tripod will last you for many, many years. Go for quality brands like Manfrotto, Slik, Benro, Gitzo, Vanguard, or (if you can afford it) Really Right Stuff. Get a ball head or pistol grip head for sports, birds, portraits, general use, get a three-way pan head for architectural photography*

12) Should I shoot RAW or JPEG, does it matter?

This is an important decision every photographer has to make. Most serious photographers prefer to shoot in RAW, thus getting more information on the sensor about exposure and white balance and making it easier to do post-production work while preserving the original image. Shooting RAW is like keeping the original negative or slide in film photography. Its disadvantage is that it uses up much more file space in the camera and on the computer.

Some photographers to shoot only in JPEG, it is faster and easier and uses less file space, but it requires that photographers be very careful to get all the correct exposure and white balance when shooting in order to avoid extensive post-production work

13) What is the difference between Auto Mode and the "P" or "Program," Mode?

On "Auto" the camera makes all the decisions on exposure, white balance, or the use of flash. "Auto" also causes the flash to pop up even when you do not want it to. If you paid \$600 for your camera and leave it on "auto", you are only using \$100 worth of the camera's features. Solution: put it on "Program" which allows the user to adjust white balance and exposure and the use of flash, on or off.

14) What lenses do I really need for the photography I want to do, and what is the difference between “prime” lenses and “zoom” lenses? How do I make sense out of focal length numbers? And why are some lenses so very expensive? *Prime lenses are generally better, and more expensive, than zoom lenses because they just do one thing and do it well, such as a 90mm F 2.8 Macro, or a 50mm F1.4, or a 105mm F2.5. But they are big and bulky and take up more space in your camera bag. Zoom lenses cover several focal lengths, like a Tokina 150-600mm or a Sigma 12-24 mm lens, A very practical all-around travel lens is Tamron’s 18-400 mm lens, which becomes a 27mm-600mm equivalent lens on a cropped sensor camera body*

15) What is the minimum recommended shutter speed when I hand-hold my camera? *As a general rule, a camera should never be handheld at less than 1/30th of a second. When hand-holding the camera, make sure your shutter speed is AT LEAST as high a number as the focal length of your lens. The more you zoom, the more you shake. Thus, when using an 18-300 mm zoom lens zoomed out to 300mm, your shutter speed should be AT LEAST 1/300th of a second to avoid the blur caused by camera shake. It is ALWAYS better to do long telephoto shots with a tripod.*

16) Why does my camera offer so many shooting modes, like S, or One Shot, Or Servo/ Continuous, or Mirror Up, or Self Timer, or Remote? *One shot is the mode to use for still life objects or landscapes, nightscapes, when you are not in any hurry to take the picture. Continuous or Servo shooting should always be used when photographing people (because they blink) and for moving objects.*

Mirror Up is a specialized use for really close up insects or flowers when you want to avoid the shake caused by the camera’s mirror flipping up and down to take the picture.

Self-Timer is a very good way to avoid camera movement when you push the shutter on slow-shutter speed shots at night or indoors, and can also be used to allow the photographer to get into the picture,

Remote shooting is done with a wired or wireless device that triggers the shutter button from a distance, reducing camera shake and also allowing the photographer to get into the picture. The sharpest low-light photos are always done with Remote AND Self-Timer shooting.

17) How can I make moving cars and people disappear and how do I get those nice streaking headlights and taillights at night?

Solution: Put camera on a tripod, use a remote to trigger the shutter for a 2 or 3 or 4-second-long exposure. The slower the shutter, the longer the headlight/taillight car trails will be. Shoot on Manual.

18) How do I get my off-camera flash to keep up with the rapid-shooting mode of my camera? *Solution: put Flash on manual Mode, dial its power level down to 1/8th or 1/16th power so that its output can keep up with the continuous shooting mode of your camera.*

19) What do the Exposure Lock (AEL) and Focus Lock (AFL) and Exposure Compensation (+-) buttons do?

A +1 or +2 setting on Exposure Compensation allows the user to override the camera's meter and make the picture brighter. A -1 or --2 setting makes the picture darker. The Exposure Lock button allows the user to aim at a darker or brighter part of the scene and lock in its exposure value, Focus Lock enables the user to lock on one part of the scene or image that may not be in the middle, such as a person's face, or a flower, and it holds that part of the scene in focus until after the shutter is pressed.

20) How do I get that nice silky water look on waterfalls and fountains, surf, and rivers *Solution: use a neutral density filter to block out the light and shoot at 3, 4, 5, 10, or 20 seconds for a very silky effect?*

A Photography Quiz!

