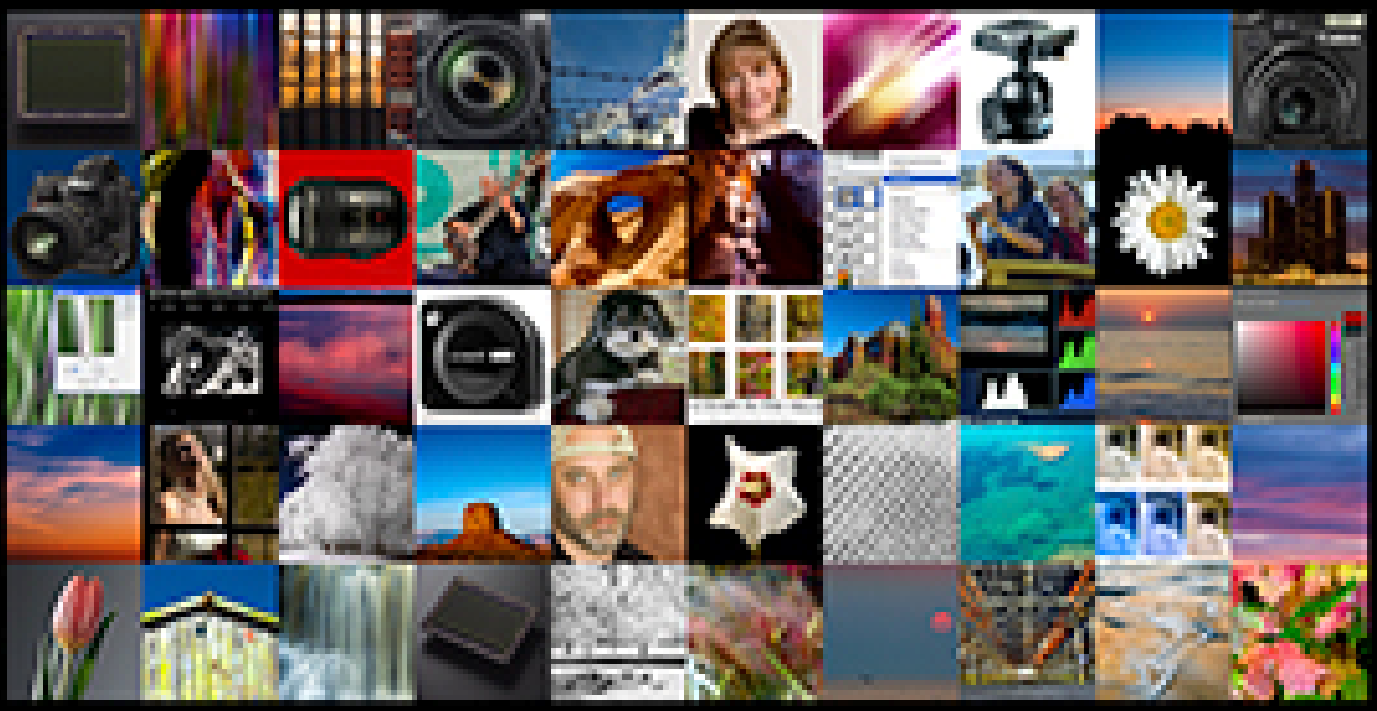
Digital Photographer Series

Improve Your Photography

50 Essential Digital Photography Tips & Techniques



Kevin L. Moss

THE DIGITAL PHOTOGRAPHER SERIES

IMPROVE YOUR PHOTOGRAPHY

50 ESSENTIAL DIGITAL PHOTOGRAPHY TIPS & TECHNIQUES

Kevin L. Moss

Table of Contents

About the Author

Specializing in a variety of photographic subjects over 30 years, Kevin has since mastered the technology of digital photography, expanding horizons from a traditional nature photographer to other disciplines as well. Portrait, urban, still life, and abstract images are now included in Kevin's ever expanding photographic portfolio.

Kevin is the publisher of http://digitalphotographydaily.com.

Authored Works

- **Autumn in the Hills,**
  Createspace, ISBN: 1449581528
- **Photoshop Elements 7,**
  Digital Photography Series, Createspace ISBN: 14421981
- **Digital Nature Photography and Adobe Photoshop**;
  Thomson PTR Course Technology; ISBN 1-9863-135-7
- **50 Fast Digital Camera Techniques, 2nd Edition,**
  Wiley Publishing. ISBN: 0764598066
- **Camera Raw with Adobe Photoshop for Dummies,**
  Wiley Publishing. ISBN: 0471774820
- **Photoshop CS2 and Digital Photography For Dummies**,
  Wiley Publishing, ISBN: 0764595806

ISBN: 1451508409
Digital Photography Series: Improve Your Photography – 50 Essential Digital Photography Tips & Techniques

What Kevin's Students Say…

"Until now, I was a complete novice in Photoshop, had just acquired CS4 and was rather intimidated. Kevin puts you absolutely at ease with his patience and humor, and you're assured that there's no such thing as a stupid Q. His critiques are precise and to the point. ... You learn what's good about an image and receive suggestions for still further improvement. Kevin is a gem ... His obvious enthusiasm for his subject is a gift to his students."

-Nancy F

"Thanks again for your help and instruction in "Photoshop for Nature Photographers". One of my photos, "Bryce Canyon", was selected by Outdoor Photographer for honorable mention in the current "Celebrate the Seasons" photo contest. My photo is in the April 2009 issue, and will appear on their website soon. Without your class to give me the technical knowledge and the confidence to use it, this would not have been easily possible. Take care and enjoy your next trip to the UP."

-Chris S.

"This is an excellent course. … Kevin presents a lot of detail in the lessons, but it's presented in a clear manner with good examples. Kevin was very willing to respond to questions and seemed genuinely concerned that students were getting something out of the class."

-Sharon M

"Kevin Moss helped me to understand many Photoshop tools that I had been ignoring. He also was helpful on the artistic concepts of composition and color. I learned a bunch! And my photos are indeed better."

-Fax S.

"Thanks for an information-filled and fun class! I had a lot of fun. Also, there is so much information here, I will be studying these lessons for some time to come. ... Also, thanks for your patience with all the questions!"

-Mary I.

"*Thank you for an excellent class! It was well-organized, and your instruction was individualized, constructive and personalized. I learned a lot and got what I expected out of the course. I can now dodge and burn on my computer like I used to do in my darkroom! ... Thanks again, Kevin!"*

-Christer N.

Introduction

Of all the books I've written and published and all the course materials I've developed and taught, this book is more exciting for me than all the other projects. I've written this book out of sheer fun. If it was "work", it would have never gotten written. Actually, I'm not even charging for the eBook version. I'm putting it out there for free for the readers of Digital Photography Daily(http://digitalphotographydaily.com), and my students at http://betterphoto.com and The Center for Digital Photography.

The idea for this book actually came to me a few years ago while doing presentations for my local camera clubs in Detroit, Ann Arbor and Windsor, Ontario. I had developed a series of slide shows that was packed full of fun and useful tips and techniques for the photographer. Included was stuff like shooting with a 50mm fixed lens, shooting for color or abstracts, and some fun tools to use in Photoshop. I had some of the material together already, so why not share it?

Another fun part of writing the book is the fact that I wrote it in my own voice. None of that second-person stuff that's for college textbooks. We're photographers, and we like our info straight. Think about it. We read (at least I hope you do) a lot of magazines on photography. Whats nice, is that we get to read articles by other photographers, often on new gear or techniques, and we get to read the articles that are written in their voice. I appreciate reading that style, and I also enjoy writing in that style.

I hope you enjoy the book, and get something out of it. Of all the tips and techniques listed and explained here, some of them you already know, or maybe even already heard. Some of them, you may not have been thinking of or expecting, so I hope you'll be able to get something out of it.

Lastly, like everything I put my name to, I'm open to hear from you on it, good or bad. Please feel free to contact me at kevinmoss@digitalphotographydaily.com. I will get back to ya!

Very Best in Your Photographic Adventures,

Kevin Moss

Shoot With a Fixed 50mm F/1.8

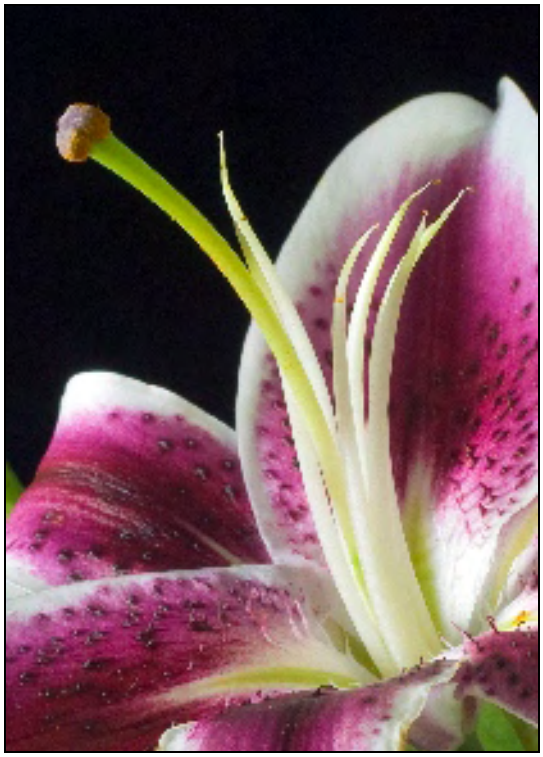
This one is for all the DSLR users out there. If you're still using a compact digital camera (and that's fine!), keep this in mind when you upgrade to your favorite DSLR; use a fixed 50mm f/1.8 lens for your digital camera. I say this for a few reasons, the most important of which, is image quality for the dollar. I've used both the Nikon 50mm f/1.8D AF Nikkor and the Canon EF 50mm f/1.8 II Both lenses work remarkably well.

If I'm shooting with one of my Nikon DSLR's or my Canon, I always have a 50mm f/1.8 lens in my bag. I use some good lenses, but these little guys usually rate at the top when it comes to quality. Additionally, the lenses are tack-sharp whether you're shooting wide open at f/1.8 or closed down to f/22.

Additionally, my 50mm f/1.8 is one of my favorite portrait lenses. Teamed up with a DSLR sensor with a 1.5X or higher crop factor (like you'll find in the Nikon D90, Canon 50D, Canon Digital Rebel and most digital SLR cameras that aren't full frame), you get an actual 75mm portrait lens. If you're using a full frame sensor DSLR, you're getting the standard lens.

In any case, you're getting top quality for about $100 USD. That's quite a bargain given the quality you'll get with these lenses.

In this example, I used my second camera that I carry when shooting the occasional wedding. A Nikon D80 fit with the Nikon 50mm f/1.8 lens. I shot this image without flash, hand held, through a window. After getting the images from the wedding into Lightroom for a closer look, I was amazed at the color and sharpness of the lens. I like to shoot my portraits with this lens whenever possible.



In addition to shooting portraits, weddings and candid photo's with a 50mm f/1.8, I like to shoot my still life and flowers with the lens. In studio or outdoor situation, it's my best flower lens.

The positives:

- **Tack Sharp:** Due to the fact that the manufacturers of these lenses don't have to add a lot of glass to be used for zooming through a large range, the design is fixed, and simple.
- **Value For the Money:** For around $100 U.S., you just can't beat the dollar-for-quality value of these lenses.
- **Small and Lightweight:** Both the Canon and Nikon models are small and weigh about ½ of your kit lens.

Drawbacks:

- **No Zoom:** We're spoiled these days. In the past, when we shot with fixed focal length lenses with our film cameras, we did zoom, but we did it by "using our feet".

In summary, if you're a DSLR user and you don't have one of these little babies, give it a try. The cost of the lens is minimal, and the benefit of tack-sharp images far outweigh the negative of not being able to go wide-angle to telephoto in one lens.

Get To Know Your Digital Camera

This one is for the beginners...

Preferring to stay "camera agnostic", all of today's leading digital camera manufacturers do a great job. The cameras that have been on the market the past few years get us some great results. Folks, the technical quality is now surpassing film cameras, and it didn't take the digital camera industry very long to get there. I was sold 7 years ago, when my little Sony compact digital camera (with an excellent Zeiss lens) was getting me just as good, or better results than my film gear. At that point, I never shot with my film camera again.

Back to you. You're probably using a digital camera purchased recently, or even in the past year or two. You may have shot a few hundred, or thousands of images already (probably in the green labeled "A" for Automatic Mode). Probably got some good results here and there two, but you want more, and trust me, your digital camera probably has more capabilities than even a pro would ever use. The first key (the second key is you and your techniques) to improving your photographic skills is mastering your photographic tool, your digital camera. Here is a step-by-step guide to getting there.

In the past 5 years or so, just about everyone I know has gone out and purchased a digital camera. If you haven't noticed, all the consumer electronic circulars in the Sunday paper have entire sections dedicated to digital cameras, accessories, and printers. Yep, right next to the cell phone page. Digital cameras may be the latest rage, but unlike the iPod, I bet that most digital cameras end up like old film cameras, collecting dust on the shelf.

I know people who purchased their digital cameras two years ago and never bothered to learn how to transfer images to their computer. After filling up their memory cards, they display the pictures they took by turning on the camera and reviewing the pictures on the 2 inch LCD. Funny thing is, these are the same people that are planning on buying the latest and greatest that is available on the market! The point here is to learn the basics about how to use your camera, load images to your computer, and then go out and have some fun. Don't forget to make a few prints, by the way!

Though all the hundreds of different digital camera models that are available today look different from one another, they all have the same basic operation. All run on batteries that need charging from time to time. All need some sort of memory card inserted. (Do this properly: They only go in one way!) They all have an on-off switch and a shutter button. The most important part of your digital camera is the users manual that comes with each one. Don't forget to read yours!

Now lets get started. Using your digital camera is as easy as 1,2,3 . . .

1. **Read the Manual!:** This one seems obvious, but you'd be surprised. When you unbox your digital camera, you get anxious to try it out. My suggestion, take the time to know all the controls and menus on your camera. If you're lucky, out of the box, you might be able to insert your battery, memory card, and turn the camera on. What you need to read in the manual, is how to do some basic setup of your camera:

2. **Learn how to turn on your camera:** This step may seem a little basic, but each manufacturer does it differently. Don't be embarrassed: I admit I've fumbled a few times with new cameras from my students during in-person instruction, finding out where the simple buttons and gizmos are.

3. **Get comfortable with your lens:** Play around by zooming in and out. Most digital cameras come equipped with a zoom lens with which you can zoom out for wide-angle shots or for some cool landscape shots or zoom in to the image of person for a great candid portrait.

4. **If you are shooting indoors, turn on the built-in flash.**

5. **Make sure your shooting mode is set correctly:** Automatic mode, surprisingly, works for many shots you take. Automatic mode is great for now until we get into more technical modes later in the book.

6. **Compose your subject:** Make sure you are not shooting into the sun, there are not any power lines running across the horizon, there are not any telephone poles sticking out of a persons head and make sure your scene is "square" and not tilted. Try to get in the habit of taking the time to compose your shot: You will be surprised how much of a difference it makes!

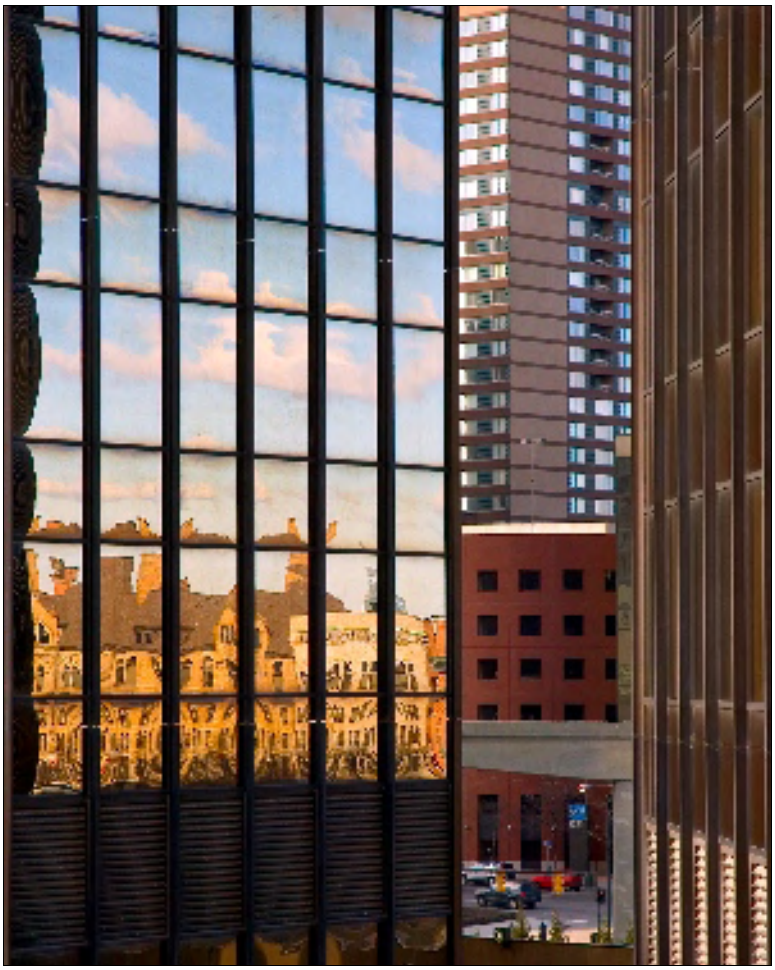
7. **Shoot!:** Depress your shutter halfway to focus, the rest of the way to take the image.

Carry a Camera Wherever You Go

The way to become a better photographer and get the most from your digital camera is to just use the thing. Take it with you wherever you go. Get used to carrying it around and shooting some images. Get over that embarrassed feeling of taking pictures of things when other people are around. Just ignore them, or better yet, take their picture! As a bonus, you then have more images to play with when you begin to edit them in Photoshop or Elements, or which ever image editing software you'll use.

I was doing a consulting gig a few years back for General Motors in downtown Detroit. Often during lunch breaks, I'd take a walk around the downtown area, carrying one of my digital cameras. I was able to get many good shots of the unique architecture the downtown area offers. I wouldn't have that opportunity if I didn't carry a camera with me each day I was working on my GM Web project.

At that time, the Super Bowl was in town, February 2006, with the press center for the week being held at Detroit's Renaissance Center, the home of General Motors World Headquarters. The entire media, sports and celebrity world converged in the building where I was spending all my time. Great opportunity for shots I normally wouldn't have a chance to get.



Take a camera wherever you go, you'll discover images you normally wouldn't get!

Aaron Neville, Detroit, Feb 3, 2006. Canon 20d, EF 50mm f/1.8 II

I wasn't planning on photographing anything in particular, actually, I didn't have the time. I was working on a large Web project and deadlines were looming. What I did manage to do was walk around the huge spectacle, and fire off a few shots worth keeping. One in particular, was of Aaron Neville, who was to sing the National Anthem before the game. I caught him in the hallway after one of his many press interviews.

Summary: If you're like me, you may have a few digital SLR's that aren't too convenient to carry around or leave in a car all day long. What I do, is carry a compact digital camera, one with quality such as the Canon G11 or the Nikon Coolpix P6000 Both of these cameras will serve you well, and fit into a pocket, purse, briefcase or backpack.

Tip: For one week, take your digital camera with you wherever you go. By taking pictures that week of everything and everyone interesting to you, you'll be amazed on how many pictures you would have missed had you not had your camera with you.

Photograph an Art Show

Every spring or summer, my area is booked with art shows. One of the most popular in the country is the Ann Arbor Art Show, which takes place every July. There are also numerous art shows which take place in almost every major community. You can go to different shows every weekend of the summer, and never run out of shows to visit. Quite often, I'll know one or two of the photographers displaying and selling their artwork, another incentive to go.

I like to go to as many art shows as I can for two reasons. First, as a photographer, I like to view other photographers work, and talk with them. I consider myself an artist, and a great way to expand your artistic horizons is to talk to other artists! Its one of the ways I learn, and it gets me in touch with others with similar interests. The second reason I enjoy art shows, is the diversity in subject matter in which I can take photographs. I always bring one of my digital cameras with me.

While at the art show, I'll photograph whatever the day presents to me. It may be a closeup of a sculpture from an artist, it may be one of the musical artists that is performing, or it may be one of the other people enjoying the fair that day. No preconceived agenda, just going with the flow, and photographing as I go.

With that in mind, here are a few suggestions I have for you when you visit art shows, and carry your camera with you:

- **When photographing other artists work, ask permission first.** Ask the artist for their business card (this is important), and explain to them you're just enjoying the day, and like to photograph people and artwork. If the artist agrees, let them know that if you ever publish any of the photographs that you'll first contact them and ask them for a release. This is of respect for other artists and their work. If the artists objects, thank them, tell them you understand, and move on to the next booth.

- **If the artists gives you permission, thank them.** You can even take their photograph in front of their booth, and email them a copy as a gesture of gratitude. Shoot for color and abstracts. Personally, I am constantly adding to my abstract and color-study portfolios.

Shooting close ups of artwork is one of my sources for these types of images. Don't be afraid to get in close on sculptures and other pieces of art. You'll be pleasantly surprised at some of the images you'll get.

- **Watch the people.** Take a look around, and fire off some candid's of interesting people attending the art fair.

Getting Images From Camera to Computer

Another one for the beginner...

Surprisingly, this is one of the most frequent questions I get on the street when someone becomes aware that I teach digital photography and write books on the subject.

Don't have a card reader?
The simplest way for the beginner is to plug their camera into their computer *if they don't have a card reader*. Every digital camera is packaged with a CD that includes software utilities for your camera. Before you can transfer pictures from your camera to your computer, you need to install the CD on your computer. The other item you need is that USB cable that came with your camera. It's that cable with the big thingy on one end and the little thingy on the other. Refer to your owners manual to locate the cable connection on your camera: It can be hard to find!

Have a card reader?
If you have a card reader, this is the easiest way to transfer images to you computer. Card readers are devices that connect to your PC via USB cable. These devices often accept multiple memory card formats, such as Compact Flash, SD Cards, XD Cards and Memory Sticks (for some Sony models only).

The common process for transferring images from your camera to computer is:

1. Make sure you turn your computer on.

2. If transferring directly from your camera, make sure you turn your camera off.

3. Plug the camera or card reader into your computer by inserting the camera end of the USB cable into your digital camera and the computer end of the USB cable into an available USB connection on your computer.

4. Turn on your digital camera if transferring directly from the camera or plug in a memory card into the card reader.

5. After a few seconds, your computer should recognize the camera or memory card and prompt you to choose your next step.

6. Your computer either prompts you to choose the method to copy your images, or your camera's software prompts you.

7. Choose to either copy the images to the default folder on your computer or better yet, choose a specific directory you created to copy these images to.

Create a folder on your computer where you can copy all your images to. This way your folder won't be buried in the windows default images folder.

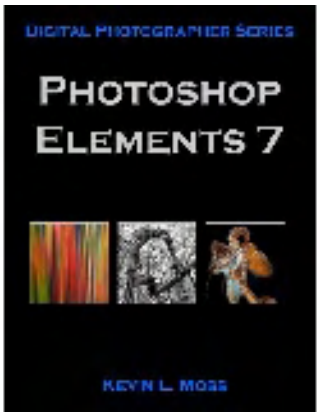
Your camera's software may automatically assign a folder name each time you copy images to your computer. Get familiar with the way your folders are set up. After your images are copied safely to your computer and they are backed up, then you can then reformat your memory card in your camera to make room for more pictures.

Warning: Always make sure you have a backup of the images that are copied to your computer before you reformat your memory card. You want to make sure that these images are not only on your computer, but backed up to CD or DVD for safe-keeping. If you accidentally delete the images on the computer or the hard disk fails, at least you still have the images on CD or DVD.

Tip: Invest in a USB card reader. Prices for these devices have come way down and most of these can read multiple memory card formats. Using card readers to download images is quicker and safer. Some computers even have these built right in!

Manage Your Image Library

An excerpt from The Digital Photographer Series: Photoshop Elements 7



As a photographer out in the field shooting great photos, you'll be eager to get back to your computer so you can mess around with your shots. After downloading your images, you'll be excited to open Bridge, view the images you've just taken, and then process the best of the litter.

The next thing you know, you'll have run the nature images through Elements, made a few prints, and then moved on to something else, such as cruising the Web to do some shopping for more digital camera gear! The downloaded images will then sit in their folders, maybe soon to be forgotten.

If you've been using a digital camera for a while now, and you take thousands of nature and landscape photos like I do, you've probably noticed how quickly images pile up on your hard drive. Every time you download photos from a memory card to your hard drive, you could be adding hundreds of digital images to an already crowded storage space, even one or two gigabytes at a time. They then sit there, pile up, reduce the amount of available disk space, and maybe get lost or forgotten.

Whether I'm shooting nature images in the field, downloading pictures, organizing files, or working with images in Elements, I have a workflow for everything. A workflow is a step-by-step progression of actions you take on a consistent basis to ensure that proper techniques are consistent from shooting a photo to creating the final print.

An image-management workflow will work equally well when you're managing those hoards of images I've been warning you about.

By spending a few minutes planning your file management approach, and then by following your workflow, you'll be much better organized, more productive, and saner. And best of all, it doesn't cost you anything!

Creating a file management system doesn't start and end with your computer. Implementing use of external storage and backing up to optical disk should be part of your image management workflow as well.

Creating a file-management system starts with three simple tasks:

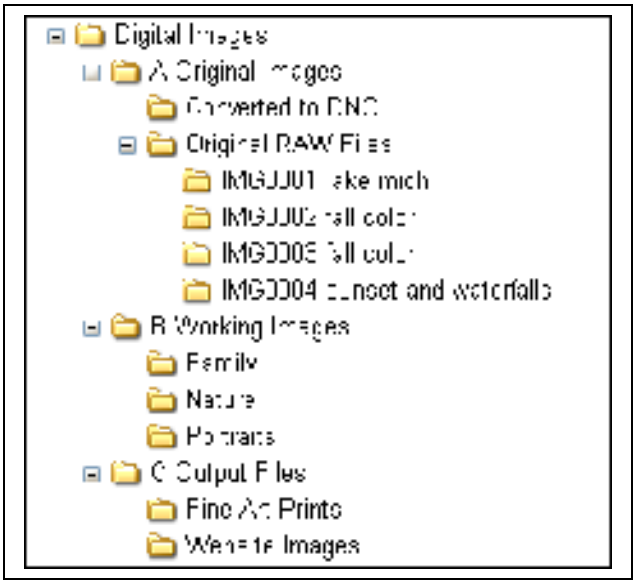
- **Plan how to organize and store your images on your computer .** All photographers have different needs. Make a plan — the simpler the better—to organize all of your images, not just your nature stuff. If you're like me, you'll have nature images divided between wildlife photos, landscapes, macros, and maybe even abstracts.

  Like many photographers, you might also have images of family, friends, or even some commercial clients for whom you shoot images. You need a plan of organization to keep all of those images straight.

  For your photos, you might want to separate images into categories, such as family, architecture, plants, animals, flowers, or geography. You can also divide up your images by region, such as the Midwest, Southwest, Australian Outback, or whatever world regions you photograph in and about. Really, I have many students from Down Under!

- **Create folders to store categorized images.** Whether you're using a Windows PC or a Mac, first create a master folder to contain all your original, working, and final output images. (I call my master folder "Images", but you can name yours anything you want.) The next step is to create subfolders within your main images folder to classify each major step of your workflow.

  With the thousands of shots you make in a given timeframe, try to keep it simple. Set up a master folder called Digital Images. Within that folder, set up folders for original images, working images, and finally output images.



All you need is one folder to hold your original, working, and output folders. Backing up all of your images will be easier when they are all held in one folder.

- **Back up all of your images in one step .** When all of your images are contained in one folder (that contains all of your subfolders), backing up to a CD, DVD, or external hard disk or file server becomes a lot easier.

Manage Those Files!

Now that you've thought about your strategy for how you are going to store and back up your image files, consider following a simple workflow for your everyday work. The following steps might not exactly match how you approach your work, but you can use them as an example of an image-management workflow.

- **Make a backup in the field.** I haven't yet spoken of this in detail, but if you're out on an extended field-shooting expedition, consider carrying a portable storage device, such as the Epson P-7000, or one of those new mini notebook computers (some carry over 160 Gigabyte hard disk drives, and they are small, and inexpensive!) or even an Apple iPod. These devices are small and battery-powered, and they can also play music and audio books! I recommend making backups of your memory cards if you're away from a computer. Memory cards can easily be lost or damaged in the field. And one more line of defense doesn't hurt.

An additional piece of advice I have for when you're using a portable storage unit in the field is, don't be comfortable enough to reformat your memory cards after you've downloaded the images to your computer or other portable device. These devices can fail or get lost also! I only recommend using these devices for backup purposes (and on a temporary basis at that) until you get your memory cards downloaded to your computer.

You might think this step is a little excessive, but I've heard horror stories. Recently, a friend of mine lost most of his shots when he misplaced a 2-gig memory card on an airplane on a trip back to the U.S. from eight days of shooting in England. He wasn't a pro, but most of his shots, including those of Stonehenge, London, Avebury, and Wales were lost.

Tip: I suggest labeling memory cards with your name and contact information to create a possibility that the memory card will be returned.

- **Download your memory cards to your computer.** The first thing I do when I get back to my hotel room, my office, or my home after a day of shooting is immediately download my images to my computer. I create a subfolder in my "Original Images" folder, usually named in sequential order with a date and a descriptive name for the images taken that day, such as: IMG0041 May 30 England, IMG0042May 1England, and so on.

- **Back up your images to DVD and/or a series of backup hard disk drives.** Right after downloading my images to my "Original Images" folder, I back up to DVD — twice! A DVD holds more than 4.5 gigabytes of data, about the amount for a typical 4-gig CompactFlash(CF) or SD card full of images. I often go through at least four or five cards when shooting nature photos all day. Raw images are quite large. One DVD usually holds 500 to 600 images, depending on the size of the files you are capturing. I make two copies of my DVDs, one to keep onsite in my image library and one to keep offsite in my safety deposit box.

Back up those files to DVD!

You can purchase blank DVDs inexpensively now. Great bargains are available at your local computer and office supply stores. Whether you're using DVDs to archive your images, be aware that optical discs are not all alike. DVDs, like many things, are available in different levels of quality.

There are some cheap discs on the market, but they might be cheap for a reason. They might scratch easily or they might be susceptible to quicker chemical deterioration than other discs. When buying blank CDs or DVDs to archive your images, buy name-brand premium discs, archival quality such as Delkin Archival Gold or Verbatim DataLife. These discs are supposed to hold up for many years, even decades if they're carefully handled and stored.

Backing up twice to optical disc might seem a bit extreme, but your original images are like your original negatives—if they get lost or destroyed, you always have an extra copy offsite as a last resort. Some photographers will mail their disc backups to their addresses at home, to prevent that the loss of their equipment during travel means the complete loss of images.

- **Back up your hard disk.** In addition to backing up my original images to DVD, I also back up my "Digital Images" folder to an external hard disk every night. You can never have enough backups of your important image files and documents. As close friend and long-time photographer and Mac guru tells me, "There are two kinds of people — those who have lost data and those who will."

- If you don't have an external hard disk to make nightly backups of your data files — not just your images, but all of your other personal work — I recommend getting one, or two (I have several, and upgrade these yearly). You can purchase external hard disk drives with capacities of more than 500 gigabytes for less than the cost of a couple of large capacity memory cards. For a couple hundred bucks, you can rest easy knowing that your valuable data is protected in case your computer's hard disk fails.

The perfect backup system for your irreplaceable images, the Western Digital's My Book® Mirror Edition™ dual-drive storage system offers RAID-based continuous data protection and user-serviceability.

- **Use Adobe Bridge, Lightroom, Photoshop Elements Organizer, or Picasa as your image-management system**. The next step in the image-management workflow is to work with your images using software you already might have. Photoshop comes with Bridge (pro -quality), Adobe Lightroom is world class, and if you're using Elements, the Organizer is the best dollar for dollar deal out there. The Organizer is worth the price of Elements alone in my opinion. . From within these software titles, you can organize your photos into one large Catalog that includes all of your images, or even separate Catalogs, and within those catalogs, you can even further organize your images into Albums.

Hold An Exhibit

And Show Off Your Work

All the fruits of your digital photography efforts deserve a showing. Photographs are meant to be displayed and enjoyed by others, what way to best show off your work than to hold an exhibition! Invite your friends, family and co-workers and show them the artist that you truly are.

Suggestions to holding an exhibition include:

- **Print, mount, matte and frame 10 or 20 of your best photographs.**
- **Find a location to hold your photography exhibit.** Local bookstores, community centers, places of worship or neighborhood art centers are all good places to start. There probably won't be a fee involved and these organizations like it when you bring people into their establishment.
- **Set a date and time for a reception intended to *launch* your exhibit.**
- **Send out personal invitations.** Print your invites on photo paper with a sample of your work to the people you would like to invite to your personal art exhibit.
- **Advertise your exhibit by contacting your local newspaper of the event.** Many newspapers will list your notice for free in their weekly or daily art-exhibit section. If you have blog, even better, send an email to your subscribers! (if you don't have a blog yet, GET ONE!).
- **Have a sign-in sheet and grab email addresses.** If you hold the event, make sure you collect names and email addresses of the people visiting your exhibit. You can use these email addresses as follow ups, and to notify your "fans" of new events or offerings.

Tip: If you intend on selling your framed photos at the exhibit, make sure you keep a few extra prints of each photo in the exhibit on hand, you may be surprised how well your art will sell! Check with the establishment you are exhibiting your photos in and see what their policy is for selling your work.

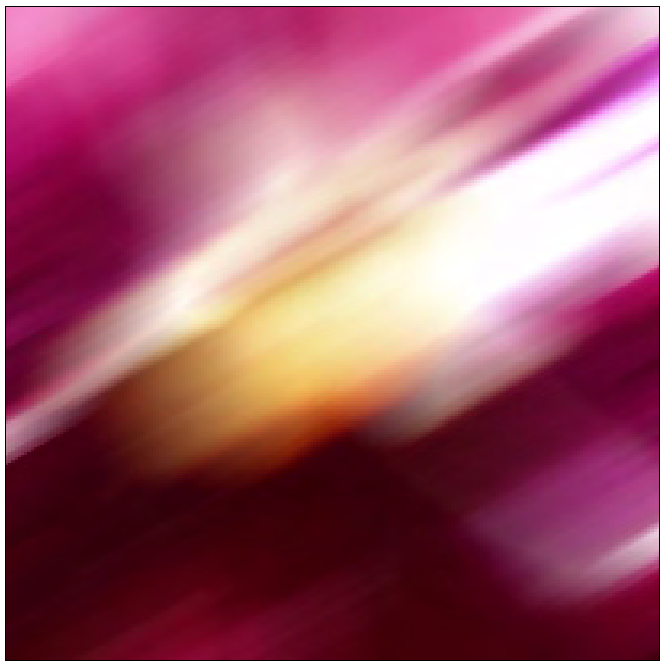
Cool Abstract Art with Extreme Cropping

...with help from using the Motion Blur Filter

Original "dud" image. Nothing special here!

One of the things I like to do with photos, especially flowers is to crop a small portion of the image to create a fine-art abstract. I especially like strong colors on my abstracts with simple subject matters. I shoot a lot of flowers, and have just as many "duds" as I do have good images. I don't discard the lousy photos, just in case I want to create abstract images out of them by messing with them in Photoshop or Elements and cropping closely to only certain parts of the image. Its my reoccurring theme of "**rescuing lost treasures**".

To create an extreme abstract:



1. **Choose a photo where a small portion would make for an interesting abstract.**
2. **Click on the Crop tool in the Photoshop or Elements Toolbox.** Don't forget to type in the Width, Height and Resolution for the image you are cropping.
3. **Crop that portion of the image using the Crop tool located in the Photoshop toolbox.**
4. **Apply overall image adjustments. Perform any additional edits needed to the photograph.** For this image, I simply used 2 filters: Filters-->Blur-->Gaussian Blur, and then I applied the Filters-->Blur-->Motion Blur filter in Photoshop CS4.

Making Power Lines Disappear

More Photoshop and Elements Techniques

One of the most disappointing things when shooting photos is when you get a great shot, only to find out there's a power line or a streetlight in the way. You may not have noticed them when taking the photo, but they sure appear when browsing with Bridge in Photoshop. Many times these things that you didn't notice will ruin a shot. No more! To make these pesky lines go away:

1. **Open a photo where something ruined the shot.** Like a power line.

2. **Create a new Editing Layer** (trust me on this one)**:**

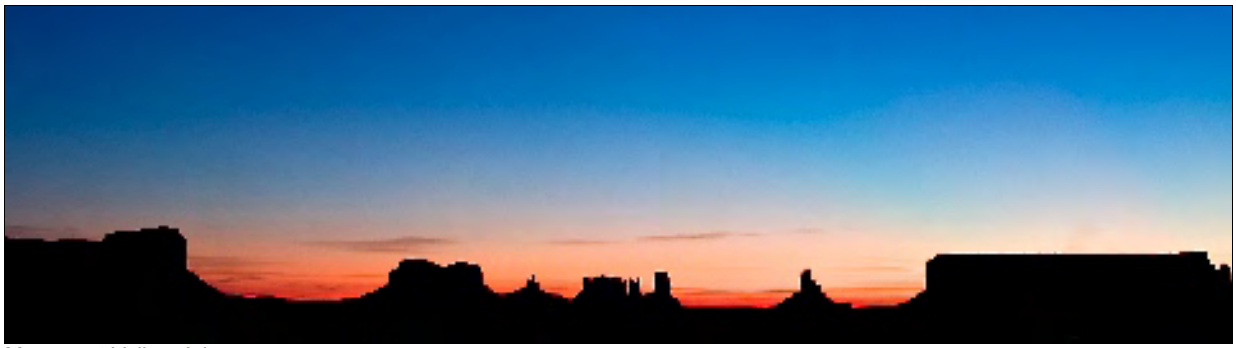
   SHIFT+CTRL+ALT+E
   (SHIFT+CMD+OPTION+E on a Mac)

3. **Click on the Spot Healing Brush Tool located in the Photoshop or Elements Toolbox.**

4. **Enlarge or reduce the size of the brush by clicking the [or the] key.**

5. **Click and drag the Spot Healing Brush over the lines you want to make "go away" like in the photo shown.** Short strokes are best as the area surrounding the paintbrush is used by the software to clone out the power line.

Take A Photo Trip!



Monument Valley, Arizona

One of the best photography experiences I've ever had was traveling with a small group on a photography trip. A few years ago, I was searching the Internet for a travel photography adventure in America's southwest.

Antelope Canyon, near Page, Arizona

I was pretty anal about the locations I wanted to photograph. I searched and searched, and spoke to many travel photography outfits advertised in Outdoor Photographer magazine and on the Internet. All but one didn't seem practical for me. The one that did, was John Baker's Travel Images.

John and I do not have an official affiliation, that is, I'm not getting paid for this! Just being honest with you, when I see good value for photographers, I'm going to write about it. This one's coming from my heart. I had such a good experience, I wanted to fill you in on it.

Back to my story. I did call Travel Images, and John returned my call ASAP. We talked for a while, and I let him know what type of trip I had in mind, which nobody else was doing. I wanted first to hit the slot canyons in Northern Arizona, primarily, Antelope Canyon. I also wanted to spend time in Utah, mainly Monument Valley, Canyonlands, and Arches N.P. John didn't have

anything scheduled for that area at the time, but he asked me to give him a few days, and he'd come up with something.

Monument Valley

What John came up with, was the Red Rock Trip. Two weeks in the America Southwest, pure photography. I was pleasantly surprised! Our time frame was August, and John proceeded to schedule the trip in between a few fall color trips he already had booked up with his photography clients. October it was. Thankfully, John was able to get a great group of other photographers to join us for the Red Rock trip, and rest is history (I'm still close friends with the people on that trip, as well as John).

John had scheduled a great two week excursion. A few days in Page Arizona, including Antelope Canyon. A few days in Southeast Utah, Monument Valley. Mexican Hat, Goosenecks State Park, Arches National Park, Canyonlands National Park. I was getting my Red-Rock-On! For two weeks, it was pure photography. Without John as a guide, I never would have known 1/2 the places to go at these sites, and what times were best for photography. It was money well spent to have a guide, just for the extra 100% photo-op's it offered.

John is always mixing up his destinations, and he does have a very interesting variety of trips worldwide, often top photo destinations. Machu Pichu anyone? Nova Scotia? Yellowstone?

Galapagos? John has them all. Not only that, he's very experienced in knowing where and when to photograph sites in all of these world locations.

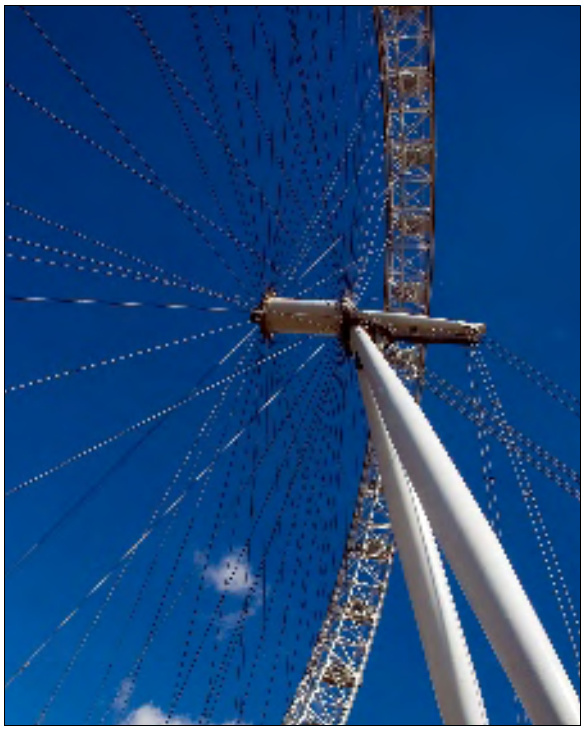
In summary, if you want to take that dream photography trip, strongly consider going with an experienced trip leader, who also is a photographer. You can view more at http://travelimages.com, and follow the links to get in touch with John, tell him I said hello!

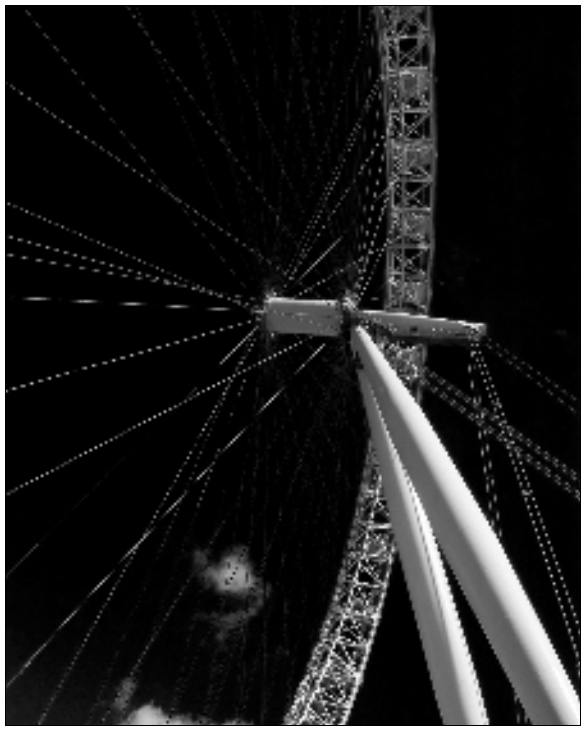
Arches National Park, Utah

Shoot in Color, Convert to Black and White Later

One of the best practices an experienced photographer should be aware of, is to shoot all of your photographs in color. Almost all digital cameras give you the ability to take images in black and white mode, but its not needed. Whether you're using Photoshop, Elements, or even Picasa, all these software titles gives you the ability to convert your images to black and white later.

The reason to shoot all of your images in color even if you prefer black and white at times? Easy, more options. If you shoot in color, you always have the option of processing the image in either color or black and white. If you shoot your images in black and white mode right out of the camera, you lose the ability to process the image in color later. Why limit your options?





In summary, if I would have shot this image in black and white mode in-camera, I wouldn't have the option of utilizing the image in color. As you can see, in color, the image has a lot of color and impact. Its just as much dramatic in black and white. This image of the Eye in London is a good example of why you want to give yourself both options for an image, color *and* black & white.

Invest in Good Lenses

Knowing a lot of photographers over the years, my students, readers, or my contributing to and lurking in online forums, I'm amazed at the frequency photographers upgrade their cameras. Some upgrade every time a new replacement comes out for their already very serviceable cameras. I can understand that, photographers are gadget junkies, and I'm no exception. Personally, I'd rather spend my money on other things, like travel, college tuition for the kids, or a new bathroom.

My suggestion when you get the itch to get that hottest new Nikon or Canon, is to first look at your overall camera arsenal. The first question you should ask yourself is "do I have the right combination of lenses?" Chances are, there are one or two you're shy of. Another question you should ask yourself, is your camera still serviceable, fairly new, and producing acceptable images?

If you're shooting with a compact digital camera and want to move up to a DSLR, go for it, you'll be glad you did. If you are using a DSLR, and its only a year or two old, that's another story. I shoot and write as a profession, and I still can't justify in my mind upgrading to the latest model in my "range" just because the manufacture announced a new improved model. When I invest in equipment, I personally like to get 3 years usage out of it, and for lenses, even longer, sometimes much longer. The DSLR I'm using now was state-of-the-art 2 years ago, and I have a feeling that I'm due for a new one in a year or so. Until then, I'll hold back my urges, and instead lean toward high quality lenses to add to my arsenal. I'd advise the same for you.

Lastly, when you invest in a digital SLR, you're investing in a "system". Whether it be Canon, Nikon, Pentax, Sony (formally Minolta) or Olympus, you're buying into those manufacturers

specific lens systems. Camera bodies may come and go, but the real value is building up your system of lenses and accessories.

Here is just a sample (just for Nikon and Canon) of some of the high-quality lenses that cover you from 14mm all the way up to 200mm, each considered best-in-class that you might consider adding to your system:

Nikon Lenses To Dream For	Canon Lenses To Dream For
Nikon 105mm f/2.8G ED-IF AF-S VR Micro	Canon EF 100mm f/2.8 Macro USM Lens
Nikon 14-24mm f/2.8G ED AF-S Nikkor	Canon EF 24-70mm f/2.8L USM
Nikon 24-70mm f/2.8G ED AF-S	Canon EF 70-200mm f/4 L IS USM
Nikon AF-S NIKKOR 70-200mm f/2.8G ED VR II	Canon EF 17-40mm f/4L USM

Use a Color Management Workflow

Color Management Explained

Imagine a scenario of just getting home from photographing an event that results in a compact flash full of once-in-a lifetime images. Photographs worthy to be placed upon the pristine white walls of the Metropolitan Museum. OK, maybe just some great pictures of your loved ones that you would know to look great behind the glass of an 8 X 10 frame located your desk at work. The point is, you have just captured images that you know will blow your hair back once they are printed.

Printed without Color Management

Viewed on Computer Monitor

After loading your images to your computer, you gleefully view what looks like to be your favorite image of the bunch. After a few tweaks, you send the image to the printer. To your dismay, your photograph comes out of the printer with a reddish cast and is too dark. Not exactly what you edited in Photoshop. You tweak and print the same image a few more times and poof, same result. The print does not match the image viewed on the monitor.

By applying a few important color management concepts to your computer and your editing software, you make sure image you are viewing on your computer monitor matches the photograph printed as close as possible. At a price of about one dollar per 8x10 for photo-quality paper and ink, you'll save a bundle and a bunch of frustration-caused emotional breakdowns too. Consider color management workflow the Prozaca of digital photography.

One of the most important tools you'll need to make sure that the images your viewing and editing on your computer display is what is going to be printed, is a colorimeter. A colorimeter is a color measurement tool that attaches to your display, and in conjunction with software, is used to create a monitor profile you're computer uses. When calibrating your monitor with a colorimeter, you're more closely matching the colors seen on your display to the print that's being churned out on your printer.

Two of the top selling calibration tools include the Datacolor Spyder3Pro and the X-Rite colormunki. You'll find that investing in these tools will be well worth the price, and calibrating your monitor will save you dollars by reducing the amount of paper and ink used in a "trial and error" process.

The most important step of implementing color management into your workflow is to calibrate your monitor. It is important to calibrate on a regular basis as the colors, brightness and contrast of your monitor change over time. Whether you use one of those old big clunky computer monitors (once called CRT's), one of those sleek new LCD monitors or a laptop computer, the rule remains the same, calibrate on a regular basis.

While calibrating your monitor, you are making actual adjustments to the brightness, contrast and color balance to match what your calibration software uses as its standard. These adjustments are actual physical changes to the operation of the monitor and are necessary to produce an accurate profile that you computer will use.

By calibrating your monitor you have effectively set yourself up for a successful color managed workflow. If this step is skipped, you are almost guaranteed that you will be making adjustments to digital files based on false information!

Explaining Color Modes in Photoshop

Before you begin work on a photo, it's a pretty good idea to know what the image is going to be used for. Is the image to be printed on your inkjet photo printer? Displayed on the Web? Used for prepress? The answers to these questions will determine which color mode you chose.

Use Adobe RGB 1998 for editing and printing, convert to sRGB for images to be viewed on the web

The color mode simply lets you determine which color method Photoshop is to use to first display your image while editing and then to output (print) your image. Color modes represent particular numerical color describing methods, also called *color models*.

Choices for color modes used for digital photographers in Photoshop include:

- **Bitmap:** Not used for digital photographs. Uses black & white or color values to represent pixels in an image
- **Grayscale:** This mode would be used if the original image opened in Photoshop were already a black and white image. Most of your photographs captured with a digital camera or acquired using a film scanner will be color.

Tip: To produce black and white photos in Photoshop, stick with editing the image in your normal color mode and converting to black and white later.

- **Duotone:** Not usually used for digital photographs, duotone is a mode used for specific printing purposes related to two-color print jobs. Its also used for advanced black and white printing techniques.
- **sRGB:** Digital cameras are usually set to this color space, but on most digital SLRs, you can set your default color space to Adobe RGB 1998 as well. sRGB is the best color space to use for photo's that are to be viewed on the web. If you edit your images in Adobe RGB 1998 as I suggest (you have a larger color gamut to work with), you should ***convert*** your images to sRGB when you're ready to size and output an image for viewing on a web page or attaching to an email.

- **Adobe RGB 1998 (Red, Green, Blue):** For digital photographers, RGB is the standard color mode used for editing photographs in Photoshop. RGB is the default color mode and is automatically setup for you when you install Photoshop. In North America, the standard editing mode for photos should be Adobe RGB 1998

  Unless you are preparing images for prepress or other special purposes, leave RGB as your standard color mode for editing your images in Photoshop. It offers a wider range of colors to edit with.

- **CMYK (Cyan, Magenta, Yellow, Black**): Another standard color mode used in Photoshop, CMYK mode is used mostly for preparing images where color separation is needed for printing press processes.

  When it's necessary to submit images for commercial printing, edit your images in RGB mode, then convert your image to CMYK for your final submission.

- **Lab:** Lab color mode is the intermediate model used by Photoshop to convert from one color mode to another. For digital photographers, Lab color mode will rarely be used, however I know of a lot of photographers that edit their images in Lab mode. Not sure why! They probably read an article somewhere.

- **Multichannel:** Not normally used for digital photographs. Multichannel mode is used only for specialized printing applications.

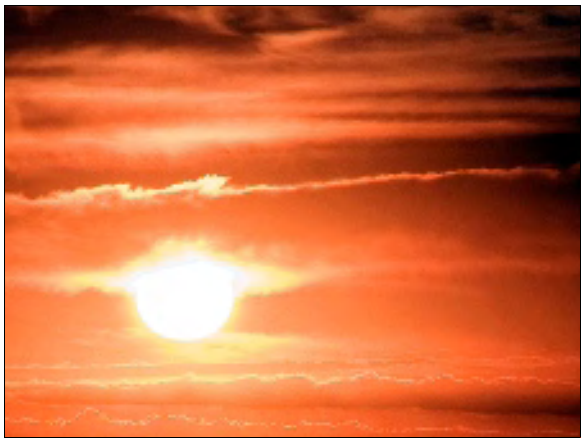
For most photographers in the Americas, I suggest the following color profiles:

- **In Camera:** If you print some, and put some up on the Web or email, set you camera to Adobe RGB 1998. Edit your images in the same color space. When preparing images for the Web or email, I suggest then converting your images to the sRGB color space.