Here is a quiz to test your knowledge of photography:

Quiz Questions:

- 1) What is the ISO?
 - a) The amount of light let into the lens
 - b) The speed at which the shutter functions
 - c) How sensitive the sensor is to light
 - d) The setting that changes the color of the image

- 2) What is the aperture?
 - a) The speed at which the shutter opens and closes
 - b) How many settings the camera has
 - c) How wide open the lens is when taking the picture

- 3) When attempting to get a good exposure, what are the 3 settings that should be checked first?
 - a) Aperture, ISO & Shutter Speed
 - b) White balance, Flash & Contrast
 - c) Burst mode, Resolution & Aperture

- 4) Which is the larger aperture?
 - a) F/2.8
 - b) F/22
 - c) F/16
 - d) F5.6

- 5) Which f stop will give you greater DOF (depth of field)?
 - a) F/2.8
 - b) F/16
 - c) F/8

- 6) A higher ISO gives you more "digital noise" or "grainy-ness" in the image
 - a) Yes
 - b) No

- 7) A higher shutter speed is used when you want to ...?
 - a) Freeze an image in time
 - b) Create a blur to the image
 - c) Make a fast video

8) When the camera is set to Manual Mode, all settings will have to be adjusted by the operator

- a) True
- b) False

9)The "Tv" Mode on a Canon camera dial stands for:

- a) Television Mode
- b) Movie Mode
- c) Shutter Priority Mode

10) The "A" Mode on Nikon, Sony, Olympus and other cameras stands for:

- a) Automatic Mode
- b) Aperture Priority Mode
- c) All Purpose Mode

11)The "P" Mode on all camera dials stands for:

- a) Program Auto Mode
- b) Portrait Mode
- c) Photo Mode

12) When using a tripod, you should turn off the Vibration Reduction (VR) or Image Stabilization (IS) switch;

- a) True
- b) False

*Answers: 1) c; 2) c; 3) a; 4) a; 5) b; 6) a; 7) a;
8)a; 9) c; 10) b; 11) a; 12) a*

Washington Photo Safari By the Numbers, 1999-2019

No. of safari participants 1999-2019: 37,751

No. of repeat clients: 11,300 (30% of total)

No. of types of photography taught by WPS: 27

No. of safaris conducted: 5,616, with 120 different itineraries

No. of people who have taken an average of 9 safaris apiece: 700

No. of people who have taken an average of 25 safaris apiece: 50

No. of people who have taken over 60 safaris apiece: 2

No. of all WPS safari signups including rain checks and gift certificates: 40,200

No. of US states from which participants have come: 50, (75% from DC/MD/VA)

No. of countries from which participants have come: 53, from 6 continents

Percent of participants by gender: Female: 52%; Male: 48%

No. locations where safaris have taken place: 186: in 11 states, 30 cities, 8 countries

No. of instructors who have taught for Washington Photo Safari since 1999: 36

No. of 5-star reviews on Trip Advisor: 255 and 2 Annual Hall of Fame Awards

Trip Advisor Ranking: No. 4 out of 80 outdoor activities in Washington DC

Avg. no. of participants per day: 5.1 (365 days/year)

Avg. no. of safaris per week: 5.1

Avg. no. of people per safari: 6.7

Price range per person, half-day/ full day safaris: \$69-\$129 // \$185-\$198 per person