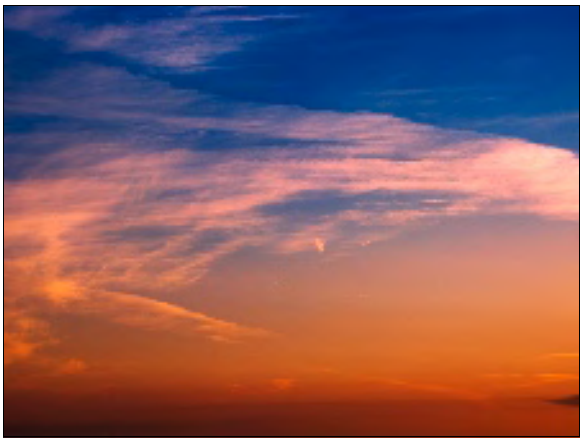
- **Photoshop & Elements:** As mentioned, edit your photos in the Adobe RGB 1998 color space. The reason? Larger color gamut. You can convert to other color spaces later after you make your color and tonal corrections.

Shoot the Sky

This isn't for everyone, it is for me though, you should try it. Shooting the sky is something I teach all my Nature Photography students in my BetterPhoto.com courses. It gives them an idea of something that's simple, and is always there!

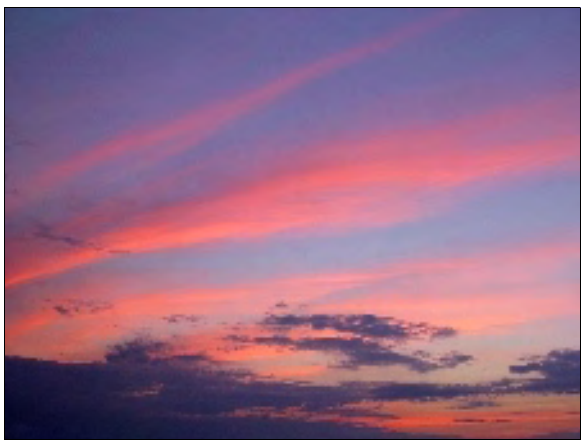


Looking for some great nature subject matter? Consider developing a portfolio of sky photographs. Just the sky, nothing else. Where else can you obtain images nobody else has? The sky changes minute by minute, and is never the same. That's right, no two photographs of the sky are the same, and they'll never be the same either. All you have to do is point your camera up, and shoot.



Here are a few of my suggestions for shooting the sky:

- **Set your camera to Aperture Priority Mode.** Set your aperture to f/5.6. You're shooting with a focal length set to infinity anyway, f/5.6 is probably your lens "sweet spot", or where its at its absolute sharpest.
- **Use a tripod in low light situations.** Unless you're shooting at a shutter speed over 1/500 of a second, use a tripod to insure utmost sharpness.
- **Shoot the sky just before sunrise, or just after sunset.** That's the time where you're going to get the best color in your images. Shooting at mid-day is going to give you uninteresting sky's, unless its storming out or you have some great blue skies with a nice mix of clouds.
- **Shoot at a low ISO setting.** To ensure low-noise images, set your ISO to the lowest setting on your digital camera.



Explaining 8 and 16 Bit Modes

RGB images are made up of either three 8-bit or 16-bit grayscale channels. Each of the three channels represents shades of red, green or blue (hence the acronym RGB). RGB represents the combination of the primary colors of light we see. 8-bit images contain up to 16.7 million unique color definitions of RGB. 16-bit images contain up to 35 trillion unique color definitions of RGB.

Your choice for image modes to setup for working with your images in Photoshop is to choose either 8 or 16 bit mode to work in. Whether you edit your image in 8 or 16 bit mode may also depend on your original image. If you capture JPEG images in your digital camera, the only choice you have is 8-bit mode. If you have your digital camera set to capture RAW or TIFF images, the wonderful world of 16-bit color awaits you.

OK, this technical stuff is interesting, but how does it affect editing our digital photos in Photoshop? The answer is simple. Every time we make an edit to an image, we wind up throwing away image information. The extensive our edits are, say changing exposure, color saturation or contrast, we throw more data into the trash. We want to make sure we have plenty of information to work with to guarantee our image edits do not degrade the color quality of an image.

The bottom line with which mode to use to edit images in Photoshop is to if you can choose 16-bit mode to guarantee you are editing images with as much information available as possible.

Not all Photoshop or Elements features are available to you in 16-bit mode, however with each new version of Photoshop, more functions become available. If you are shooting JPEG images with your digital camera, you will only be given the option to edit your images in 8-bit mode.

Features available for use in 16-bit mode include:

- All tools in the toolbox except the Art History brush tool.
- All color and tonal adjustment commands (except Variations)
- Layers and adjustment layers.
- An assortment of filters.
- Crop, rotate and image size adjustments
- Support for PSD and TIFF files

If you need to use a Photoshop tool or filter that is not compatible with 16 bit mode, save a copy of the file to retain its 16-bit mode status, then convert the image to 8-bit mode to enable you to use the tool or filter. Elements users need only to worry about 8 bit mode, as you can only make edits and adjustments in 8 bit mode in Elements.

Use the Gradient Tool For a Colorful Sky

One of the most requested techniques received from my students is how to color up a dull or "bald" sky. A sky in an image that is either vacant of any detail, or just plain dull. I'll often use a tool that is often overlooked by many Photoshop and Elements users, the Gradient Tool. Located in the toolbox, its an easy-to-learn tool that gives you many coloring opportunities that would be a great addition to your arsenal.

To add a little "punch" to your image, often to the sky or even the foreground;

Original Image. F/25, ISO 100, 6 sec

1. **Process your image like you normally do.** Make your color and tonal corrections using Camera Raw, or adjustment layers in Photoshop, and even the Quick or Full Edits in Elements (I just love the Quick Edit in Elements).

2. **Create a new "editing" layer. Type SHIFT+CTRL+ALT+E** on a PC, or **SHIFT+CMD+OPTION+E** on a Mac.

3. **Select the *Gradient Tool* from the Photoshop or Elements Toolbox.**

4. **Select your desired Gradient Color.** Click on the Foreground Color Selector in the Toolbox to choose your color. For this example, I chose the color **Red**.

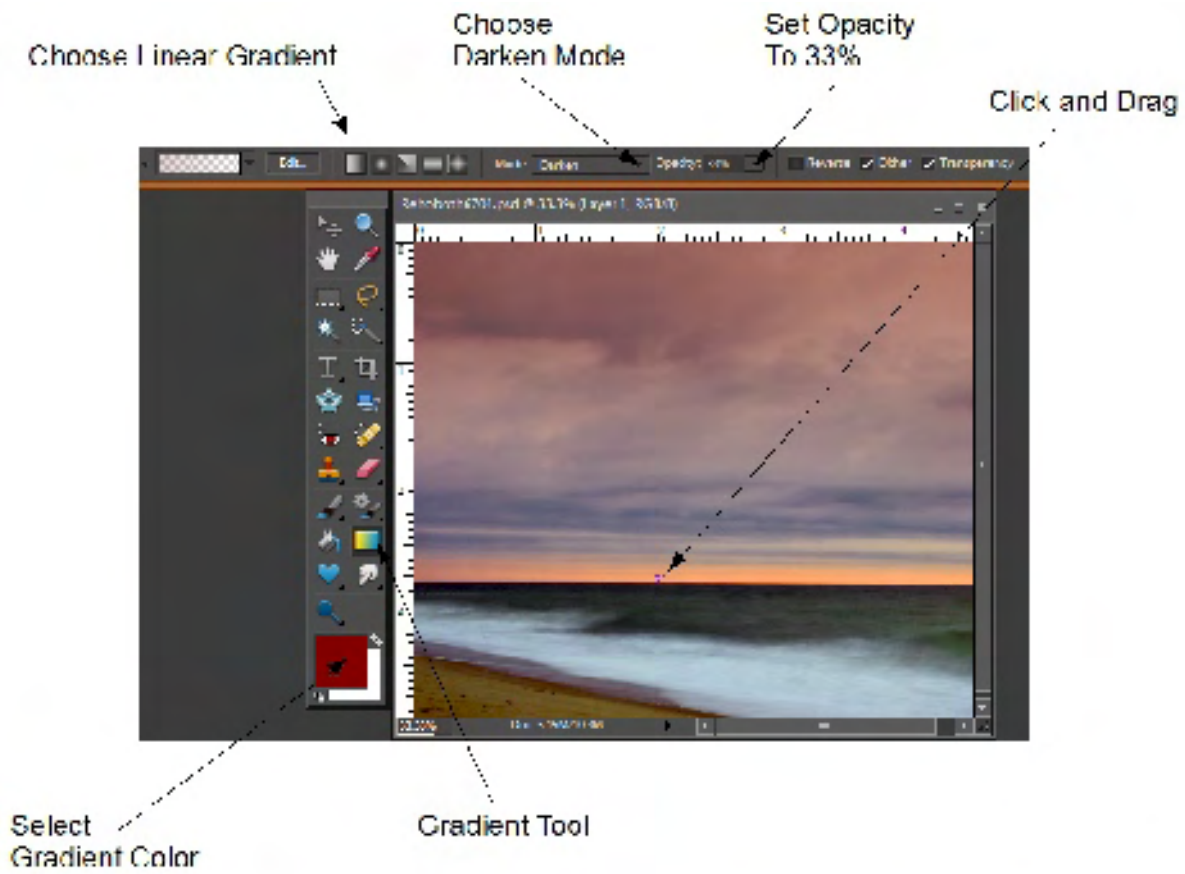
5. **From The Option Bar, Click on the *Linear Gradient* icon shown in the illustration below.**

6. **Choose *Darken* Mode from the Mode Selection Box.**

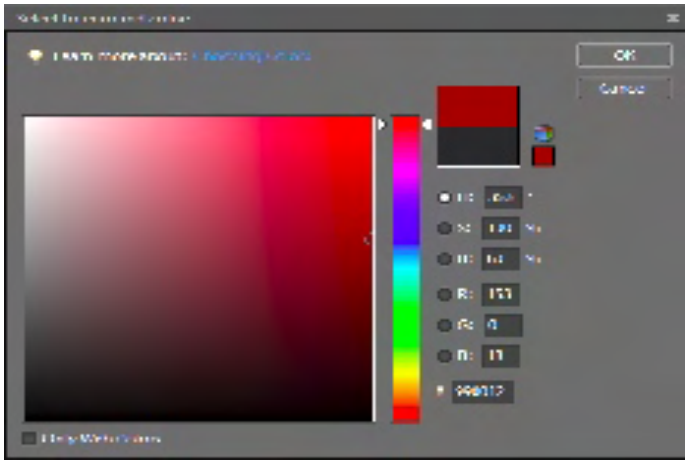
7. **Set your Opacity to 33%.** You can apply the gradient many times until you get the darkening that you want.

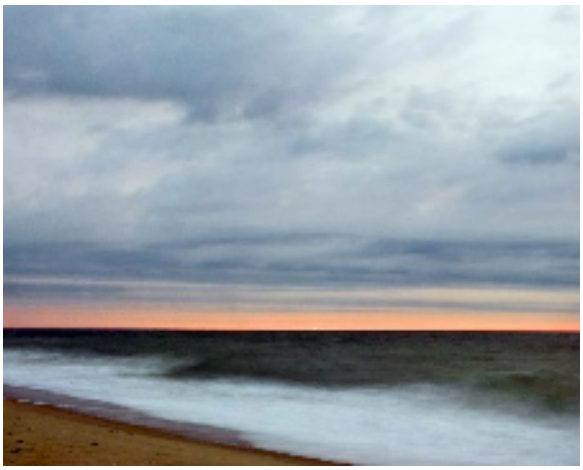
8. **Click the top middle of the image and drag the Gradient Tool ¾ of the way down. Repeat as necessary.**

Using the Gradient Tool



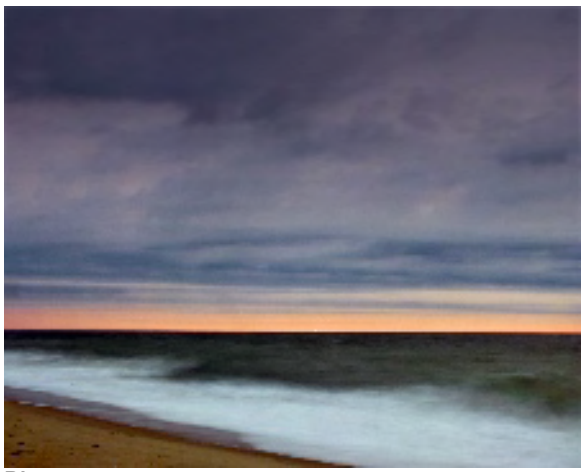
Other suggestions for using the Gradient tool for modifying a sky, or even other parts of an image include **Selecting different colors.** Be a creative or abstract artist. Select different colors from the color palette. Click on the Foreground color button on the bottom of the Toolbox, deselect the Only Web Colors selection box, and choose any color in the spectrum.



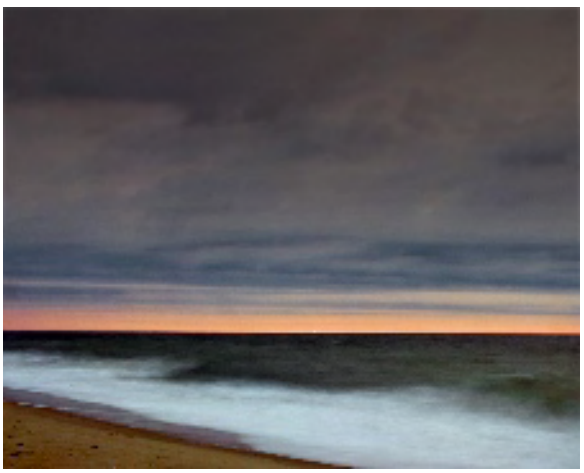


Original

Red



Blue

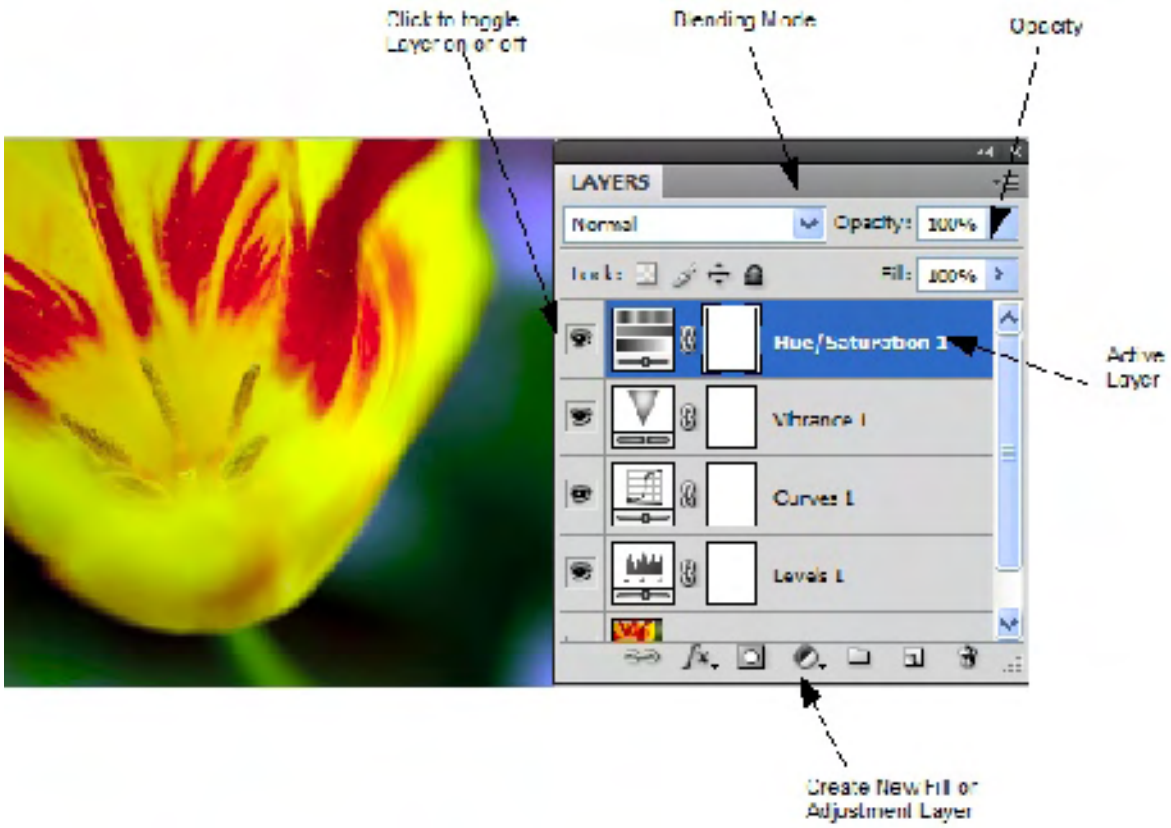


Grey

Understanding Layers

Working in Layers: The Sandwich Theory

An excerpt from The Digital Photographer Series: Photoshop Elements 7



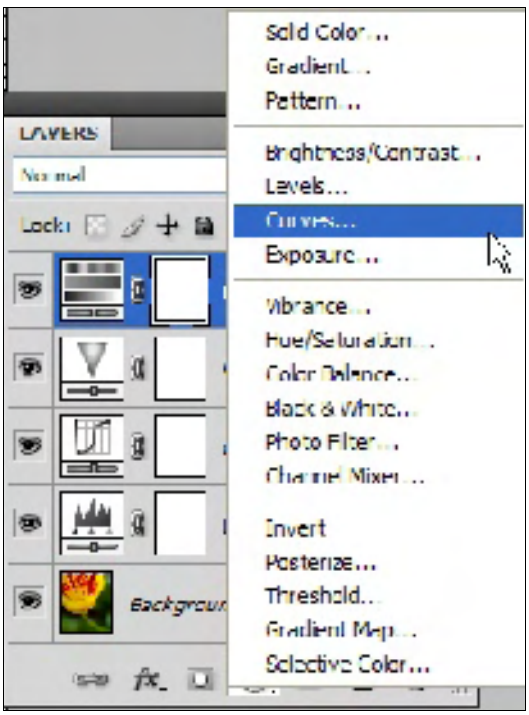
The Layers Pallet

I like to use the analogy of a big sandwich to describe the use of layers in working with images in Photoshop or Elements. I start with a couple slices of bread, or maybe three (you know, double-decker sandwiches)—the basis of every good sandwich. I then add a layer of lettuce, one of tomato, a layer of salami, and a layer of rare roast beef. Add a little layer of mustard, another layer of cheese, and I'm in heaven: a layered hero-sized sandwich. The idea is the same when you're using layers in your Elements images.

Like making a sandwich, editing images in Photoshop or Elements is also based on the premise of performing each individual change to an image on its own layer. Think of each layer as a transparency, and each transparency as containing a particular change. When you open an image file, the original image is used as a background layer. Add a layer to make an adjustment, and that layer is placed on top of the background layer. Each new edit is contained on a new layer, stacked from the bottom on up. Stack the images together, and you have a composite image: a finished product, just like my sandwich.

Now I'm getting hungry!

The Layers palette contains all the layers that make up an image. You use the Layers palette to control all layers; you can create new layers, hide layers, and work with groups of layers. With all these layers, maybe we should be calling images processed in Elements digital sandwiches.



The Layers palette, shown with the Create New Fill or Adjustment Layer flyout menu

By default, the Layers palette is visible. If you inadvertently close the Layers palette while you're working in Elements, you can always start it up again by choosing Windows, Layers or by pressing the F7 key.

Following are some important facts about working in layers:

- **Background layer.**
  When you're opening an image file, Elements and Elements creates the bottommost background layer. There are certain changes that cannot be made to the background layer in Elements: You cannot delete, reorder, or change the opacity or blending mode of the background layer.

Tip: Before editing your image, always make a duplicate of the background layer. It is a best practice to not perform edits to the background layer. Reserve that layer as the original on which to base all your edits: It's your backup parachute in case anything goes wrong.

- **To show or hide the contents of a layer, click the eye icon.** If the eye icon is visible, the contents of the layer are visible. If the eye icon is not visible, the contents of the layer are hidden.

- **Rename layers by double-clicking the layer name and typing the new name.** You want to make sure that your layers are named correctly, pertaining to the particular adjustment or edit you are making to that layer. It helps you remember what you did in that layer later if you save the file, and then go back to it days or weeks later.

- **Click and drag to change the layer order.** To change the order of your layers, click a layer and drag it to the position where you want that layer to appear.

- **Create new layers from the flyout menu.** Click the Create a New Layer button. Choose the layer type from the flyout menu. You can also create a new layer by dragging an existing layer to the New Layer button, which is located on the bottom of the Layers palette.

- **Drag to delete layers.** Click the layer and drag it to the trashcan icon located on the bottom right of the Layers palette. You can also right-click the layer and choose Delete Layer from the flyout menu. If you're using a Mac, simply select the layer in the Layers palette and click the delete button on the keyboard.

- **Flatten layers.** Flattening layers combines all layers into one. When you flatten an image, your ability to make changes to individual layers is lost. Flattening layers is usually performed to create a version of an image to print or to submit for publishing.

  If no layers are selected, the entire image is flattened into one layer with the top layer's name. If two or more layers are selected, only those layers are combined into one layer, again taking the top layer's name.

Tip: To maintain your image edits, save your image before flattening it and save the flattened version of your image file using another filename.

Adjustment and Fill Layers

Adjustment layers allow you to change color or tonal values of an image without affecting the original (background) image. When you create an adjustment layer, changes made in that layer are viewable along with all the adjustments you made in the layers underneath it. You can use adjustment layers to make enhancements to levels, curves, color balance, brightness/contrast, and color saturation.

An adjustment layer affects all the layers beneath it in the Layers palette. The advantage is that a change made to an adjustment layer doesn't need to be repeated in the layers stacked beneath it. For example, if you want to change the brightness of an image, you only have to make that change once to the overall image.

Fill layers allow you to fill the layer with solid colors, gradients, or patterns.

The following list describes the types of adjustment and fill layers you can use in your image-editing workflow.

- **Solid color.** A solid color layer is considered a fill layer. Create a solid color layer to fill an image with a color. You can also use it to create a colored background for an image.

- **Gradient fill layer.** You can use gradients to apply a color in a transition from light to dark. They are useful for creating dark-edged vignettes for some images or for creating transitioned color backgrounds. You can also use gradients to create some cool image special effects. You can also experiment with images by adding or reducing the opacity of the fill layer.

- **Pattern fill layer.** Create a layer containing a pattern from the Pattern menu. Adjust the layer's opacity to strengthen or weaken the pattern effect.

- **Levels adjustment layer.** This is the first tonal adjustment I make in my workflow. You can make adjustments to levels of red, green, blue, and midtones in this layer.

- **Brightness/Contrast adjustment layer.** Want to "punch up" the contrast in the image? Use the Contrast slider in a subtle manner.

- **Hue/Saturation adjustment layer.** This is my favorite of them all. One of the last steps in your image-editing workflow is creating a Hue/Saturation layer and punching up the color saturation in your image to make the color in your images pop.

Get Up Early and Shoot the Sunrise

ISO 100, f/16, 1/250 sec. Nikon 70-200mm f/2.8 ED VR, Nikon TC 14E II Extender

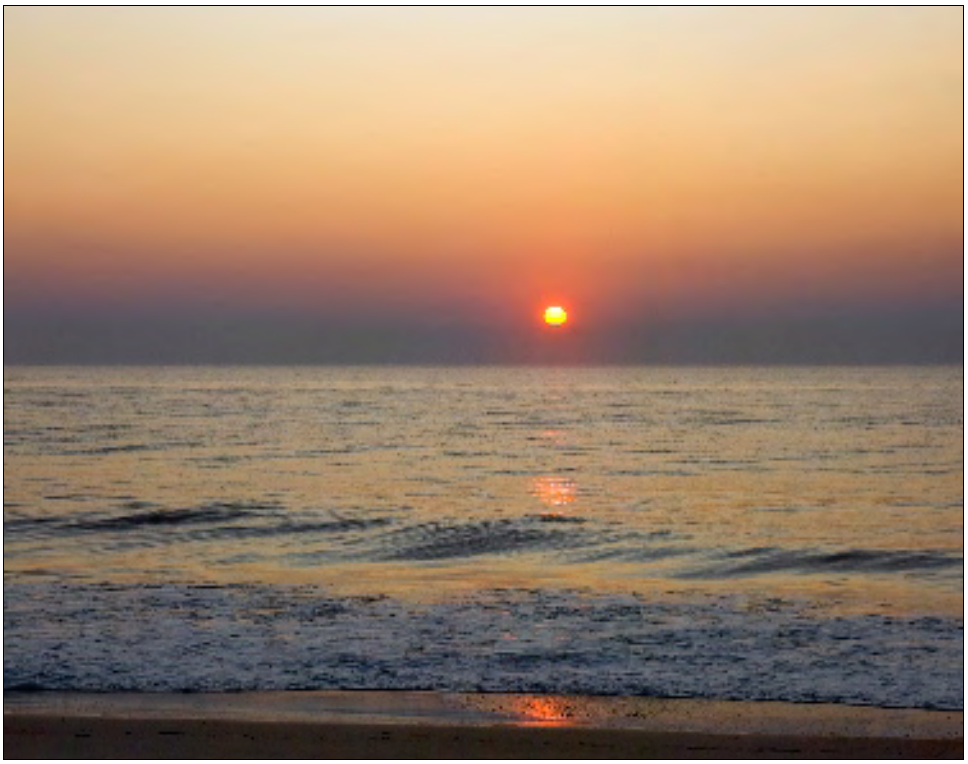
As a photographer I'm known for my extensive portfolio of sunrises and sunsets. I've been photographing these for years, and I will the rest of my days. Its a personal pursuit and an effort that involves lifelong learning. For years, I've had enough images for a photo book on the subject matter, however, for most of my outings, I'm just doing it for personal enjoyment. I'll be getting around to publishing that book eventually, my problem is going to be choosing which 150 of my best sunrises and sunsets to choose.