Amount of funds raised on volunteer disaster relief photo safaris: \$31,500

No. of WPS gift certificates donated to local-area charity silent auctions: 180

Washington Photo Safari Locations, 1999-2019

Adams Morgan Neighborhood
Albert Einstein Memorial
African-American Civil War Memorial
American Art Museum
American Red Cross Statuary
Anderson House
Arlington Memorial Bridge
Arts and Industries Building
Baltimore Museum of Art
Baltimore Museum of Industry
Baltimore Shrine of St. Anthony
Baltimore's Inner Harbor
Baltimore's Mt. Vernon
Baltimore Fire Museum
Beaches of Normandy, FR
Bethesda, MD
Blackwater Wildlife Refuge, VA
Bombay Hook, VA
Brookside Gardens, MD
Cabin John Regional Park, MD
Cape Kennedy Space Center, FL
Capital River Cruises/ Potomac River
CEB Tower Observation Deck, VA
Chinatown/ Gallery Place
Chincoteague, VA
Churches of 16th St NW
City & County of Frederick MD
City of Alexandria, VA
City of Amsterdam, Netherlands
City of Annapolis, MD
City of Buenos Aires, Argentina
City of Cologne, Germany
City of Ellicott City, MD
City of Frederick, MD
City of Fredericksburg, VA
City of Giverny, France
City of Harpers Ferry, WV
City of Harrisburg, PA
City of Havana, Cuba
City of Heidelberg, Germany
City of Nassau, Bahamas
City of New York, NY
City of Paris, France
City of Philadelphia, PA
City of Prague. Czech Republic
Lincoln Memorial
Locust Grove, MD
Longwood Gardens, DE
Martin Luther King Jr. Memorial
Mansion at O Street NW
Masonic Temple in Alexandria, VA
Meridian Hill Park
METRO System, DC
Middle Creek Wildlife Range, PA
Mme. Tussaud's Wax Museum
Mormon Temple in Kensington MD
National Air and Space Museum
National Arboretum
National Building Museum'
National Christmas Tree
National Gallery of Art, East and West Bldgs.
National Gallery of Art Sculpture Garden
National Harbor, MD
National Law Enforcement Memorial
National Mall
National Museum, Afr. Am. & Culture
National Museum of African Art
National Museum of American History
National Museum of The American Indian
National Museum of Natural History'
National Portrait Gallery
National Postal Museum
National Sculpture Garden
National Shrine of Immaculate Conception
National Zoo
Navy Memorial
Netherlands Carrillon, VA
Newseum
Old Executive Office Building
Old Stone House, Georgetown
Orlando FL
Outer Banks, NC
Pennsylvania Ave NW at Night
Phillips Collection
Reagan Washington National Airport, VA
Reflecting Pool
Renwick Gallery
Ricketts Glen, PA
Rock Creek Cemetery
Rock Creek Park

City of Quebec, Canada
City of Rosslyn, VA
City of Rouen, France
City of San Diego, CA
City of San Francisco, CA
City of Trinidad, Cuba
City of Virginia Beach, VA
Columbia, MD
Conowingo Dam, MD
Cooper Vineyards, VA
Corcoran Gallery
Crystal City Underground, VA
Diyanet Center of America, Lanham MD
Dumbarton House
Dupont Circle
Eastern Neck Wildlife Range, MD
Embassy of Italy
FDR Memorial
Fells Point, MD
Folger Shakespeare Library
Fourteenth Street NW at Night
Franciscan Monastery
Francis Scott Key Bridge
Freer Gallery
Gatorland, FL
George Mason Memorial
George Washington's Mt. Vernon
Georgetown
Georgetown Cemetery
Grace Episcopal Church
Great Egret Rookery, MD
Great Falls, VA
Gunston Hall, VA
Hain's Point
Hay-Adams Hotel
Hillwood Museum and Gardens
Hirshhorn Museum
Jackson Hole, WY
Jefferson Memorial
Kalorama Neighborhood
Kenilworth Gardens
Kennedy Center for the Performing Arts
Korean War Veterans Memorial, DC
Kreeger Museum
Lafayette Park
Lakeland, FL
Library of Congress
Lilypons Gardens, MD

Ronald Reagan International Trade Center
Royal Palace,
Versailles
Royal Caribbean Cruises to the Bahamas
Sackler Gallery of Near East and Asian Art
Seneca Falls, MD
Shaw Neighborhood
Shenandoah National Park
Smithsonian Castle and Gardens
Smithsonian Folklife Festival
Southwest Waterfront
St Nicholas Cathedral
St. Johns Church
St. Johns Russian Orthodox Church
St. Matthews Cathedral
Thompson Boat Center
Tidal Basin/ Cherry Blossoms
Tide Lock Park, Alexandria VA
Theodore Roosevelt Island VA
Titanic Memorial
Top of the Town, VA
Udvar/Haszy Air and Space Museum, VA
Union Station
US Air Force Memorial, VA
US Botanic Gardens
US Capitol Building
USDA Farmers' Market
US Institute of Peace
US Marine Corps Memorial, VA
US Marine Corps Museum, VA
US Naval Academy, MD
US Navy Memorial
US Park Service
US Supreme Court
Vietnam Memorial
Vietnam Three Servicemen Memorial
Vietnam Women's Memorial
Viking River Cruise: Normandy/ Rhine Rivers
Washington Harbor
Washington Monument
Washington National Cathedral
Watergate Complex
Wharf, The
White House
Willard Intercontinental Hotel
Wilson Building
Women In Military Service Memorial
World War II Memorial
Yellowstone National Park, WY

(WPS thanks officials of all these institutions for granting us access to their locations)

Notes



*To My Children, Rebecca, Estela, and David Luria,
From Their Proud Father*