Whether on family vacations or photo expeditions, if I'm near water whether it be lakes or oceans, I always make it a point to get up early, an hour before sunrise, and travel to the shore to greet the new day shooting the sunrise. With coffee of course.

Why sunrises you ask? For me, its a reason to get up early. Artistically, you also can't get more original subject matter to choose from, either day to day, or minute by minute. No two sunrises (or sunsets) are the same. Not only that, the sky changes by the minute, 30 minutes before the sun rises all the way to an hour to after the sun appears on the horizon. The water is different, the

clouds are different, the haze is different. The birds are different. No two images will be same. Now that is originality!

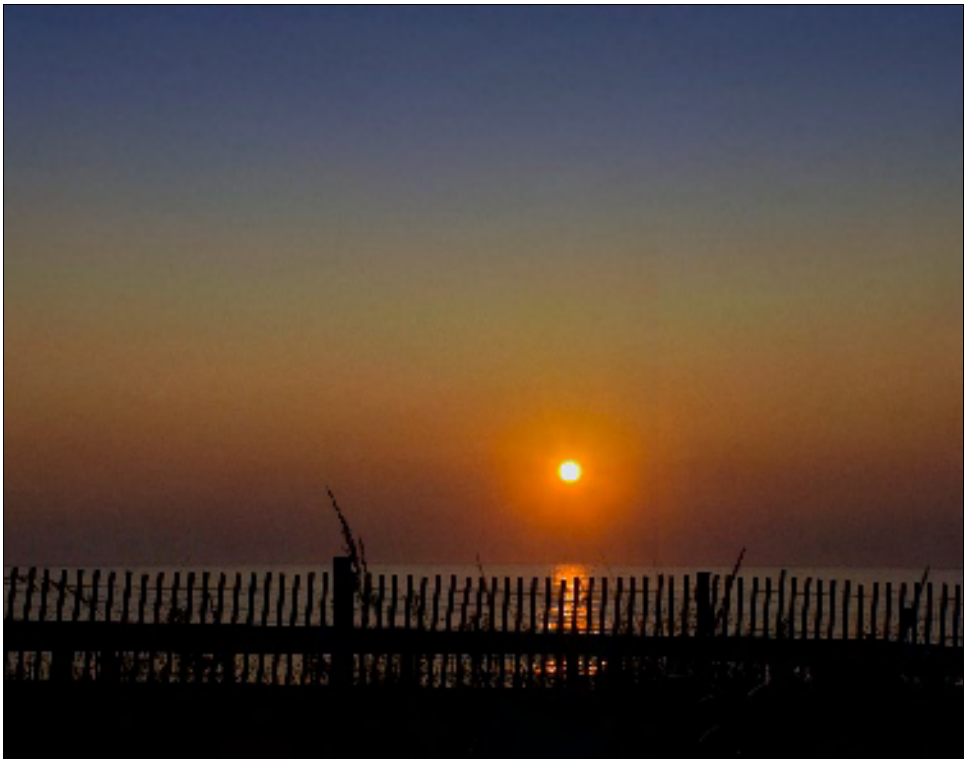
I do have a set technique that's consistent from morning to morning for shooting the sunrise, but I do have a few habits that I start the day out with first:



ISO 100, f/11, 1/125 sec

1. **Make the coffee first.** I don't know about you, but I need that boost of caffeine in the morning to get me going. Its the first thing I do, quietly! I prefer fresh ground Starbucks by the way. Double cream, no sugar.

2. **Check my equipment.** I actually do this the night before, but If I forget, I'll do this while the coffee is brewing. Make sure I'm using charged batteries. Check to make sure my lenses and protective UV filters are clean. Make sure my settings are where I want them on my camera. Lowest ISO setting for optimal quality, set to Auto White Balance (too early to mess with custom settings for me!), and set to Aperture Priority.



ISO 100, f/16, 1/250 sec

3. **Make sure my tripod is clean:** Shooting sunrises and sunsets also means that your tripod has to be clean of mud and sand. Sand is the enemy of a well functioning tripod and ballhead. I don't want to get to the site, and have an equipment malfunction! Its happened before to me, and I've learned from that mistake.

4. **Take out the Dog and Feed Him:** Not to be in danger of the dog waking up everyone, I always make sure I take the cutie out, and then feed him before I make my way down to the shore. That way, I'm not dealing with angry family members woken up by a hungry dog when I get back. Trust me on this one!

As far as technique, I have have a few that have served me well:

- **Get to your location a minimal of ½ hour before sunrise.** This gives you a chance to give yourself time to setup your spot in the optimal location. Do you want to get right on top of the water if you're shooting over a body of water, or to a mountain range to get the sun rising over the horizon? Give yourself a little extra time to pick an optimal spot. Once the sun starts to rise, you want to concentrate on shooting, not moving.

ISO 100, f/16, 1/4 sec

- **Don't wait for the sun to rise before shooting.** Some of the most breathtaking images I get are taken within a few minutes before the sun breaks over the horizon. The same could be said for sunsets. You'll get the most dramatic skies just before the sun comes up, or after the sun goes down.

- **Use a steady tripod and good quality ball head.** I can't stress this point across more throughout this book. The key to sharp images is good technique, backed up by a high quality tripod and even better-quality ball head. I shoot the majority of my images on a tripod, and learned a long time ago not to skimp on these two. You could have the best quality camera and lenses, but without good sharp shooting technique and equipment, your images will be of poor quality.

- **Focus Mid-Foreground to the Horizon.** My focus point is half-way to the horizon. If that's a great distance (more than infinity), I'll feel setting my aperture to f/8, the sweet spot of my lens. By focusing ½ the distance to the horizon, you can be assured that both your foreground and background of the image will be in focus.

- **Use a Remote Shutter Release.** For low light images, it is essential that you shoot with a remote shutter release or your camera's **self-timer**. You don't want to introduce vibration in the camera by your finger pressing the shutter. Both Canon and Nikon offer inexpensive remote shutter releases.

- **Take time to compose your image.** I see a lot of other photographers work. Often, especially when shooting sunrises over water, the photographers will have a tenancy to compose their images with ½ the frame to the sky, and ½ the frame to the foreground, thus cutting the image in half. I recommend composing the scene 2/3 to the sky and 1/3 to to the foreground, or reverse.

- **Add the human element.** To add scale to your image, don't be afraid to add a human element to the foreground of your scene. A boat dock, a fence (as seen above), a small building will add drama to your sunrise or sunset.

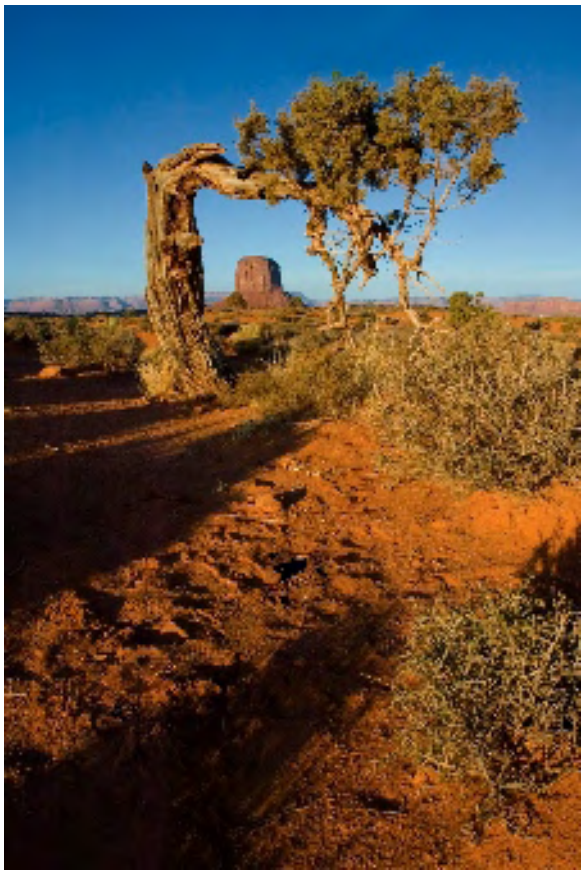
- **Be patient and wait ½ hour to 45 minutes after sunset or sunrise.** The event with the magic light doesn't exist at any certain time before or after the sun rises or falls over the horizon. Lighting and color of the sky changes by the minute. Arriving ½ hour before sunrise can result in your best images, depending on the conditions. Same goes for the 45 minutes after sunset. The color in the sky deepens, and you can get some excellent shots of the sky far after the sun falls for the day. Be patient, and you'll be rewarded.

30 minutes before sunset, Canyonlands National Park, ISO 200, f/13, 1/2 second

The Importance of a Good Tripod

As a nature and still life photographer, I shoot 98 percent of my photos on a tripod. It's a habit I grew into years ago and I can swear by the results. A tripod is the second most important piece of equipment you could ever use; the first most important piece of equipment is a *good* tripod.

To help drive my point home, I'll tell you a little story. While out on a recent photo trip to the American southwest John Baker and Travelimages, I was shooting some scenes at Monument Valley, Utah. One scene, shown in Figure 3.1, was particularly difficult. I tried different angles, but our tour leader had a better idea—get as low as you can to obtain a better angle. It was a great shot, but I got lazy and thought I had enough light for a sharp photo, even at f/22, so I hand-held the shot so I didn't have to reconfigure my tripod. Wrong! I noticed after I got the photo in Photoshop and zoomed in that parts of the frame were not focused to my taste.



This photo was taken without a tripod. Further examination after zooming in shows where the image is "soft" and not too sharp. This is bad if you want to enlarge your photo to larger than 8X10 inches.

Different Tripods for Different Folks

When friends ask me what type of tripod they should get, I get stumped. That blank and confused look briefly appears on my face until I formulate an answer in my head. After composing myself, I break the rules and answer a question with a question: What type of shooting do you do? You see, I can recommend a number of different models of tripods, but the answer depends on what type of shooting people do, how physically fit they are (some of these three-legged wonders can weigh a lot), what type of camera equipment they haul, and finally, how much money they have to spend on one.

If you don't have a tripod or feel you need to upgrade the one you have, keep the following criteria in mind:

- **Camera type.** The type and weight of a camera greatly determines the tripod you can use. Nature photographers often take long hikes and prefer to carry the lightest tripod, but one that is sturdy enough to reduce any vibrations. If you're shooting with a compact digital camera such as the Canon G11 or the Nikon Coolpix 6000, you're probably not going to need a 12-pound tripod; a lighter-weight tripod should do the trick. The Hakuba MAXi-343E weighs just 1.9 pounds and is easily strapped to your camera bag for those long hikes. The model has been replaced by others, but if you're using a lightweight camera, one of these sturdy, lightweight tripods should do the trick. I should know; I traveled across Wales and England with one this year, and it was a pleasure not to haul a 10-pound tripod along. I was shooting with lightweight cameras and lenses, and the Hakuba served me just fine.

Hakuba sells sturdy, lightweight tripods that fold to 17.5 inches and weigh less than two pounds. This is perfect for use with a compact digital camera, such as my compact Nikon, shown here.

The Manfrotto 055CXPRO4 weighs less than 4 lbs but can handle up to 17 lbs of gear

- **Weight**. The one determining factor that's more important than most others is the amount of weight your tripod has to support. Although a light was great for a compact digital camera while traveling abroad, most of my shooting in the field is with digital SLRs and big, heavy pro-model zoom lenses. The combined weight of my digital camera and zoom lens exceeds five pounds, and I opt for one of my heavier duty models.

- **Material.** Another consideration in your decision is the material your tripod is made of. Metal is less expensive, but if you can, you should seriously investigate purchasing a carbon-fiber tripod. These carbon-fiber models are becoming very popular with nature photographers; they weigh a lot less than

metal and are a pleasure to take on extended hikes. Be prepared to spend 50 percent or more for carbon-fiber models though; they are more expensive, but to many of us they are well worth the price if our photography adventures take us on extended hikes.

- **Versatility.** I hate using that word—it sounds like I'm in advertising, which I'm not. However, one of the features you want in a tripod is versatility—the ability to not only extend the legs wider than the standard setting, but also to use interchangeable tripod heads. For shots where you need to get down low to the ground, you need a tripod with legs that can extend outward, allowing you to mount your camera only 12 inches or so off the ground. I've found this feature extremely valuable in the field. On some models, you can even reverse the tripod stem and mount the camera upside down.

It's All in the Head

When you make a decision about a tripod, the next thing you'll need is a tripod head. The same rules used when selecting a tripod hold true for selecting a tripod head. You'll need to take into consideration the weight of the equipment you'll be attaching to the head, the type of head that will best fit the type of shooting you'll be doing out in the field, and of course, the price. Basically, there are two types of tripod heads nature photographers prefer:

Good for a heavy load: Manfrotto 3030 Pan/Tilt Head attached to my Manfrotto 3221 Wilderness tripod,

- **Pan tilt heads.** Pan and tilt heads are the most popular tripod heads used by photographers, and for most of your nature shooting, a pan and tilt model should serve you just fine in many situations. Pan and tilt heads allow you to move your camera vertically and left to right (for panning), and to flip your mounted camera to the vertical position for shooting in portrait mode. Its a sturdy head, more than a match for my heavy lenses. I used to use one of these before switching to a sturdy ball head.

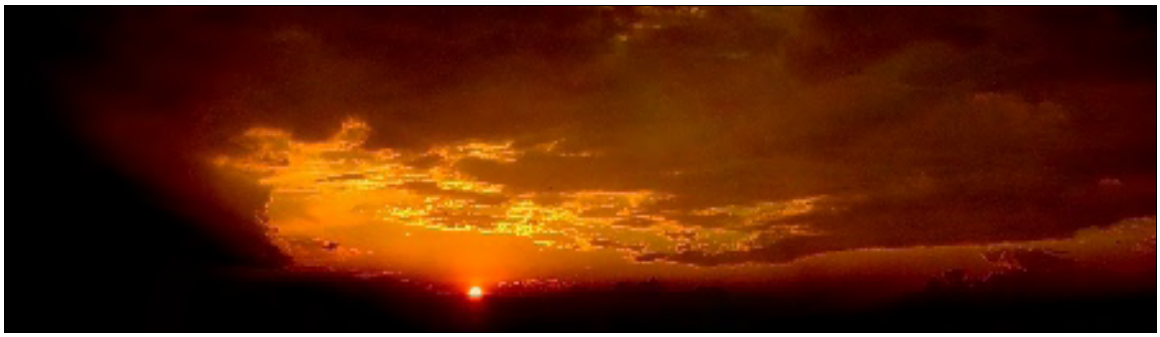
Whatever tripod head you choose, make sure you purchase a quick-release model. A quick-release trip head lets you attach a plate to your camera's tripod socket, which in turn is inserted into a slot on the tripod head, and then secured with an easy-to-use clamp you can tighten with your thumb. Quick-release heads let you attach plates to multiple cameras and lenses with tripod mounts, giving you a fast option for changing cameras or lenses without screwing in your camera to a tripod every time you want to use it.

The Manfrotto 486RC2 ball head is a popular model among nature photographers.

- **Ball heads.** I've had other nature photographers bug me because I'd often travel with only a pan and tilt head attached to my tripod. Finally, on a recent trip, I tried a ball head. I immediately fell in love with its versatility, and I can see why users of ball heads brag. They are fun to use and give you better flexibility for shooting wildlife or scenes where you have to point your lens high, toward the sky. The figure shows the Manfrotto 486 Ball Head, like the one I've used in the field.

If you're not setting up more than 5lbs, I strongly suggest the Manfrotto 322RC2 Horizontal Grip Action Ball Head

Shooting and Stitching Panoramas



Lake Huron. 3 separate images stitched with Photoshop CS4 Photomerge

With the popularity of stitching software and hence great improvements to Photoshop and Elements in recent years, its now easier to stitch separate images together to create dramatic panoramic photos. The hard part, is shooting these with the purpose of stitching later. Unlike single frame photographs, shooting a series of 3, 4 or even 5 images and making them exact in exposure and composition is another challenge.

Upon special requests from my current Elements and Photoshop students, here is a quick lesson in shooting, and stitching panoramic images.

Basic Necessities for Shooting in the Field

When you're in the field, shooting panorama's takes a little practice, a little patience, and a little bit of technique. Here are a few necessities that I recommend:

- **Have a good tripod.** I stress throughout my writings that a good tripod is a necessity. The tripod and head will allow for smooth and accurate panning that will be needed when shooting panoramas, and ensure that you're getting crisp images.
- **Use a level. I**f you're tripod head doesn't come with a level, I recommend one of those nifty levels that you can get for under $50 U.S. that will fit right in you're camera's flash head.

Shooting Panorama's

Shooting panorama's should be included your everyday photographic "toolbox". When you're out in the field, pre-visualize any scene, and make decisions on how you want to compose those scenes. Some scenes are more appropriate to be shot in portrait mode, while others are more appropriate for landscape mode. Additionally, some scenes may be good candidates for panoramic mode as well. Three or four overlapping images that compose a wide angle from left to right, a composition that you just can't take with one frame.

3 frames, overlapping by 1/3 of each frame, taken left to right

When shooting panorama's, try this technique:

1. **Level your camera.** Keep your camera mounted on a tripod, and pan the scene left to right while viewing the scene through your viewfinder. Make adjustments to your tripod head to make sure that the scene is level, and that when you're panning, your not "crooked" from left to right.
2. **Plan how many frames you'll be shooting.** Typically, I try to capture my panoramic images in three or 4 shots, maximum.
3. **Zoom wider than needed.** This is an important tip. Shooting at a wider zoom setting than you feel is needed for the composition gives you the option to crop the scene to the composition you want later in Elements or Photoshop. By shooting at a wider angle, you can then compensate for lost content when the frames are stitched together. Trust me on this!
4. **Focus the scene with manual or autofocus.** When you're finished focusing, turn off the autofocus on your camera. This way, your focus will be locked, and consistent from frame to frame.
5. **Meter the scene.** I use spot metering a lot, but may use one of many metering schemes depending on the lighting conditions of my subject matter. Whatever metering you choose, when complete, use the A/E lock feature on your camera, or, you can read the f/stop and shutter speed, and dial in these settings in manual mode. Regardless how you do this, the f/stop and shutter speed must be the same for each frame you are shooting.
6. **Take your series of photographs.** Now that your camera is level (at least the best you can), focused and metered, you're ready to go. Compose your first shot to the left, and take the photograph. Slowly "pan" to the right, but not all the way, you want to leave 1/3 of the frame "overlapping" from the previous frame. Take the shot. Repeat panning to the right, overlapping 1/3 of the frame over the previous frame. Take the shot again.

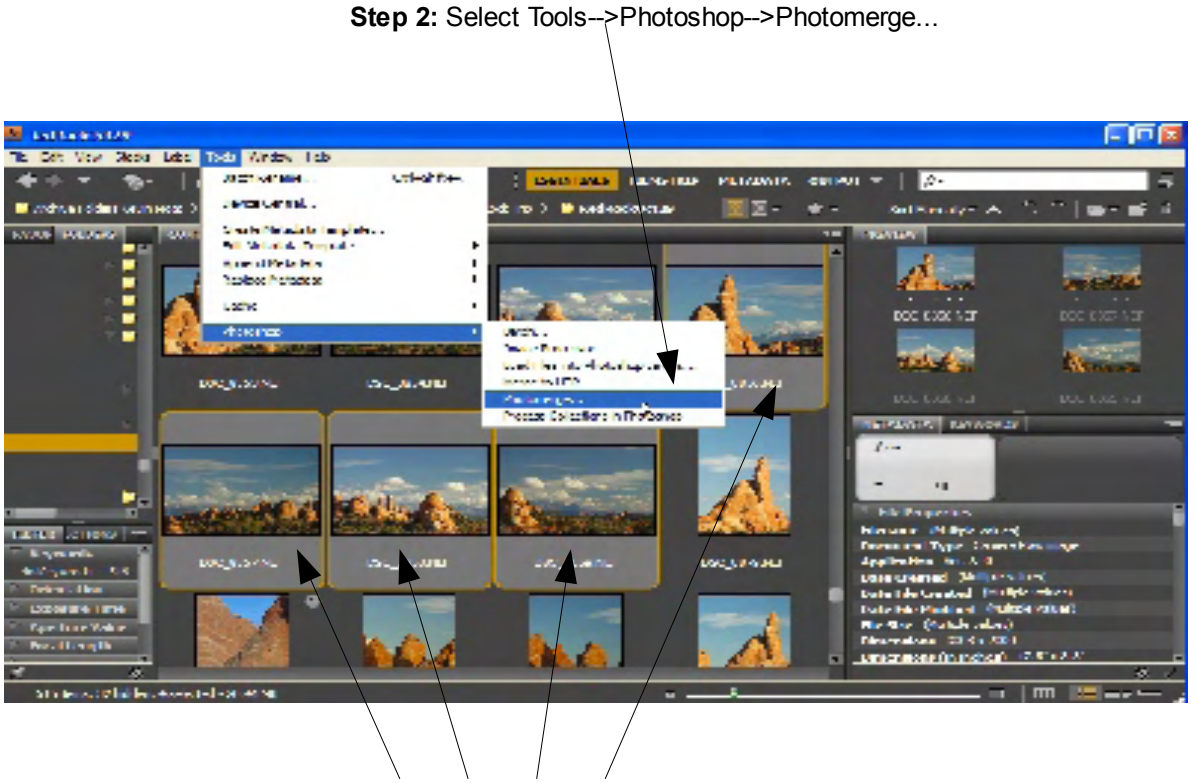
7. Review your 3 or 4 shots on your LCD. Scroll through the images on your cameras LCD to make sure you have good exposure, and that the frames are reasonably level. If needed, make metering, leveling or focus adjustments, and repeat the process.

Using Photomerge to Stitch Panorama's

Here comes the fun part!

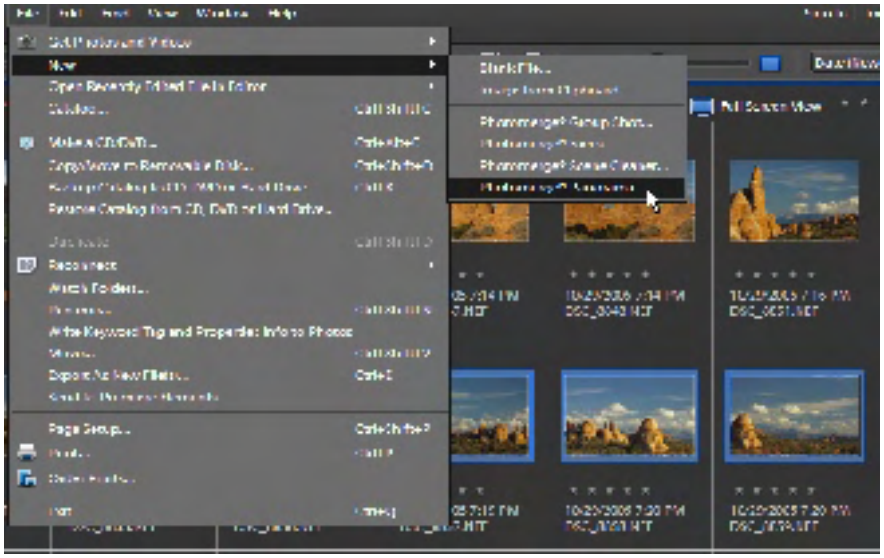
Both Photoshop and Elements comes with a nifty feature used to stitch panorama's called ***Photomerge***. The steps to stitching together your panorama frames are:

1. **From Bridge hold down the CTRL (CMD key on the Mac) while clicking on the images you want to stitch together.** You can do the same in the Elements Organizer for Elements users.



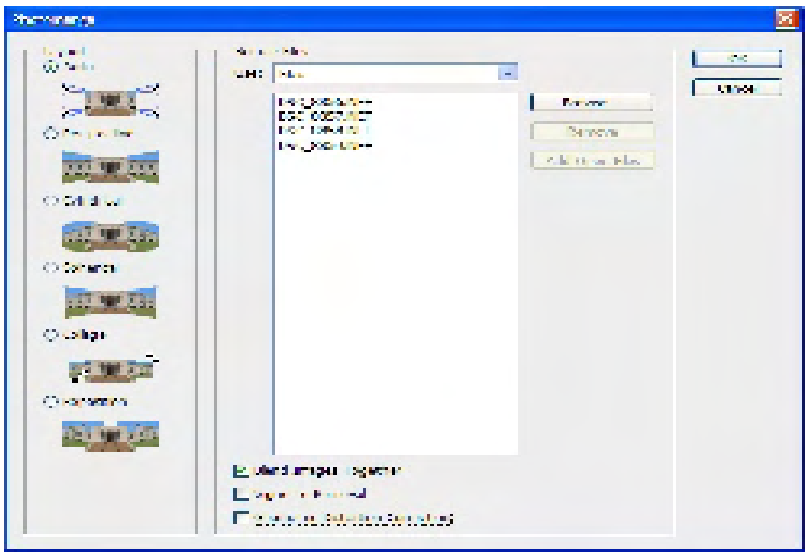
2. **Choose Photomerge from the Tools Menu**. Click on the Bridge Tools menu, and select Photoshop-->Photomerge. Bridge will then proceed to open the images in Photomerge.

Elements Users should choose New from the File menu, and choose Photomerge from there.



In Elements, Photomerge is selected from the File-->New-->Photomerge Panorama menu

3. **Select Photomerge Options.** The Photomerge file window will next appear in Photoshop. From this window, you can select options for how your images will be arranged when they are stitched together in Photomerge. Here you choices for layout, blending, vignette removal and geometric corrections (Please note, blending, vignette removal and geometric corrections are not an option in Elements). For our purposes, I'm leaving the defaults shown. Click OK to proceed to the merging your chosen images.



Stitched images shown in Photoshop CS4, with crop outline shown

4. **Crop your panorama.** Shown in this illustration, you'll see that Photomerge has stitched the images together. This composition is a good example of why your camera should be level when shooting your frames, panning from left to right. Because the camera was not level, you'll see why I recommend to shoot your images at wide angle, as you need to then crop your image at this point.

5. **Complete edits, color and tonal corrections.** My plan for this image, is to first crop the image in Photoshop, and fill in the upper portion of the image with a sky painted in with the Clone Stamp Tool. I'll then add adjustment layers to improve Levels, Curves and Hue/Saturation to finish the image off.

Completed Panorama

Essential Tools from the Toolbox

I've stated in many articles and books that there is always more than one way to skin a cat in Photoshop or Elements. For every process you go through, whether it be a color adjustment or edit to an image, there are probably 5 or 10 other ways to accomplish the same thing in Photoshop or Elements.

The Photoshop or Elements toolbox gives the photographer a number of editing tools in which to make changes to a photograph or graphic. Last I counted, there were over 80 of these tools available in the toolbox. Mastering all probably isn't necessary, but for photographers, there are a few that you might want to practice on. Whether you're using Elements or Photoshop, most of these tools work the same.

- **The Paintbrush.** The Paintbrush in Photoshop and Elements includes the Color Replacement, Impressionist Brush, and the Pencil Tool. Just Right+Click on the Paintbrush, and you'll see those other tools as well. The Paintbrush is a tool often used by graphic artists and photographers alike. Choose a Foreground color by clicking on the Forgeround/Background color tool in the bottom of the toolbox, pick a color, and paint in the color anywhere in the image or graphic.
- **Color Replacement Tool.** Use this tool to select a color from any spot in the image (just ALT+CLICK on any spot), and paint that chosen color elsewhere in the image.
- **Pencil Tool.** Like the Paintbrush tool, the pencil tool paints in color you choose, however with harder lines.
- **Impressionist Brush Tool (In Elements Only)**. This tool is a little artsy, and is available in Elements only. Choose this tool to paint in an Impressionist painting effect.

The Elements Toolbox

- **Rectangular Marquee Tool.** Used often to outline a portion of an image in order to crop. After outlining the portion of the image to crop, go to the Image menu, and choose Crop.

- **Lasso and Magic Wand Tools:** These tools are used to make selections in images. Used often in order to make edits or color/tonal adjustments to selective portions of an image. These tools take time to master, so pick images to practice on! The Quick Selection Tool and the Magic Wand tool are the selection tools of choice for the photographer.

- **Crop Tool:** I use this tool for almost every image I work with in Photoshop or Elements. You can specify the height, width, and dpi for the image in the Option Bar, then click and drag your crop to both crop the image, and to resize it according to your Option Bar entries.

- **Eraser Tool:** Located in both the Photoshop and Elements toolbox's, the Eraser tool is used to erase previously executed edits. Change the Eraser tools Opacity setting in the Option Bar, and you can "reduce" painted in effects or edits previously made to your image. Leave the setting at 100%, and you'll completely erase painted in effects.

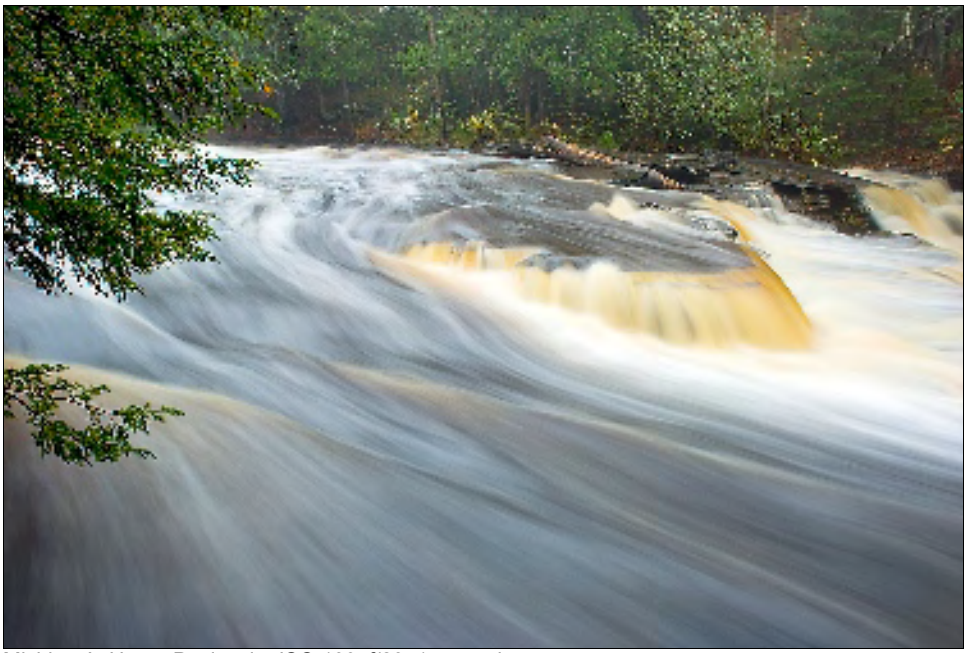
- **Smart Brush/Detail Smart Brush (Elements Only).** Nice additions to Elements. With these brushes, you can make a selection AND make color/tonal changes to your selected part of your image both at the same time. Options for effects made to the selected areas are available above on the Option Bar.

- **Clone Stamp Tool.** Used often by photographers, this tool allows you to choose a portion of the image you want to paint in another part of the image. Again, first choose the "source" by ALT+CLICK (OPTION+CLICK on a Mac) on an area of your image, then paint in the "cloned source" to another part of the image. I often use this to clean up the sky, or to even remove power lines. The Pattern Stamp tool works similar, however instead of choosing a source from the image itself, you choose the source from the Photoshop or Elements pattern library. A potential "cool" special effects tool!

Tip: When making edits with these tools or adding effects from the Filters menu, create a new editing layer by typing SHIFT+CTRL+ALT+E, or on a Mac SHIFT+CMD+OPTION+E. You'll create a new layer that includes all your previous layers in which you can make edits. Remember, you can't make edits in Adjustment layers...

Photographing Waterfalls

Michigan's Upper Peninsula is blessed with some of the most dramatic waterfalls in the country. Often, I'll return to the same sites to shoot the same waterfalls I might have shot years ago. My techniques keep getting better, and sometimes, weather conditions are better one year from the other years. My suggestion: Never be hesitant to return to the same sites you've visited before. Practice can make perfect! With repeat visits, you'll learn the area better, familiarize yourself with the best lighting conditions for the subject, and compose your shots differently than in the past.



Michigan's Upper Peninsula. ISO 100, f/20, 1 second exposure

My tips for optimum waterfall shooting include:

- **Lighting:** Like shooting trees in autumn, the best lighting is overcast, especially in between rain storms. In the Upper Peninsula, it rains almost every day in the fall. You want that dark diffused lighting in order to slow down your shutter speed.
- **Shutter Speed:** In order to get that blurred-smooth-flow look to your waterfall scene, you need to shoot at a shutter speed of 1 to 1.6 seconds. In order to achieve a properly exposed scene at those slow shutter speeds, you'll need to set your aperture to a setting of f/16 or smaller, up to f/22. You'll get great depth of field, with the entire frame in focus too. If the lighting is too bright to bring your shutter speed down to 1 to 1.6 seconds, try a neutral density filter.

Bond Falls, Michigan. ISO 100, f/22, .8 sec

- **ND Filter:** A neutral density (ND) filter is a must for waterfall shooting. Placing an ND filter over your lens reduces the amount of light, thus decreasing the shutter speeds to accommodate the reduction of light, without affecting color in your scene.
- **Tripod and Remote Shutter Release:** At shutter speeds of 1 to 1.6 seconds, use of a tripod, a good tripod is a must. Additionally, at those speeds, you'll also need the assistance of utilizing a remote shutter release. Using a remote shutter release eliminates any vibration introduced to your camera when your finger actually presses the shutter. Trust me, a remote release, available for almost all camera models, makes a huge difference in obtaining sharp images. If you don't have a remote shutter release, try the "poor-persons remote shutter release".
- **Your Camera's Self-Timer:** Using your cameras self-timer feature will accomplish the same effect as using a remote shutter release. When this feature is set, you press the shutter, and the camera doesn't expose your film or image sensor for a pre-set number of seconds. Setting your self timer to 5 seconds will allow for any vibrations to cease when pressing the shutter button.

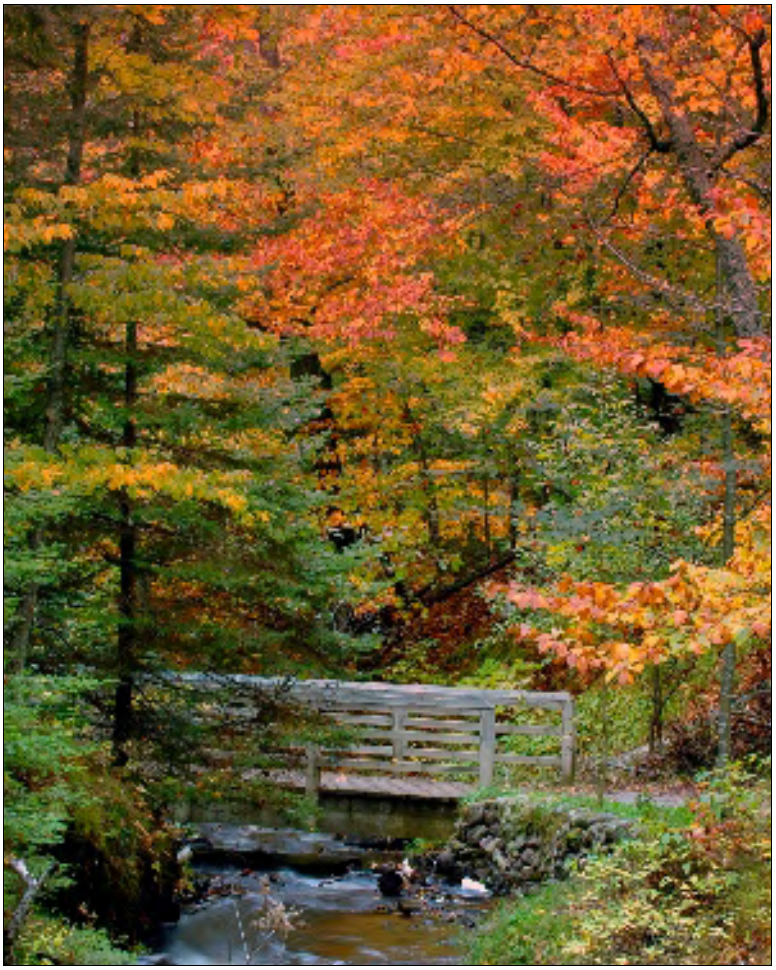
Wagner Falls, Munising Michigan. ISO 200, f/18, .5 second exposure

Photographing Fall Color

One of the tricks to photographing spectacular fall color, is knowing where and when to go. Living in the U.S. Midwest, areas of peak fall color differ greatly within each region. For instance, peak fall color along the shores of the Great Lakes often lag a few weeks from peak color just 20 miles inland from any point. Factors such as altitude and shorelines have a big impact on timing. The type of vegetation also has an impact.

Porcupine Mountains, Lake of the Clouds, Michigan's Upper Peninsula. ISO 100, f/8, .4 second exposure. First week of October, 2007 with the Motor City Camera Club.

Often, I make a trek to Northern Michigan during the last week of September through the first week of October. From experience and trial and error spreading thousands of miles over the years, I have learned that the eastern half of Michigan's Upper Peninsula (also called "the UP") was heavily logged over the years and replanted with pine tree's, wasn't a good choice to look for color. Lets face it, pine tree's look the same in all four seasons, green!


Munising, Michigan. ISO 200, f/20, 2 sec exposure

The place to go in my neck of the woods for fall color in the U.P. is the western half, where plenty of hardwoods abound, and that means some blazing color. That area peaks the last week of September, while the eastern half of the peninsula peaks one to two weeks later. Lower latitudes within the state can peak 2 to 3 weeks later. Michigan isn't any different than any other northern state or Canadian provinces. Timing depends on geography.

Your window for fall color shooting in your area is probably only a few weeks a year. Additionally, you don't have to travel far. You can get some great fall color shots within a mile of your home if you look hard enough, maybe even as close as your own backyard.

One of my favorite types of tree's to photograph any time of year, is the birch tree. The white bark of the birch tree provides great contrast in images where your type of flora is mixed. In other seasons, I'll look for groups of birch trees, and often develop those images as black and white, but in autumn, I look for birch trees as my main subject, contrasted with color.

I'll offer some of my tips for fall color shooting:

- **Look for overcast or rainy days to shoot:** That's right! Bright sunlight can wash out the colors of the leaves, leaving you with "flat" looking images. The best time to shoot fall color is right after it rains, when there is still cloud cover, but the trees are wet, giving you nice dark bark contrasting with the color of the leaves.

- **Shoot on a tripod:** Surprised? Again, this is a must for sharp images, especially those shot with small aperture settings and long exposures (under 1/100 of a second).

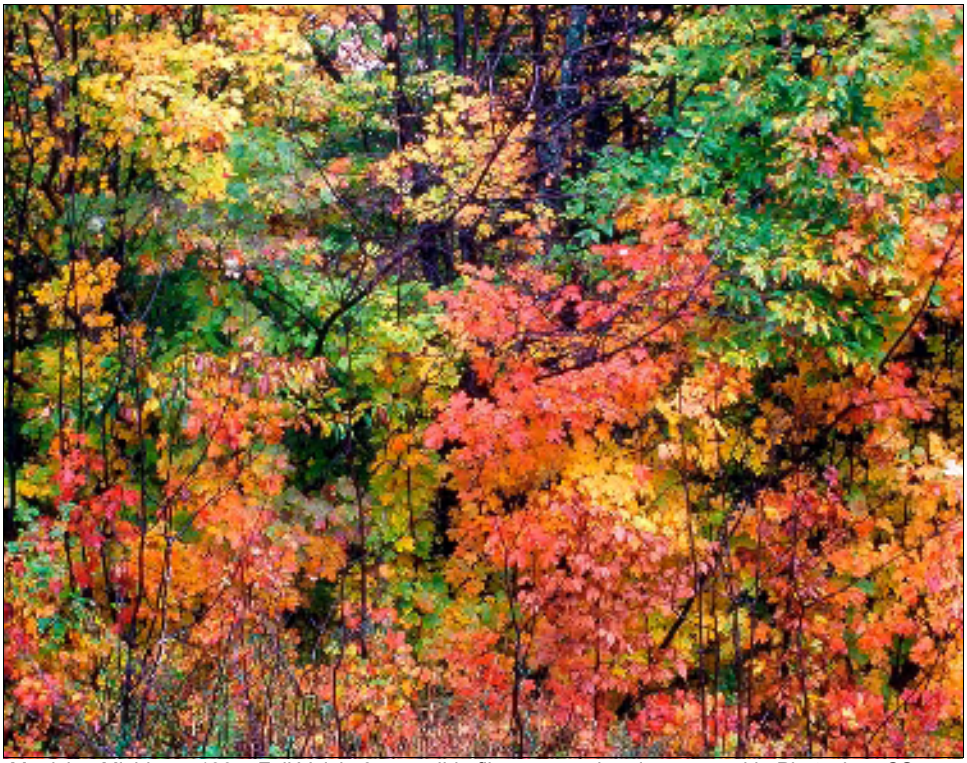
- **Use a small aperture setting:** I often shoot my fall color shots at f/16 to f/22, small aperture settings, in order to get sharp foregrounds and sharp backgrounds, especially for wide-angle shots of trees.

Petosky, Michigan. ISO 200, f/5.6, 1/125 sec exposure

- **Get in close:** Make it a habit of shooting your scenes wide-angle first, then proceed to zoom in for another series of close-up shots, maybe just of sections of trees and colorful leaves. Lastly, move in even closer for close-ups of maybe a handful of colorful leaves.

- **Use a circular polarizer:** Your best friend for many scenes of fall color, is to put a circular polorizer over your lens. The circular polorizer will reduce glare from the leaves, and help saturate colors in your shot. Experiment with rotating the filter element so as not to "overdue" it, darkening the scene too much. Just rotate your element enough to reduce the glare of the leaves, and to make the colors "pop" just a little.

- **Watch for windy days:** You may have to make adjustments for faster shutter speeds in dark days and in windy conditions in order to make sure the tree limbs and leaves remain sharp. Alternatively, a little movement in some images add a nice effect. Experiment!



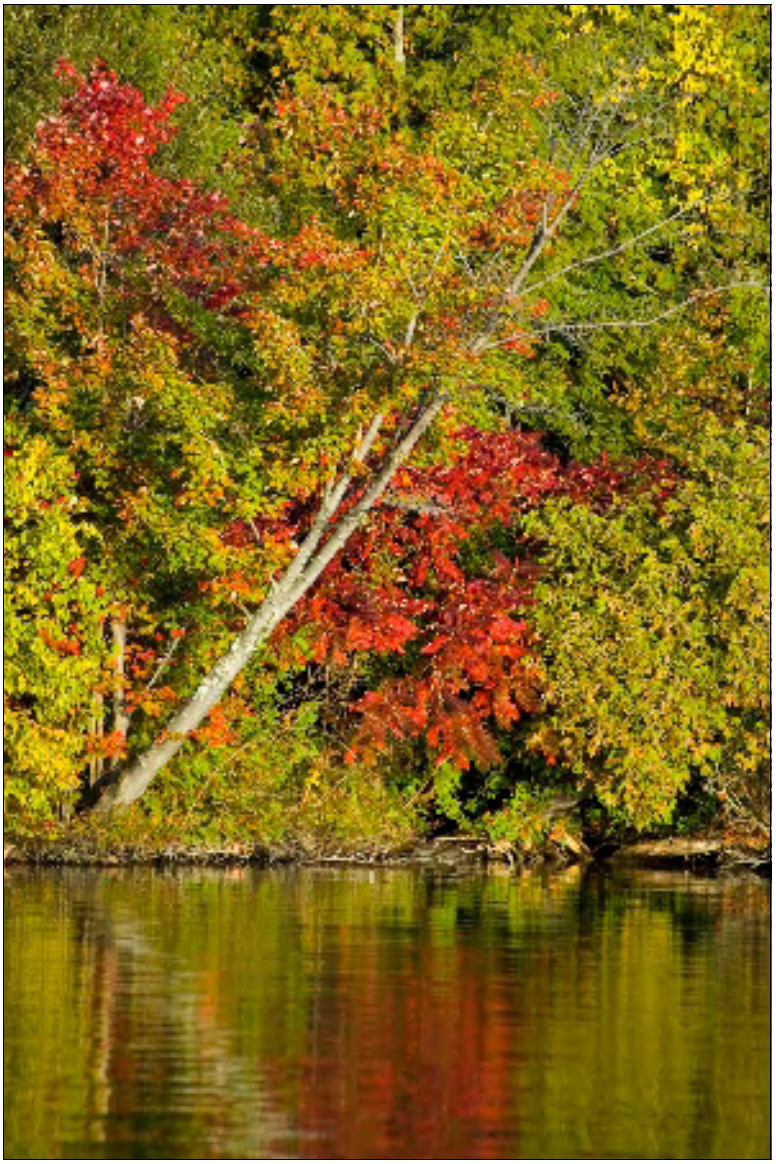
Munising Michigan, 1994. Fuji Velvia 35mm slide film, scanned and processed in Photoshop CS4

A few ideas for composition include:

- **Color reflections in water.** If you're shooting fall color and there is a body of water nearby, check out the colorful reflections that can be had.
- **Zoom in.** If you have a longer lens in your arsenal, like a 70-200 or 70-300mm lens, put that baby on, and zoom in on your subject matter to get a different perspective.
- **Include the human element.** You don't have to be a nature purist, if you can shoot an interesting fall color shot with a fence line, building, or even person in it, you'll get more "scale" in the image, and make it more interesting.
- **Close Ups.** If you have a macro lens, our your camera has macro capabilities, try some extreme close ups of a leaf, or a group of leaves.

Even Though its Digital, You Still Have To Start Out with Pristine Images

About 6 years ago, I went on a photography trip up to the north country. For the 5 days I had scheduled to take photographs, it rained and sleeted for 4 of those days. On day 5, I had my chance to shoot some areas I had scoped out earlier. It took me an hour to get to my location and on the way I nearly got stuck driving up a steep mountain with narrow muddy roads, but I did eventually get to where I could shoot my vista. It was sunny out later in the day, so I wasn't worried about the dreaded afternoon sun washing out my fall colors.



Yuck. Shot at high-noon, bright sunlight. Washed out colors and incorrect white balance makes this image a complete dud.

Upon returning to my campsite, I downloaded all my images to my laptop. Made a cup of coffee and proceeded to review my catch in Photoshop (that's my personal Java workflow). To my dismay, most of my shots were just plain washed out. Even though I shot later in the day, the sun was so bright, most of my shots just didn't cut it. Nothing in Photoshop would have helped the shots I took that day.

The lesson to be learned here...is no matter what plans and opportunities you have, you still have to start out with good images before you edit them in Photoshop.

Understanding File Formats

JPEG, Raw and TIFFs to be Exact

Shooting digital provides the photographer with many choices of size and format of images. Choices we didn't have using film cameras. For fine art photographers who wish to output large prints, the highest quality file settings should be used. Photojournalists and sports photographers are interested in speed and don't need huge files that choke up our memory cards as shown in Figure 6-1. Sports photographers will often turn down the file size, shoot JPEG instead of RAW and maximize the speed in which their cameras write to the card.

I once asked a photojournalist if he ever shot in RAW format. Without thinking, he said "never", he likes to get it right in JPEG and was not interested in high quality printing. The photojournalist went on to tell me "I don't need to shoot in RAW, my pictures are perfect the first time as I shoot them". OK, he had a little ego. He then proceeded to tell me "I'm shooting for black and white newsprint, which looks lousy anyway". I guess I see his point.

I personally shoot landscapes, portraits, still life's, action shots and anything I deem interesting. No matter what I'm shooting for, I always set my camera to the highest file quality setting and largest size. My reason is that I'm shooting for fine quality prints. I can always downsize for the web or smaller size printing later.

The sports photographer will always shoot for speed and a lower file size, but always for quality for the intended output. I've seen some incredible sports shots photographed at a lower resolution that enlarged in print just fine. The photojournalist I met, well, he really doesn't care, and according to him, his photos look lousy in newsprint anyway.

By the way, he took my picture, and it wound up in the newspaper. He was right, my picture looked lousy.

Figuring Out File Types and Sizes

Firing up your digital camera and trying to figure out all those techie things can be intimidating to most. Most people don't know the difference between a JPEG and a TIFF, and that's OK. Its like when you bought your first VCR and tried getting it hooked up to the TV, at least for those of us who remember the days before VCR's! The point is, making all those settings in the camera can be lets say, a little complicated.

In order to make things simpler when it comes to file types and file sizes to choose, I will first explain what each file type means and some tips on their usage.

The JPEG advantage

The most commonly used file format used for digital cameras is JPEG (pronounced jay-peg). JPEG is a file format that is most compatible across multiple uses such as the Web, digital cameras, photo viewers and photo editing software such as Photoshop or Photoshop Elements.

Shot with an older point & shoot digital camera, the 2MB JPEG provided great detail and color for this landscape photo

The advantage of shooting JPEG files is with the use of image compression. Image compression is simply defined as reducing the size of the file, hopefully with little or now noticeable loss of quality as illustrated in Figure 6-2. The advantage to using JPEG as your chosen image format is exactly that, reducing the image size without noticeable loss of quality. You can fit many more images on a memory card in JPEG format than TIFF or RAW format.

Digital cameras allow you to make different JPEG quality settings. Most cameras have setting for Fine, Normal and Basic. ***For most of your shooting always set your camera to "Fine", the highest available JPEG quality setting.***

A Tale Of Two Compressions

For digital camera file formats, there are basically two different types of compression, lossless compression and lossy compression. Both have their place and both in the technical world of file compression and are used everyday by photographers.

- **Lossless Compression:** Lossless compression can be defined as file compression without the loss of data or quality. If you are an avid computer user, Winzip is a utility used to collect and "smush" data files into one. It compresses the data for easier transmission and storage. When you un-zip your files, they remain intact. No loss of quality whatsoever. TIFF is an example of a file format that can be compressed using lossless compression.

- **Lossy Compression: Lossy** compression reduces the size of images by throwing away data, which may not be a bad thing if you use it correctly. Usually JPEG images shot at the highest resolution or "fine" setting can't be distinguished from the same image shot using Tiff or RAW formats.

TIFF

TIFF (Tagged Image Format) files offer a few advantages over shooting with JPEG, but with a big tradeoff. TIFF images shot out of the camera are among the largest when it comes to file sizes. An image shot in JPEG fine mode may be 4MB in size compared to the same image shot in TIFF at 12MB in size.

The advantages to using TIFF as your shooting file type include the fact that TIFF images can be compressed in a lossless way. TIFF images, like JPEG, are compatible with most image editing software programs. In the printing industry, TIFF format is considered the final format used for printing. In Photoshop, the advantage to TIFF images is that they can be edited in 16 bit mode as oppose to 8 bit mode, which is what JPEG can only offer.

The bottom line for photographers is, you would be hard pressed to find image quality out of camera much different between TIFF and JPEG for most output situations. Out of camera, there isn't any reason to shoot in TIFF format anymore. JPEG seems fine for the casual shooter, and Raw has increased tremendously the past 5 years from many DSLR shooters. It used to be that ehe only photographers that shoot in TIFF are ones whose cameras do not offer a Raw shooting format and want the absolute best quality they can capture, not any more with Raw.

Most digital cameras today offer the option to shoot images in RAW format as an alternative to the standard JPEG, thus eliminating the need to shoot using TIFF. In Photoshop, you can always convert your image to TIFF format for final printing or distribution media printing.

Raw

Growing in the past 7 or so years is the offering of a Raw file format. Yes I know, this sounds like another one of those techie type acronyms to remember, but actually RAW actually means raw! Quite simply, it's described as an unprocessed or raw image file.

The Raw image is one where the camera performs no adjustment to the image when the photo is taken.. The camera stores all the information its sensor captured. All adjustments normally made by the camera such as sharpness, contrast, brightness and color saturation have to be performed in RAW conversion software such as Photoshop Camera Raw.

The advantage for shooting Raw for digital photographers is simple. The Raw file provides a true digital "negative". Think of shooting an entire memory card full of images where compared to the film world, is the equivalent to a roll of film. With Raw images, the photographer can choose to develop these negatives any way he or she chooses.

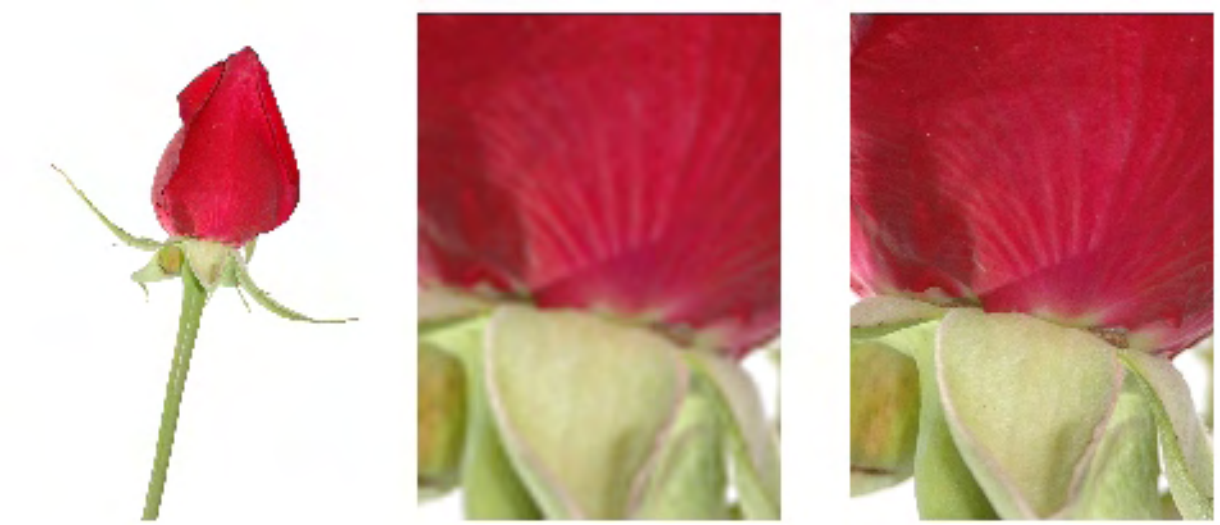
Compared to TIFF files, Raw files take up about half the storage space due to the fact that Raw files are made up of one 12 bit channel file. TIFF on the other hand are made up of three 8 bit channels. Like TIFF, JPEG is made up of three 8 bit channels but saves storage space through the use of compression.

Image Size Explained

Simple logic will state that if you shoot at the highest image size or resolution possible, you can always downsize images to fit a smaller format, say for the Web. If you shoot at a smaller resolution, its more difficult to upsize an image for lets say an 11x14 print or to crop certain portions of an image. This subject is a no-brainer, shoot at the highest resolution possible. You will cover any situation you need for output of your images when you get to that point of the digital workflow. Simple logic, says Spock...

The rule of thumb while shooting photographs is to always set your digital camera at the highest image size available. Unless all you shoot are images for the Web and nothing else, choose the largest resolution available for your camera. The illustration below illustrates the difference between shooting in low resolution versus high resolution.

Digital SLR file sizes will be larger than consumer or prosumer digital cameras with the same sensor megapixel size. The reason? Digital SLR's contain larger sensors, meaning images actually contain more information. Not only that, digital SLR's have bigger pixels. Additionally, if you're shooting in Raw mode, you're images will be captured in 12 or 16 bit mode, twice the amount of information captured in a JPEG at the same resolution.



Original image, low resolution close up, then high resolution close up

Digital camera sensor size does make a difference in quality given the fact that a 10 or 12 megapixel Digital SLR will produce better quality images for an 16X20 inch print than a 10 or 12 megapixel consumer grade digital camera. That doesn't say that your eight megapixel camera can't produce stunning 16 X 20's. The difference comes when you want to do a lot of cropping in

Photoshop or enlarge a print to 11 X14 or 16 X 20. The digital SLR will win out every time as far as sharpness, reduced noise, color and tone.

Typically, image sizes for a 10 megapixel digital SLR sensor as on the Canon 40D or Nikon equivalent will come in three flavors for you to choose in your cameras menu setup:

Size	Number of Pixels		Usage
3888 x 2592	10 megapixel	Large	Large prints up to 16 X 20 inches
2816 x 1880	5 megapixel	Medium	Prints up to 8 X 10 inches
1936 x 1288	2.4 megapixel	Small	4 X 5 inch prints, best for Web or email

Though consumer or prosumer can have the same megapixel rating as a digital SLR, manufacturers have to cram the same amount of pixels into a smaller image sensor. This results in a difference in quality from an 10 megapixel prosumer camera and a professional 10 megapixel digital SLR. Now don't go throwing out your spanking new 7 or 8 megapixel camera, the images you are capturing with that camera still rock and are of a quality that you will never need to exceed.

Recently, manufacturers such as Canon have actually reduced the pixel count in some of their compacts to improve quality of images in these cameras. For instance, The Canon G11's sensor has less megapixels than its older brother the G10, which had 14 megapixels, which is too much for an image sensor that size. Cramming 14 megapixels into a small sensor can only result in noisy images. Canon's decision to reduce the number of megapixels in the newer model was smart, increasing overall image quality instead of fighting a megapixel war with its competitors. I bet the images that come out of the G11 are much more crisp than that of the G10, which claims more megapixels!

The Canon G11 boasts 10 megapixels, cleaner images than its previous model, 5X Optical Zoom plus Raw+JPEG capturing

In summary, many professionals use these cameras as backups and for everyday shooting. I have just purchased one that I use as an everyday carry around camera and a backup to my professional equipment. These cameras are now sporting VR (vibration reduction) and some big lenses that reach from 37mm all the way past 400mm in focal length. Many of these cameras boost some great macro capability as well.

It's real hard to beat the value in the latest high-end prosumer digital camera offerings. These cameras provide you with high megapixel sizes, professional quality lenses that are often professional quality and focal lengths from wide angle to super telephoto. These cameras like the Canon G11 offer a great alternative to a much more expensive digital SLR system with interchangeable lenses.

Setting the Proper ISO

Back before we were using digital cameras, we purchased film in different sensitivities. The lower the sensitivity rating (ISO), the finer the grain. My landscapes were always shot at the lowest ISO rated transparency (slide) film I could get, usually at 50 ISO. If I wanted to shoot indoors with low light and action, I'd purchase film at ISO ratings of 200, 400 or even 800, but had to live with increased "grain" in my shots.

As in film cameras, digital cameras inherited the ISO ratings that indicate their sensitivity to light and subjectivity to image noise shown in the illustration below. A digital camera set to an ISO level of 100 is compared to a film camera loaded up with ISO 100 film. Most digital cameras today have a standard ISO setting of 100. Some digital cameras even offer the lowest ISO at 50, and others have the lowest available ISO at 100.

Obvious color noise in the image taken at an ISO setting of 800, where the image taken at ISO 100 is silky smooth

When you increase the ISO of a digital camera the sensor output is increase or amplified to allow for less light. The amplification that occurs when you increase the ISO setting has a side effect, image noise. Higher image noise is illustrated in the illustration. The good news is that manufacturers are improving the noise levels for high ISO's with every new release. The advent of full frame sensors in the top-end DSLR's are even getting to the point where image noise is eliminated even at ISO's as high as 1600!

Tip: Wherever possible, set your camera to the lowest ISO you can for the best possible image quality. If you are shooting in low light situations or fast action, you'll need to increase the ISO in order to achieve the shutter speeds needed, but may increase the amount of image noise in your camera.

Lake Leelenau, Michigan, 2002. Sony Cybershot F707, ISO 100, F/7.1, 4/10 second exposure. As a rule of thumb, shoot your images at the lowest ISO setting possible in order to obtain the utmost highest image quality with no noise!

Understanding White Balance

Daylight

Cloudy

Shade

Tungsten

Fluorescent

Auto White Balance Setting

One of the few settings that is actually unique to digital cameras is the white balance setting. Setting white balance is the process of telling your camera which color temperature the light you are working with actually is. White balance would have been a lot easier to understand if they just call it the lighting type setting. I'm going to check to see if I can patent that idea, but in the mean time I'll explain the concept.

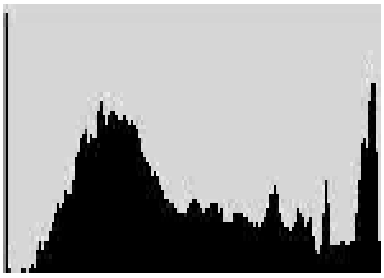
When you change the white balance setting you are just telling your camera to compensate for the type of light that is illuminating the subject. Light that illuminates a landscape on a bright sunny day will be different than the light on a cloudy day. Indoor lighting produced by incandescent light is different than the light produced by those nasty fluorescent lights. Though our eyes adjust real well to these different lighting conditions, our cameras need to adjust, either automatically or by manually setting the white balance setting as illustrated in illustration below. Like I said, they should have called it the "lighting type setting". I'll let you know how the patent idea went.

Did I mention that they should have called it the lighting type setting? To illustrate my revolutionary concept, the illustration on the previous page explains the different white balance settings you can make on your digital camera and tips on using each.

Setting	Description	Tips on Usage
Auto	The camera automatically calculates the white balance.	**Use for most situations.** Believe it or not, the Auto White Balance Setting is going to be more accurate in most situations than setting one of the many settings your camera offers. If you shoot in Raw mode, white balance can be easily adjusted in Camera Raw without any degradation in quality.
Daylight	Typical outdoor lighting.	Use this settings shooting outdoors on sunny days. Try the cloudy white balance setting, it will add warmth to your image.
Incandescent	Indoor lighting	Typical household lighting using regular light bulbs
Fluorescent	Indoor lighting using fluorescent bulbs	Use this while photographing indoors in office and commercial buildings
Cloudy	Outdoors on cloudy or partly cloudy conditions	This setting works well in many different lighting conditions. Can provide extra warmth to photographs. Experiment using this setting
Flash	Set white balance to the flash setting when using your onboard flash or external flash	Some digital cameras automatically sets the white balance to flash when attaching an external flash or using the built in flash for our camera.
Shade	Outdoors in shaded light	Experiment viewing the image on your LCD in outdoor situations between shade, cloudy or daylight.

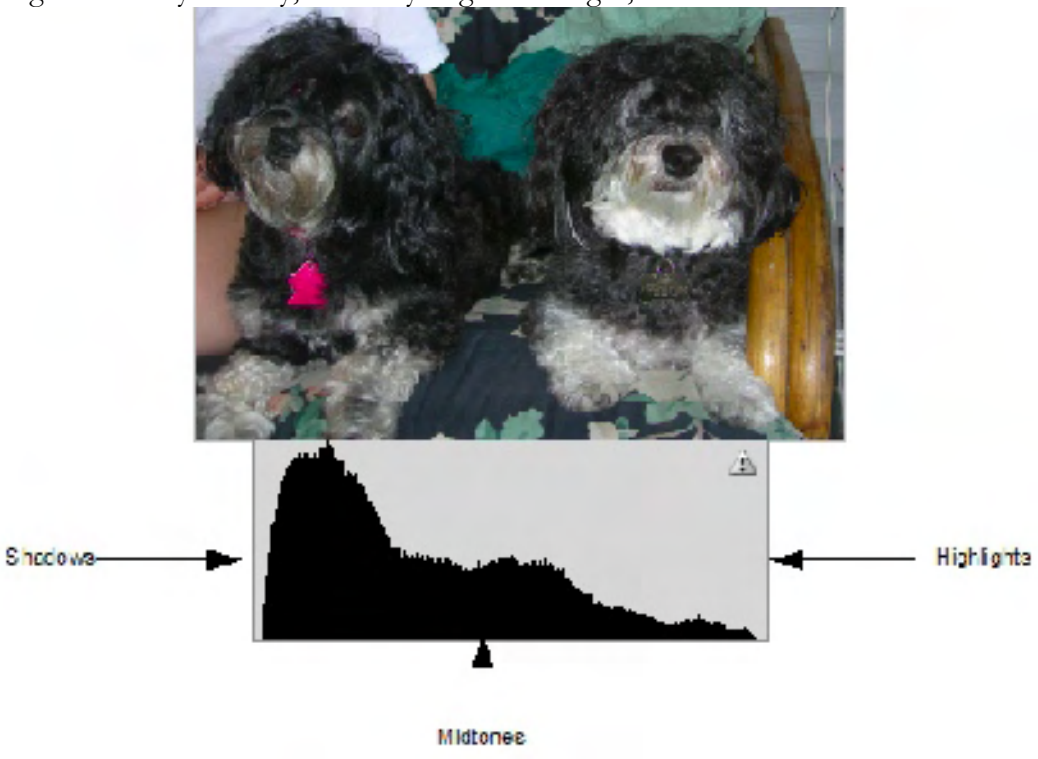
Use your LCD to review your images to make sure you are setting the white balance correctly. Experiment my shooting the same subject at different white balance settings and choose the one that looks best to you.

Using the Histogram For Better Exposure



Histograms are the key to understanding digital images. A histogram illustrates how pixels in an image are distributed by graphing the number of pixels at each color intensity or exposure level. The histogram shows detail in the shadows (shown in the left part of the histogram), midtones (shown in the middle), and highlights (shown in the right part) A histogram can help you determine whether an image has enough detail to make a good correction.

It is very helpful to keep an eye on the histogram during shooting as well as when editing them to ensure proper exposure and avoid losing shadow and highlight detail. In the example below, shadow areas are well exposed with no clipping, with the highlight area of the histogram showing no clipping as well. By the way, that's my dog on the right, with his cousin on the left.



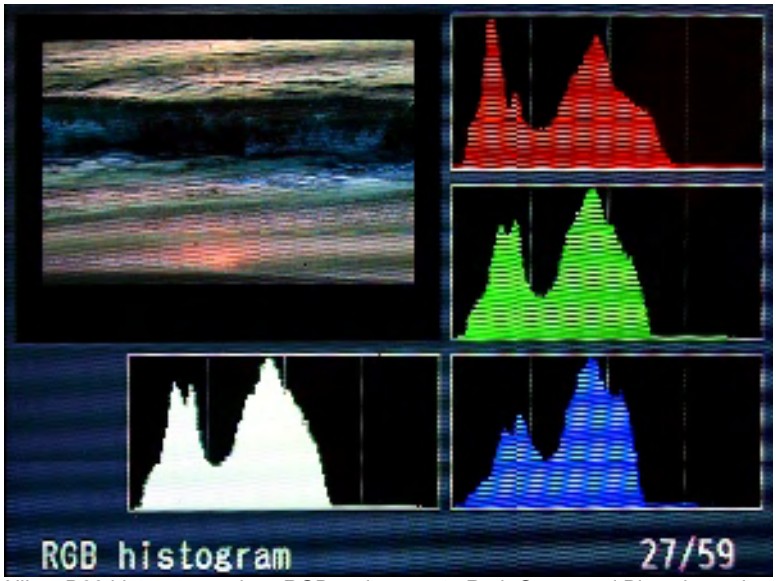
The histogram gives a quick picture of the tonal range of the image, or the image key type. A low-key image has detail concentrated in the shadows, as illustrated above. High key images have detail concentrated in the highlights. A normal, or "average-key" image has detail concentrated in the midtones area of the histogram. An image with full tonal range has some pixels in all areas.

Identifying the tonal range helps determine appropriate tonal corrections. Keep in mind, for many images, histograms will be different depending on the subject matter and lighting you're after.

Shooting with the Histogram

Most digital cameras allow you to view the histogram on the camera's LCD so you can adjust the exposure and take the shot again if necessary. Its an important habit to get into, I suggest adding histogram views to your everyday shooting workflow.

Many digital cameras come with an overexposure warning, whereby the overexposed areas blink. If your LCD has a blinking area, that shows that some of the channels are "clipped" or overexposed.



Nikon D80 histogram review. RGB and separate Red, Green and Blue channel Histograms are viewed.

Your histogram is going to be more accurate than your eyes when viewing images on your LCD, especially when you're shooting images outdoors. Get in the habit of reviewing your images histograms when shooting. Basic tips for shooting and reviewing exposure while out in the field:

- **Get in the habit of setting your camera for a histogram and clipping (blinking light) view for reviewing images.**

- **Review your images to ensure you are not getting clipping in the shadow, highlight or midtone areas.**

- **Set your exposure compensation accordingly if you're seeing clipping in your histograms, or getting the "blinking light", which indicates overexposure in some areas of the image.** In this case of overexposure, dial your exposure compensation to a -.3 to -1 stop.

Shooting in Aperture Priority Mode

One of the most confusing concepts to understand in photography is aperture setting.

These terms were probably invented by a politician: They say one thing and mean another! When a term is used, such as "stopping down" the lens to increase depth of field, what's really meant is turning *up* the aperture setting! The terms are all backwards. When you stop *down* the lens to a setting of f/11 or f/16, the aperture diaphragm closes down, letting less light to the sensor but increasing focus from foreground to background. In aperture settings, "opening up" means using a lower f/stop setting and "closing down" means using a higher f/stop setting.

To further explain, the term "opening up" a lens actually means using a *lower* aperture setting of F/5.6 or F/4 to let *more* light onto the image sensor. The portion of the image you focus on is sharp where other areas are less sharp.

Remember that *up* means lower setting and less focus of the foreground and background. *Down* means a higher setting and more focus of foreground and background. Just like politics.

I've listed the advantages and disadvantages of each shooting mode in the text that follows. As you shoot more photographs, you will improve greatly in your ability to use these shooting modes to your advantage, helping you obtain the images you visualize.

- **Aperture Priority.** Adjust the aperture setting to increase or decrease the depth of field of your photo. Smaller numbers, such as f/2, open the aperture diaphragm up and let more light into the sensor while reducing depth of field. Larger aperture settings reduce the diaphragm size and let less light in. The digital camera automatically sets shutter speed. For shots where you want a blurred background, reduce your aperture to f/2 or F/4. To increase depth of field and increase the focus of both foreground and background, increase the aperture setting to f/8 or higher.
- **Shutter Priority.** Adjust the shutter speed and camera automatically sets the aperture. For action shots where you want to freeze action, use a higher shutter speed, such as 1/500 of a second. To get a blurred effect of moving subjects such as a waterfall, reduce the shutter speed to 1/10 of a second.
- **Manual.** The photographer manually sets both shutter speed *and* aperture. Use this mode when experimenting with special effects type shots or when shooting in odd circumstances, such as long exposures at night.
- **Automatic.** The digital camera calculates the optimal combination of aperture, shutter speed, and ISO sensitivity based on the exposure value determined by the camera's metering system. Automatic mode may be okay to use for most snapshots and even portraits.

- **Creative.** Some digital cameras come with pre-programmed modes, such as sports, portrait, and landscape modes. Use these modes until you're ready to experiment with aperture or shutter priority modes: Most results are sufficient.

f/5.6

f/16

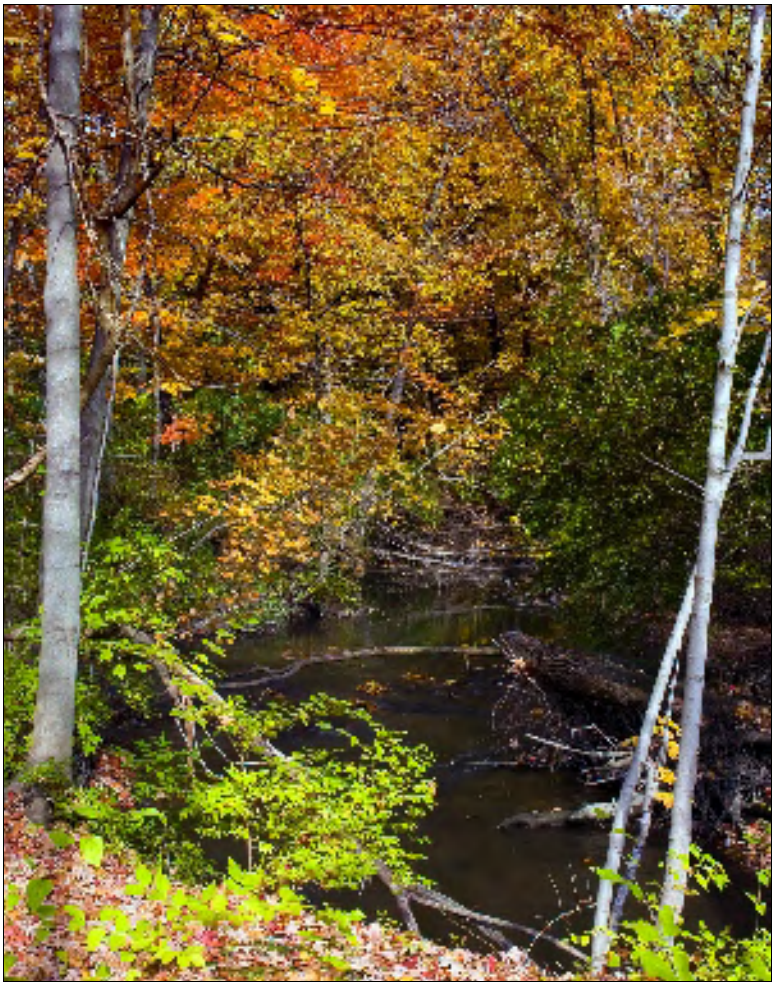
f/8

f/22

f/11

Look No Further Than Your Own Back Yard

Time and money are foes to the photographer that would rather travel to photograph wonders that are to be had. In the real world, we really can't expect to have all of our photography be based on the wonders of the world, that requires travel to get there. I've always been a proponent of shooting locally as well as while traveling, for a number of reasons.



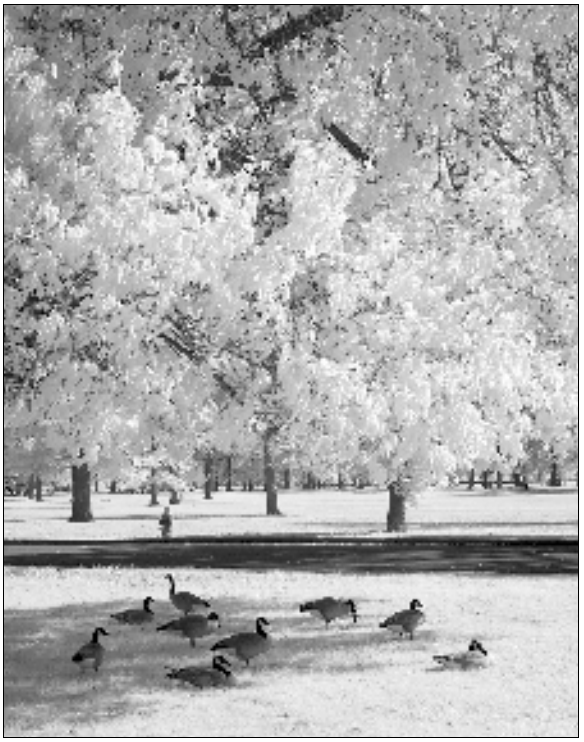
Nature Preserve, within walking distance from my home. ISO 100, F/20, 1/6 second.

Family, jobs and money don't allow most of us to spend all of our photographic hours traveling, however, to get good images you don't have to travel far from home. Look at your own backyard!

Really, almost yearly, I make a 1000 mile trek to Northern Michigan for fall color and waterfall shooting. This year, I couldn't make it during the peak color week (first or second week of October). Not to worry though...

Given all that, I decided to dedicate peak color season to shooting locally, in my own backyard, the neighborhood nature preserve (walking distance from my home), grand places of worhship, historical schools, architecture, and local parks in southeast Michigan. All within minutes of my home. Every day I ventured out to these sites, and was very pleased with my results. I didn't have to travel hundreds of miles to get good color or subject matter, it was all right here! Not only that, the experience reminded me of the unlimited subject matter right in my own backyard. I'm sure if you venture out locally, you can find the same.

Cranbrook Campus, 4 miles from my home. ISO 200, f/18, 1/13 sec, circular polarizer



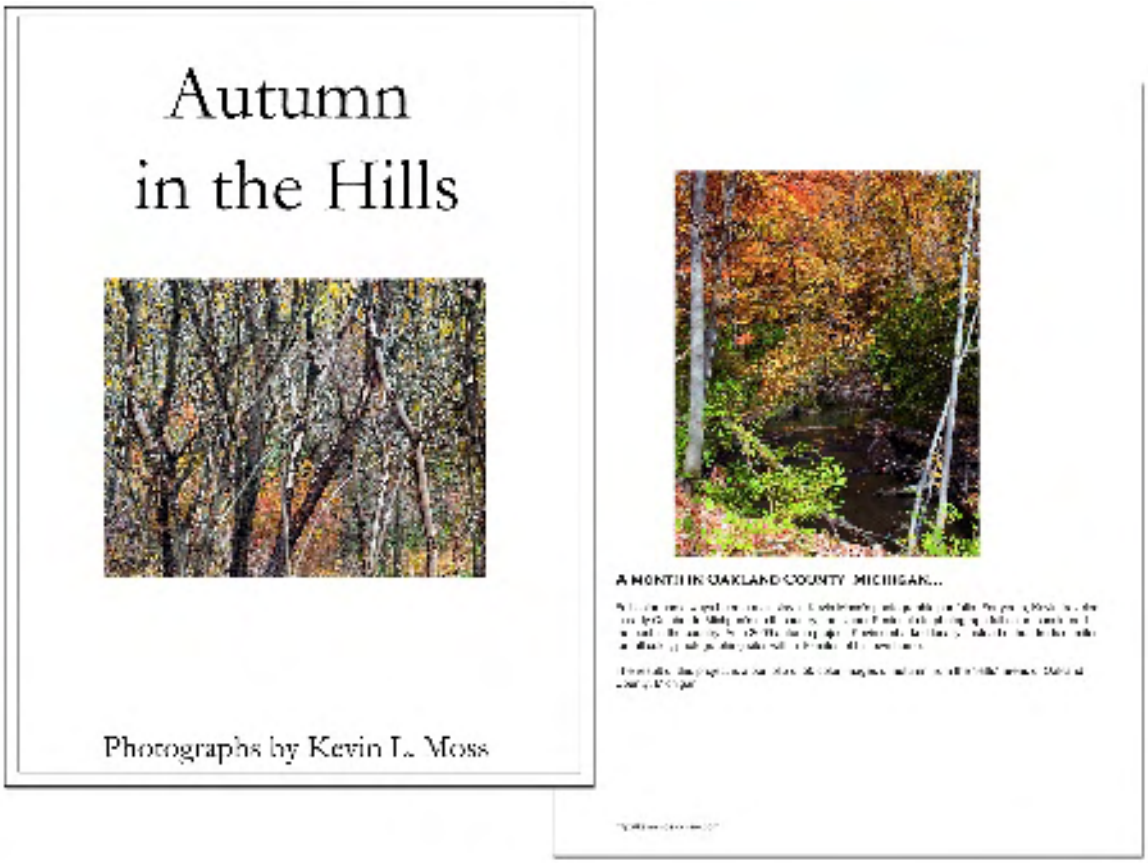
Belle Isle, 30 minute drive from my home. IR-Converted Nikon D70.

Not only did I dedicate 3 weeks to shooting locally, I decided mid-month through to dedicate the fall color portion of my local shooting to a book project, which leads us to the next chapter...

Explore Self Publishing

"You can become a published Author...All you have to do is decide to do so."

The previous section discussed looking no further than your own backyard for photographic subjects. You may want to take that concept a step further, as I have. Half way through my local shooting trips, I became so inspired by 2009's fall color season that I was discovering along my many hikes of local nature areas and the excellent year we were having in Michigan for exceptional fall color. I decided to take my images of fall color for the month, and self-publish a photo book on the subject. The result of my efforts was the book **Autumn in the Hills**. A compilation of 50 fall color photographs from the "Hills" area of southeast Michigan.



Publishing your photographs in the form of a photo book isn't as intimidating as you think. YOU CAN BECOME A PUBLISHED AUTHOR. All you have to do, is decide to do so. Become your own publisher, and start publishing your body of photographic works in a series of self-published books that you can market on the largest book selling sites on the Internet, amazon.com.

The Web offers a number of self publishing solutions for authors and photographers that want to self-publish their work, even more easily than working with a publishing house (as I have in the past, and I'll tell you, it isn't as fun!). Best of all, your books are produced and sold by a process of ***print on demand***.

Print on Demand Publishing

Print on demand is the process of selling books without maintaining an expensive inventory of your product. When a customer views your book information on Amazon.com or your own author/photographer website and places an order with Amazon, the order is then automatically sent to your chosen publishing vendor. Amazon collects the money, and sends to money to your vendor, which is then deposited to your own account (after printing expenses and Amazon fee's). The vendor then prints the book, and ships the book directly to the customer. Its easy, and it does not require any intervention by you, the photographer/author at all. The customer is not aware that the book is printed individually. Their only experience for buying is through the normal Amazon purchasing process.

After the sale is made, you're notified via email by your vendor of the sale, and you're paid for the book by your publishing vendor, by direct deposit to your bank account, paypal account, or by monthly check. Easy, clean, professional, and best of all, you're not required to do anything for a sales process, its all taken care of by your print-by-demand publisher and Amazon!

Createspace.com offers an excellent print on demand package, and is owned by Amazon.

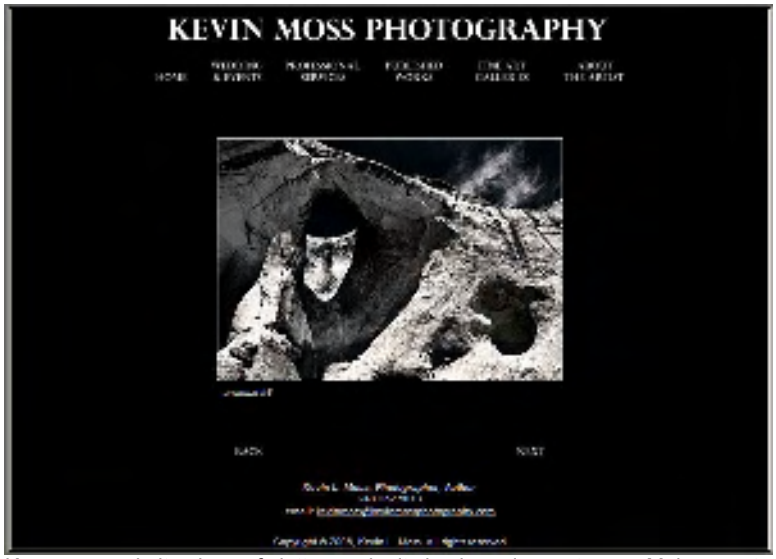
The Real Purpose For Publishing Your Work

The real purpose for self publishing your work, is to establish yourself as a serious photographer, specifically to those you want to impress that upon. It might be your local gallery owners, potential employers, magazine and/or newspaper publishers, or any other party or parties where you want to show your wares. If its in print, you automatically have an advantage over 90% of your competition. Of course, your photographic work has to be good too.

A very small percentage of photographers actually become published, so why not? Your point to publishing your portfolios isn't to sell thousands of copies and make a ton of money, on the contrary, that rarely will happen. What you can profit from, is peoples impression of you as an artist.

I've always been a proponent of the theory that photographs, worthy photographs, aren't finished until they are mounted, framed, and signed by the author.... or be published in book form. I also don't show my photographic work to others unless they are published or hanging on a wall. Its the purist in me, and I believe in that premise.

One exception to these premises is the web. I think every photographer should have a dedicated photography website to show off their best work. I say "best work", because I think you should only publish your best. To show off your best, you need to think the word "quality" for your website as well. These days, you don't have to be a web geek to kick out a good looking site. There are plenty of options out there, but that's for another chapter, this is all about publishing photography books.



Keep your website clean of clutter, make it simple and easy to use. Make sure to make images the main theme of your site. Its all about your images, and only show your best work.

Don't get me wrong, Its essential for photographers to maintain a good website, but it should not be the only means to show off your work. The end product of all photography is still the print!

Whether publishing on the web or in book form, these are some advantages for getting your photographic work published:

- **You have something to show.** I know a lot of great photographers, but they miss the final product of making photographs in print form, the web, or book form. A publisher or art director is going to respond to something they can touch, not a web address.

- **Publishing adds seriousness to your work.** If you have a good portfolio of 25 or more images, all sharing a theme, then its worthy of at least self-publishing. Publishing a single portfolio brings seriousness to that your work, and illustrates yourself as multi-dimensional.

- **Separates you from the rest of the photographers.** Lets face it, 99.9% would be a generous percentage of photographers that never get published, either on the web, in print, or in a gallery. Actually, .1% is probably WAY too generous. You can easily separate yourself from the pack just by self-publishing one or many of your photographic portfolios.
- **Leaving a permanent record.** Our imagery are stories that need to be told. That is what photography is all about. What a waste it would be if your best images were never shown. In the least, your grandchildren or great-grandchildren may never see your work. Self

publishing your portfolios is a great way to leave your photographic mark on the world. In the least, do it for your family!

If you're not into self-promotion and/or selling your work to various entities, you still have motivation for self publishing. Do it for yourself. Adding self published books to your photographic process may not pay dividends now, but probably will in the future, if not for you, then someone else.

Portfolio and book graphic used for marketing

Understanding Image Size and Aspect Ratio

One of the most overlooked topics I see is the mystery of image size in terms of dots per inch (dpi), width, height, and sensor size when it comes to aspect ratio. All these measurements come to play for every image a photographer uses. Each aspect comes into the calculation for final image size as well. Lets clear up some of the mystery.

Lets Talk About Your Camera

To start off, lets talk about your camera first. The digital camera is based on its image sensor. That's the little plate that sits behind your lens and shutter. Its filled with millions of light gathering pixels, small dots that comprise the construction of the sensor. These pixels collect the light focused from your lens, and then electronically record the light gathered from the pixels into an image file.

"Compact Digital camera sensors are extremely smaller than those of digital SLRs with a similar pixel count. In addition, the size of each pixel is also extremely smaller. This the results in lower image quality compact cameras in terms of image noise and dynamic range."

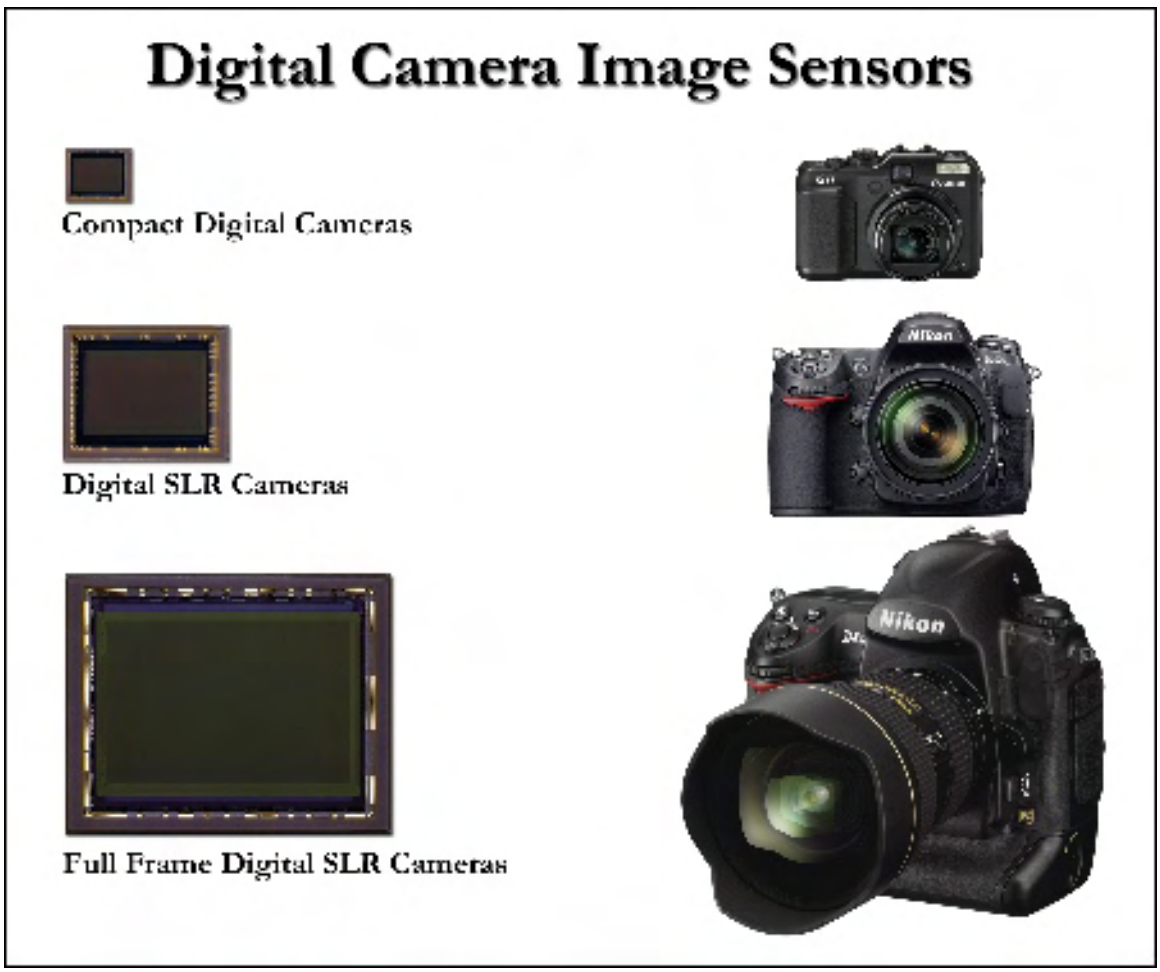
Sensors come in various sizes, and differ in the amount and type of pixels each contains. When you're out purchasing a digital camera, some of the specs that you're probably looking at is the number of megapixels that your digital camera will have. Current compact digital cameras come in flavors of 8 megapixel (8 million pixels) to 14 megapixel models on the high-end. For your normal digital SLR, you're looking at 10 to 16 megapixel models. On the high end, full frame digital SLR's are becoming popular with professionals and advanced amateurs. These full frame models have a sensor size the SAME as 35mm film, 36mm X 24 mm in physical size. Much larger than sensors that are the basis of most digital SLR and compact digital cameras.

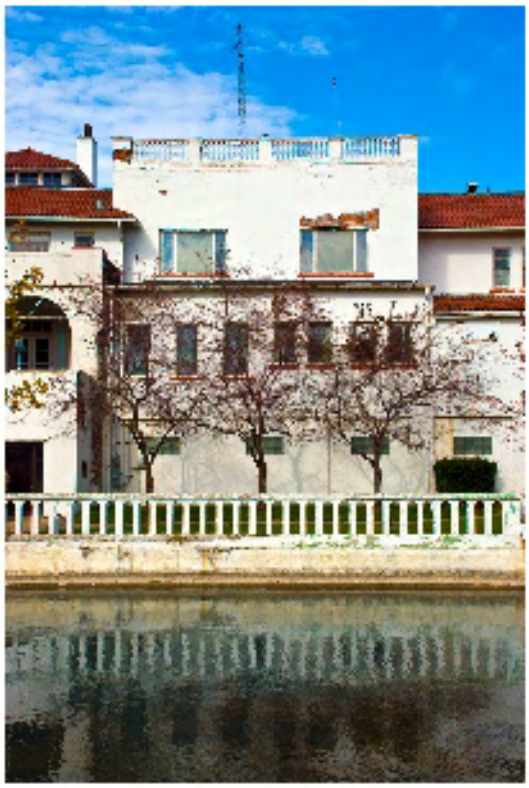
To better explain some of the terms utilized here as a preface for differentiating between digital cameras and respective aspect ratios and sizing:

- **Sensor Size:** As illustrated on the graphic on the next page, there is a huge difference in sensor sizes between different types of digital cameras. For instance, the typical point and shoot digital camera will have a small sensor, around 7m X 5mm. The next step up is the digital SLR, typically starting at 23mm X 15mm. Full frame digital SLRs sport the same size sensor as 35mm film (hence the name "full size") at 36mm X 24mm, 5 times larger than a compact digital camera, and almost twice the size of the standard digital SLR sensor.

- **Aspect Ratio:** Is the reference to the combination of the width and height of the image sensor. This is where things can get confusing. Width divided by the height Dependent on the dimensions of your sensor, the aspect ratio will typically be one of two types:

	3:2 Image Ratio	**4:3 Image Ratio**
Camera Type	35mm SLRs, Full Frame Digital SLRs, Digital SLRs	Compact digital cameras
Native image sizes (no cropping)	4" X 6" 8" X 12" 11" X 17" 16" X 22"	4" X 5" 8" X 10" 11" X 14" 16" X 20"





Digital SLR. 3:2 image ratio. 8 X 12" print

Compact digital camera. 4:3 image Ratio. 8 X 10" print

The dilemma with understanding and dealing with your image sensors aspect ratio is elementary. If you're shooting with a compact digital camera, chances are your image sensor produces images that have a 4:3 image ratio. Your images can be printed at 8" X 10" or 16" X 20" without cropping. If you're a fine art photographer and like to print your images at these sizes, no problem! Standard frames in North America are indeed 8" X 10", 11 X 14" and 16" X 20". You have many choices of pre-cut mattes and frames they fit into. You're good to go if you don't want to do any extensive cropping of your images.

If you're using a digital SLR, that's another story. Chances are your image sensor is of the 3:2 type, rendering un-cropped images at 8" X 12" or 16" X 22". Hard to find pre-cut mattes and frames to fit those dimensions. Of course, you can always crop your images, but for a standard 8" X 10" print, you'll be cutting 2" off one of the 4 sides of your image. That's problematic if you don't want to!

If you're like me, and prefer shooting with digital SLRs but like to print in the 4:3 image ratio format (my standard size is 11" X 14" for gallery prints), I suggest addressing the cropping issue up front, when you're shooting your images. Take your time when composing your images in your digital SLR viewfinder.

Summary:
Keep in mind ahead of time, while shooting, that you may be cropping the image when you work on it in Photoshop or Elements. With that in mind, you'll want to compose the scene at a slightly wide angle than usual. You'll be thankful later when editing your image on your computer, and you have the "extra" areas of the image in which you can crop out in order to get to the image size you want.

Shooting The Skyline

I've seen a lot of skyline photography over the years, and wanted to offer my suggestions for any type of night shooting you'd like to try. With digital cameras, results don't come any easier than with film, you still need to have great digital photography technique. When shooting at night, you can be sure you'll be shooting with slower shutter speeds, and if you're dealing with the weather, then you have a whole other number of issues to deal with!

Recently, I met a handful of my local photographer buddies for a trip down to the riverfront. We made an outing of it, since we had to take the tunnel underneath the Detroit River in order to get to the Canadian side to shoot the Detroit skyline. Don't forget your passport! After a dinner of ribs, diet coke, desert (a must on photography outings), we made our way over to the riverfront.

First lesson: Shoot your skylines during the business week! We met on a Saturday night, and many of the Downtown Detroit buildings were not too lit up. Lesson learned for the next outing! We really didn't realize it until we got there! Additionally, we were faced with some stiff winds, the 30mph kind that plays havoc on our digital cameras and tripods.

Here are the suggestions that I came up with that night, as well as members of our group:

- **Use a Sturdy Tripod:** Flimsy tripods will just introduce more vibration to your digital camera.

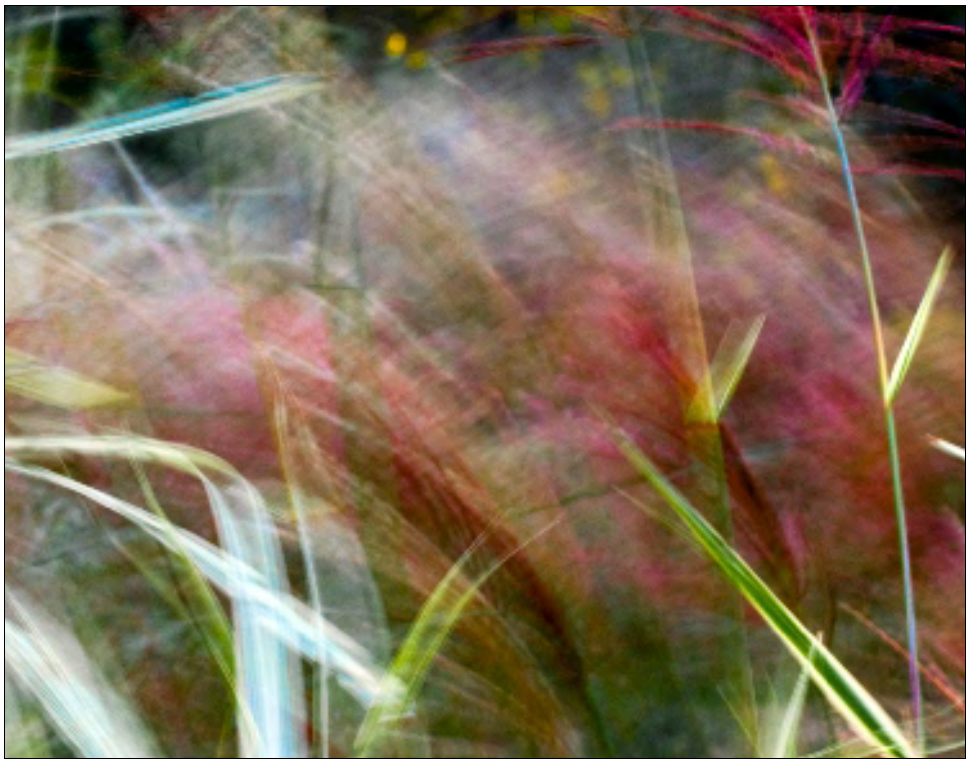
- **Use a Remote Shutter Release or Self Timer:** Another technique you'll hear about from me in many articles, is to use a remote shutter release. Most digital camera manufacturers will have one thats available for under $50 for your digital SLR model. If you're shooting with a compact digital camera, use the self timer capability. Both these techniques will help reduce vibration introduced by your little fingers pressing the shutter button. In low light shooting situations, this is a must in order to get sharp images!

- **Hang Your Camera Bag:** Yep, hang your camera bag from the center post of your tripod. Good tripods come with a hook on the bottom of the center post, just for that purpose. The extra weight of your camera bag really does help steady the tripod in windy conditions.

As far as shooting technique, I'll let you know how I got this shot… Simple. Given that the skyline of Detroit was over a mile away from where I was set up, I set my camera to Aperture Priority, set the Aperture to f/5.6, the sharpest part of my lens, and let the camera calculate the shutter speed. At ISO 800 (needed this to speed up the shutter speed), the camera took this shot at a shutter speed of .6 of a second.

Using Blur as an Element of Composition

A large part of my personal portfolio, the use of blur in my personal photographic work is ever expanding. I'm not condoning sloppy technique that result in a soft image, I'm talking about *introducing* blur into certain images in order to elicit a desired effect; an abstract study of color and blur. I've been working on a portfolio of such images for about 5 years now (hmm, another book idea!).



These images are blurred on purpose, either in-camera while out in the field or in Photoshop (or Elements) after the shot. For instance, when photographing nature, and running into windy conditions, I'll shoot the weather. Purposely, I'll look for compositions, such as wild grasses, that can actually show the movement, blur or softness that the weather is offering me at that time, namely the wind. I might be looking for super-sharp images of foliage, but if the weather doesn't cooperate, I'll switch my task to another, photographing subjects that convey movement and wind.

In addition to shooting movement in-camera, I do introduce blur in images using Photoshop and Elements. The process is the same for both. Its a simple technique that takes ordinary, or even less-than-ordinary images, ones you may never use in the real world, and transforms the image into something completely different, an abstract of nature. The process goes like this;

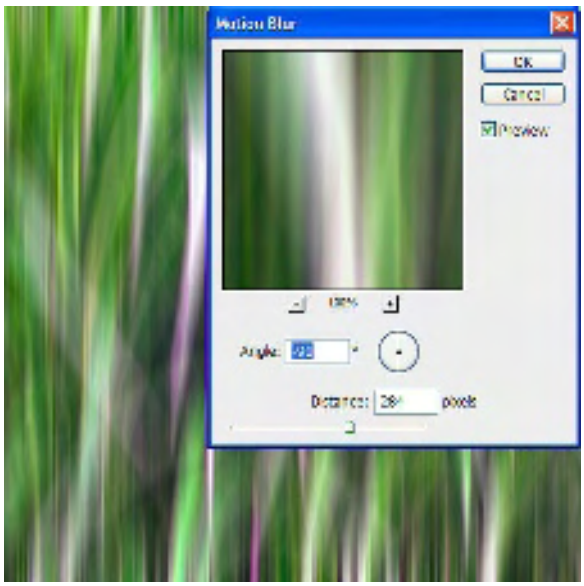
Original image. Nothing special here!

1. **Open an image in Photoshop or Elements.** The image should include some color and hopefully some patterns, horizontal lines, or vertical lines.

2. **Make your normal color and tonal adjustments to the image.** I normally utilize Levels, Curves, and the Hue/Saturation adjustment layers.

3. **Create a new layer**. The easy way is to "pancake" all previous layers into a new one by CTRL+ALT+E (or SHIFT+CMD+OPTION+E on a Mac).

4. **Add a Motion Blur Filter to the image.** Using Photoshop or Elements menu bar, go to Filter-->Blur-->Motion Blur. Adjust the angle of the blur, plus the Distance setting, which determines the amount of blur in the image.

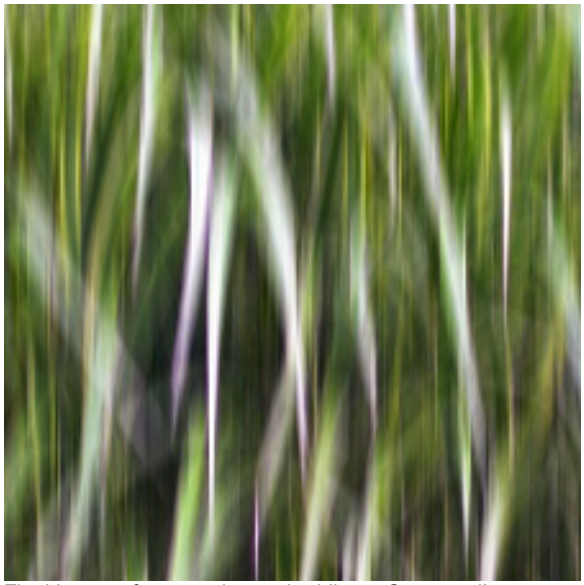


An easy filter to use, just indicate the Angle and amount of blur (Distance).

5. **Add additional color or tonal corrections.** Depending on the image, You may want to add more color, contrast, or color shifts to the image using various adjustment layers.

Not every image is a candidate for these types of techniques. After a while however, you'll start recognizing images that you'll want to experiment transforming into alternative photographs. I strongly suggest you start working on your abstract or blur portfolio, you may be pleased with the results, and you may be even more pleased with expanding your photographic horizons.

The final product, the image shown on the right, actually turned out pretty good by my counts. You see, this type of photography, especially in the snobbish fine art realm, isn't for everyone. It is for me though. I'm in the process of creating a portfolio that includes images like this, in square format, that can be printed on 30" X 30" canvas. I believe its an alternative form of contemporary art.



Final image after cropping and adding a Curves adjustment layer to increase contrast.

Explore the World of Infrared (IR)

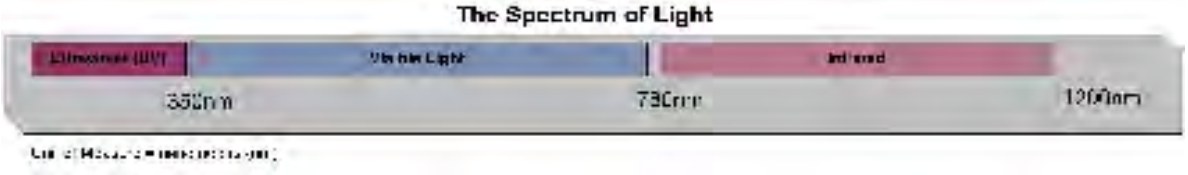


Back in the film days, or BF (before digital cameras) a small breed of photographers would load up their 35mm cameras with infrared film (in the dark I may add!), attach special filters in front of their lenses, and pursue a true art of infrared black and white photography. It was difficult to work with at best. The photographer would have to store the film in cold temperatures, and never knew what type of results they would get from the film, you see, we didn't have immediate feedback like we do know with LCD's on our cameras.

Fast forward to today, and infrared photography is making somewhat of a comeback. Its getting easier to shoot infrared with our cameras, either with special IR filters or actual converted digital cameras. With digital infrared, we still have a 2 part process. The first process is IR capture, the second process being IR post-processing.

To understand infrared photography, it is helpful to know some of the basics behind it all. Infrared photography can be described by the following:

Infrared photography entails using techniques that block out most of the visible light spectrum and below that, only letting the parts above the visible light spectrum (known as infrared) to expose the film or digital sensor.



When you're shooting infrared, you block out visible light, lets say below 715nm. This way, you're allowing all wavelengths of light above 715nm to pass, thus creating a near infrared image. You can accomplish this with one of two techniques. You can use an infrared filter attached to your lens, such as the ever-popular Hoya R72, or you can use a converted digital camera. There are pluses and minuses to both approaches. A third approach involves nothing on the shooting end of things, just post-processing.

Belle Isle Conservatory, Hoya R72 IR Filter, F8, ISO 200, 72 second exposure

- **Method 1: Use a** Hoya R72 Infrared Filter.
  The R72 filter was used in conjunction with infrared films, and now is used in conjunction with digital camera sensors, primarily on digital SLRs. You can order the R72 in a number of sizes that will fit your digital SLR lenses. If you use the Hoya R72, it will block out all wavelenghts below 720nm. For the digital camera user, that means that you'll still be able to compose your shot and focus using your digital cameras optical viewfinder, but the image preview or review on a the digital camera LCD will be totally darkened out. You'll need to shoot your images in manual mode too. Exposures on sunny days can average 1 minute or longer. I suggest bracketing your exposures as well. The cost for the Hoya R72 filter is about $100, depending on the size filter you require.

- **Method 2: IR Converted Digital Camera.** This option is becoming more and more popular in the past few years. All digital cameras come with a filter already built in that blocks IR light from exposing the sensor. Using a service that converts digital cameras to dedicated IR cameras is becoming popular with photographers that have already upgraded their DSLRs, and are looking for new life for their old digital SLR. In the past year, I've injected new life into an old Nikon D70, a camera that I really wasn't using anymore. The results with the Nikon, in just a short time, exceeded the image quality I was getting with converting normal color images to infrared black and white images in Photoshop and Elements. Using the dedicated IR DSLR was also a lot easier than using the Hoya R72 IR filter. My conversion was performed by http://digitalsilverimaging.com.

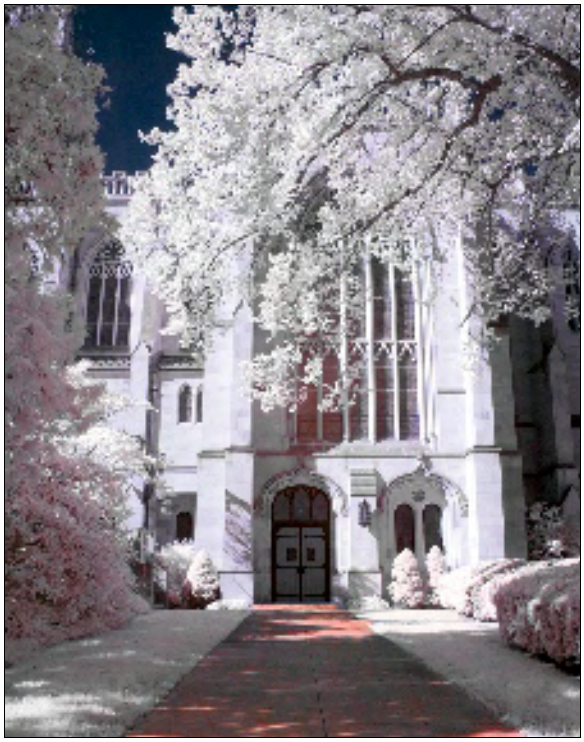
Typically, there are three types of conversions to your digital camera, and they are described by Digital Silver Imaging as:

- **665nm**
  The 665nm is a specialized Infrared Conversion. It blocks Wavelengths shorter than 665nm and allows those longer than 665nm through. This conversion is especially well suited for color infrared photography.

- **715nm**
  The 715nm is your typical Infrared Conversion. It blocks wavelengths shorter than 715nm and allows those longer than 715nm through. It is a true infrared filter that should primarily be used for B&W photos.

- **830nm**
  Deep Infrared Filter which allows for a very dramatic B&W IR look. Not suitable for color work. The 830nm will give you a deep infrared look which is reminiscent of the old IR B&W films.

IR-converted Nikon D70, post-processed in Photoshop



IR-Converted Nikon D70. Post-processing in Photoshop

I work in both color and black and white, so my obvious choice for the type of IR conversion was 715nm. If you're a die-hard black and white fine-art photographer, you may opt for the e830nm conversion. I'm pretty happy with the 715nm conversion, I think I get the "best of both worlds" that way.

FYI, you don't have to limit yourself to having a digital SLR converted. I was told that the best camera for price and performance was an advanced point and shoot digital camera, like a Canon G10. Now that would be convenient! A pocket-able IR converted camera.

I had my Nikon D70 converted with the 715nm infrared conversion. That works best for my personal infrared photography work. With the converted DSLR, my shooting workflow for IR is almost the same as for regular photographs, with the exception of using custom white balance, which is set to a blurred green/grassy scene in whatever lighting situations I'm shooting in. Setting your white balance in this way is a recommended approach to infrared white balance issues.

- **Method 3: Convert Color Images to Black and White Infrared Images in Photoshop or Elements.** I used this process on a number of occasions where my original images were not IR. I've had some hits, and some misses. Basically, software conversion of color images to black and white infrared just doesn't compare to infrared images that were captured in IR, either with a Hoya R72 filter, or an IR converted digital camera.

Stonehenge. Original image captured in color, converted to black & white IR in Photoshop.

Great Pro Results With Simple Indoor Studio Lighting

Great Still Life or Portrait Photography on the Cheap

I am an advocate of simplicity. I just don't like a lot of stuff laying around, especially expensive stuff. Over the years, I've tried to "simplify" my camera bag. The less lenses, gadgets and do-dads to weigh me down the better. Heck, if I had it my way, I'd get rid of my DSLRs in favor of two compact digital cameras (one for regular shooting, one converted to infrared), a circular polarizer spare batteries (2, one for each camera), and just a photo vest to hold it all.

The same concept goes for my lighting equipment. At any one time, I'll have an assortment of Nikon and Canon speedlights, and a whole bunch of photographic backgrounds, lighting stands, umbrellas, and a heck of a lot of gadgets. Thank goodness I'm no longer doing studio and location portraits! I've used different types of lighting for my still life images and portraits in the past, primarily flowers. As of late, I discovered a way to simplify my setup.

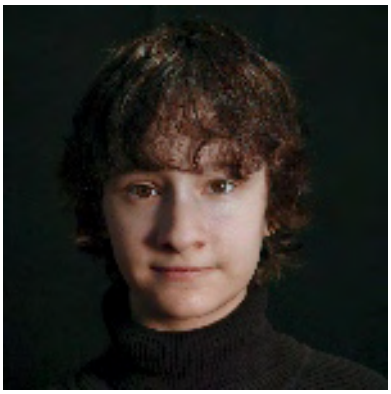
If you don't have studio lighting equipment, or a set of 2 or three speedlights for your digital camera (either way, you're looking at a few thousand dollars worth of gear), but you want to do some cool indoor still life or portrait photography, here is a good way to approach it. ***Buy a couple of aluminum light reflectors and daylight balanced fluorescent lights from your local hardware store.*** Lets splurge! How about 3 reflectors and 3 daylight balanced light bulbs?

Here's the cost breakdown (I got the hardware prices from Home Depot):

- **Aluminum Reflector:** at $8.97/each U.S., these are a bargain that can be found at any hardware store. Easily clamped onto a chair, or even modified to attach to inexpensive studio light stands, these reflectors do the job of distributing lighting. I like the 10" models.

- **100 Watt Daylight Balanced Florescent Light Bulbs:** At about $4/each, we're looking at a total of $12 for three bulbs that kick out 1750 Lumens worth of daylight balanced light. Perfect for digital cameras! Make sure you get daylight balanced as these provide accurate color rendition that is equal to sunlight, or about 5,500 degree's on your Camera Raw temperature slider.

- **20" X 30" Black Foamcore Backing Board:** Available at any art supply store, pick up a black foamcoar backing board, about $5/each. Pick up a white one too. These make for great still life backgrounds for headshots, flowers or other still life images. Total cost, approximately $10 U.S.



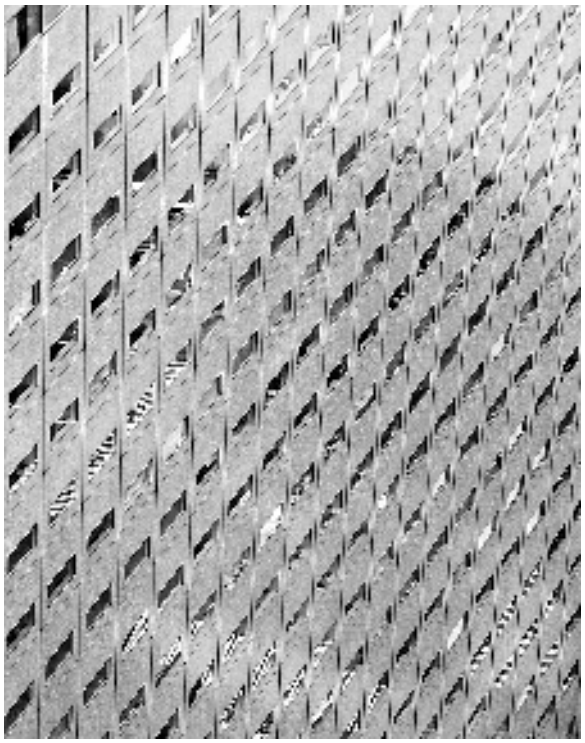
Total cost for your indoor studio lighting and background setup? About $40 U.S.

The Setup

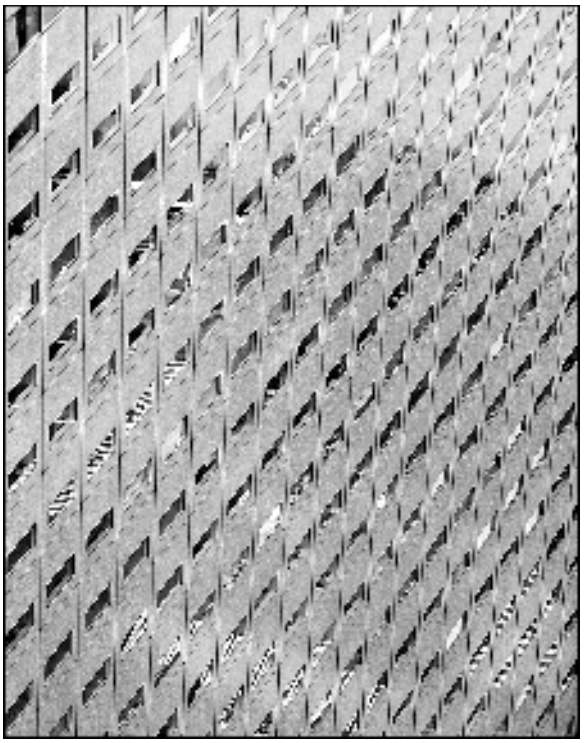
1. Tape, or stand up the foam core board being used as your backdrop against a wall or piece of furniture.
2. On a table, floor, or other flat surface, place your subject matter. Make sure you leave a distance of two feet or more between your subject and the backdrop.
3. Place one light 45° to the left of the object, and 45° to the right of the object.
4. Place your camera, on a tripod, directly in front of the object at the same height as the object.
5. Compose your shot, and adjust the lights as needed.
6. Set your desired aperture setting while in Aperture Priority mode on your camera.
7. Set your white balance to "Auto". Your digital camera will evaluate your white balance close to daylight, or approximately 5,500° Kelvin (Color Temperature) .
8. Shoot away!

The Thin Black Line

This is a quick lesson that I picked up through the Epson Print Academy about 5 years ago. Real simple. If you want to add elegance to your images that you display on the web, in print, or even on a digital projector, add a thin border, either white or black, depends on the background.



Without black border

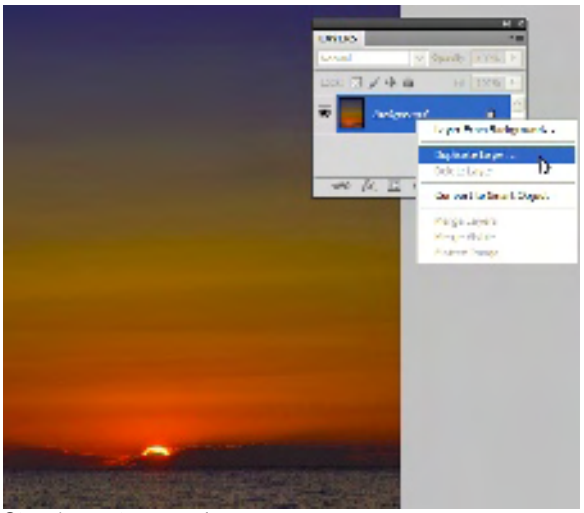


With black border

As you can see from the two examples, the image with a thin black border stands out more on the page. This is extremely beneficial for images with white along border, such as the sky. If you're displaying images on screen, lets say for camera club competitions, a white border will help define your images from a black background.

Here is a quick lesson:

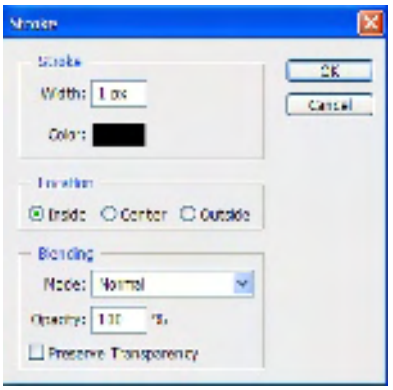
1. **Create a new layer.** This process won't work in the background layer of your images in either Photoshop or Elements. Simply right+click on the background layer in the Layers pallet, and select **Duplicate Layer**.



Step 1, create a new layer

2. **Go to Edit-->Stroke.** In Photoshop or Elements, from the Edit menu, choose Stroke

3. **Click on the Color box.** Select the color for your border. Black if your background is going to be white, or White if your background is going to be black. On the lower right of the Color window, select Only Web Colors. An easy color pallet will appear. Just click on a color, and then click OK.

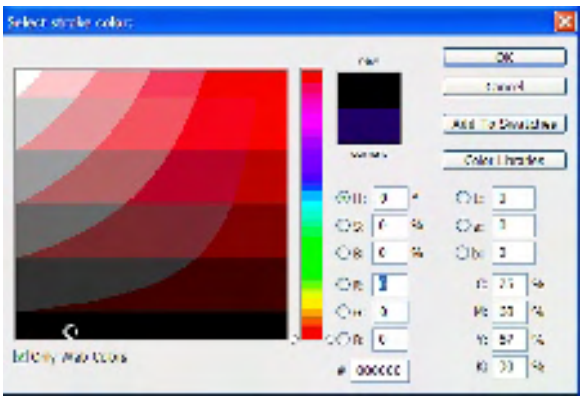


Step 2, from the Edit Menu, select Stroke

4. **Select the Width of the border.** For small images, a Width of 1 px (1 pixel) should do the trick. For large images 5X7 inches and above, try 3 px. Enter this in the Width box.

5. **Select OK from the Stroke window.**

Final image with thin black border



Step 3, select the border color

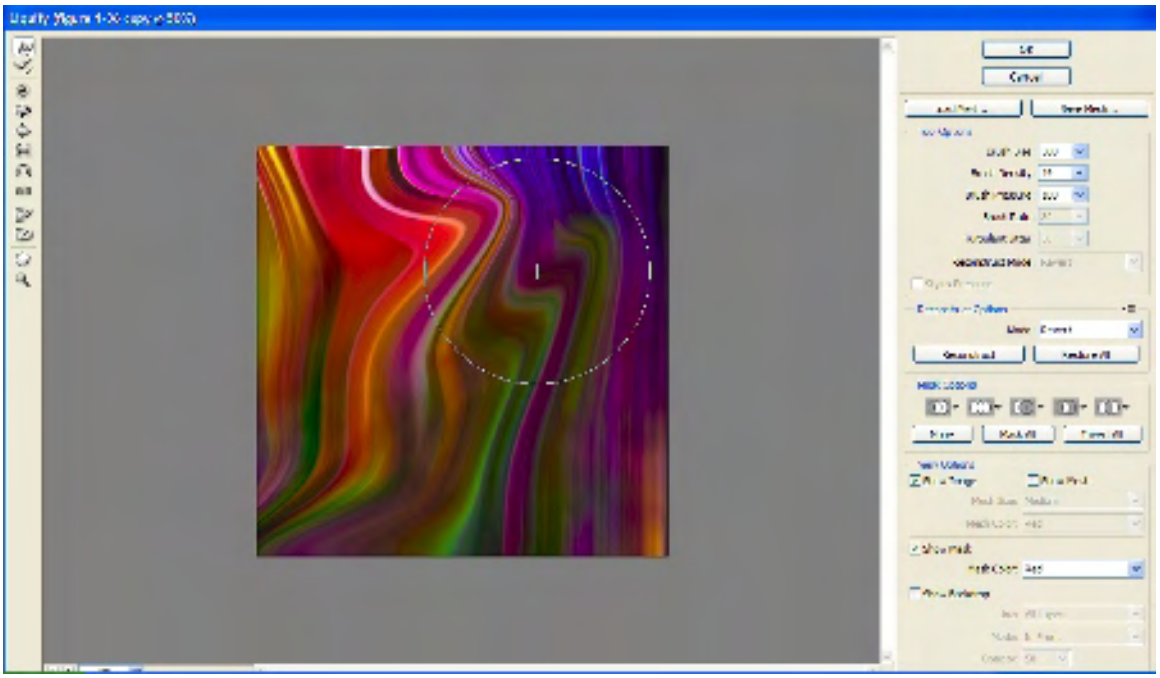
Abstract Studies With The Liquify Filter

Earlier in the book I showed you how to use the Motion Blur tool in Photoshop or Elements to take simple uninteresting (or interesting, you choose!) images and transform them into abstract art. There is another filter that you can add to your personal arsenal of simple tools to do the same thing, create abstract studies.

The Liquify tool has been in the Photoshop family for years. Its a fun filter, you can really mess with someones portrait and get a lot of laughs. I usually don't use the filter for that though, what I like to do, is mess with images to see what kind of alternate art I can come up with.

Using the image that I created with the Motion Blur tool, I'm going to take it a step further using the Liquify filter.

1. **Open your image in Photoshop or Elements**
2. **Create a new layer from the background** (right+click, then choose Duplicate Layer). If you have other layers on top of the background, create a new layer by SHIFT+CTRL+ALT+E (Windows) or SHIFT+CMD+OPTION+E (Mac).
3. **In the Filters menu, choose Liquify** (or SHIFT+CTRL+X (Windows) or SHIFT+CMD+X (Mac). The Liquify windows will appear.



4. **Adjust your brush size depending on how "wide" you want your liquify brush strokes to be.** When just starting out, experiment. For this example, I used a brush size that was about 50% the size of the image.
5. **Experiment with the Brush Density adjustment as well**, it will change the liquid effect you are painting in.
6. **When you're complete, press OK, the changes will be saved to your layer.**


Original


With Liquify Filter

Follow the Rules of Composition – And Occasionally Break Them

Whether you're a photographer that has formally been trained at some point, or even self-taught, you've come across rules of composition. Don't cut your image in half, use the rule of thirds, don't have telephone poles sticking out of someones head, don't keep the main subject matter dead center in the frame, don't have power lines running across your sky. The list goes on. For the most part, these are pretty good rules to follow. For most of our photographic work, they are just fine.

There are other times however, where the rules of composition can, and should be broken. **The next 10 techniques** explain what those rules are, when to use them, and when to break them.

This image of Monument Valley breaks the rule of thirds, twice. First, the sky takes up 80% of the vertical frame. Secondly, the monument is placed dead center. Both rule breakers work for the image, giving the image ***symmetry*** and great impact.

Improve Composition: The Rule of Thirds

The rule of thirds has been around ever since the artist has been picking up the paintbrush. The rule of thirds has been the central compositional guideline for the visual artist, not just photographers. Painters, illustrators and graphic designers use the rule of thirds as much as photographers.

In this image, the classic John Ford shot of Monument Valley, the horseman is situated in the lower right 1/3 of the image, classic use of rule of thirds. The subject matter is not dead center either horizontally or vertically. The major portion of the sky is in the upper horizontal third. The monuments and rock take up the lower 2/3 of the frame. The horseman is looking left, so 2/3 of the vertical frame is dedicated toward the left of the horseman. This is a classic use of the rule of thirds.

When out in the field shooting, keep the rule of thirds in mind. Take your time composing your images, concentrating on placement of not only your main subject matter, but the imagery surrounding that subject matter. With imaginary lines running horizontally and vertically divided by thirds in your frame, try to place your subject matter in one of the four intersecting points where these lines meet. With the main subject matter properly placed off-center horizontally and vertically, you're already improving your photograph.

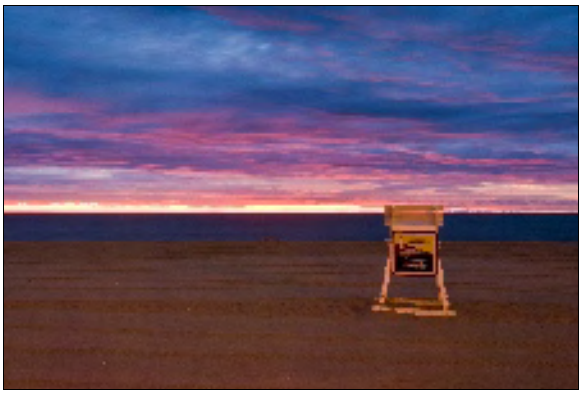
Improve Composition: Add Balance As An Element of Composition

One technique for composition is the addition of balance. Balance can be at odds with the rule of thirds, or can follow the rule of thirds. There are no rules here but a composition that provides a feel of balance to the viewer.

In this image of the Atlantic sunrise, a few rules were broken. First, throw away the rule of thirds. On purpose, I'll often leave the sky, which is often the main subject of my work, to 80% of the frame. Also, I made sure the Sun was centered (I did that on purpose), another rule breaker. I believe that the Sun gives absolute balance to the image by being placed dead-center, a perfect top-central point of a triangle that is based on the horizon. Hey, how did that bird get in there?

Improve Composition: Don't Cut Your Image in Half

This is a rule that should be followed often, and is actually one of the first photographic principles you'll learn in an Photography 101 class. Don't cut your image in half. Not talking about cutting it in half with scissors or a print trimmer, I'm talking about ***not*** dedicating 50% of the horizontal frame to a sky, and the rest to the foreground. And yes, with apologies, another sunrise example, because this type of image is where this rule is often broken.



There is another problem with this image. Notice how the top of the lifeguard chair is almost dead-even with the top of the waters horizon? That is what we call a ***merge***. Merges are something else to avoid in your composition. This merge could have been easily avoided by shooting this image either from a higher angle, a lower angle, thus the chair would not appear even with the horizon. Its a nit-picking detail, but paying attention to the details are what photographers are all about.

Image cropped to give the sky 2/3 of the horizontal frame. The merged chair has been removed. The chair would have been an interesting element of the image, however, with the merge, its better without it. Enjoy just the plain sunrise!

This is an image in which I would either not use, or crop to give the sky 2/3 of the horizontal frame. I would also just crop out the chair. I'd rather it not be there with a merge than include it in the image with the merge. Details are important, and as you go, you're personal rules of composition will grow with you.

Improve Composition: Shoot All Images in Both Portrait and Landscape Orientations

Another rule to think about when you're out taking photographs, don't forget to shoot in both portrait *and* landscape orientations. The reasons are simple, the cost of film is dirt cheap (that's because we're digital!), and by shooting in both orientations, you pretty much guarantee that you're probably getting the right orientation for the particular shot.

John Evans Nature Preserve, Beverly Hills, Michigan. Portrait orientation. Seems to work well for the fall color landscape. Nikon D70, F/16, .8 sec at ISO 400

I learned this early on. For publications, especially magazine covers, professionals always like to make sure they get the image in portrait orientation, as most magazines, OK, all magazines are in that format! The main reason though, for most photographers that don't shoot magazine covers, again is the fact that you do want to have both orientations recorded, just in case you change your mind later, when viewing your images later on your computer monitor.

Keeping this practice in mind when out shooting, you'll learn to appreciate the number of shots you'll get as "keepers" by switching orientation. You might be out at a rare site, one that you may never get back to, such as Stonehenge or Maccu Piccu. If you bothered traveling around the world to get there, you definitely

want to make sure you record it correctly. Shooting in both orientations isn't going to hurt anything, and it gives you more choices to pick from later on your computer.

John Evans Nature Preserve, Beverly Hills, Michigan. Same scene as above, only shot in landscape orientation. This works well for this particular scene, as does the above portrait orientation version. Nikon D70, F/16, .8 sec at ISO 400

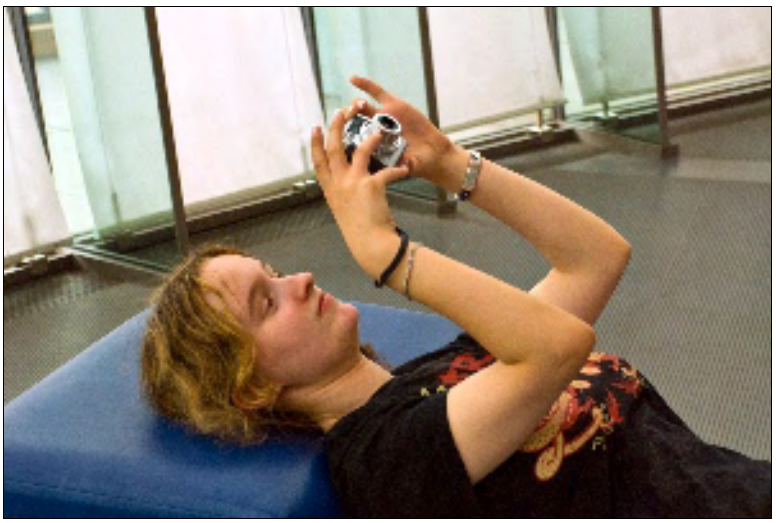
About the Image

This particular scene is important to me for one reason, it was my first outing with my first DSLR, a new Nikon D70 (great camera, now converted to full time Infrared). Taken on October 17, 2004. It was a dreary day. Very thick clouds, and rainy most of the day. Perfect conditions for fall color!

Fortunate to have a nature preserve so close to home (walking distance), I continued on, D70 in hand, tripod, self timer, and circular polarize. In post-processing, I had to actually dial down the white balance, and desaturated the reds and blues using Photoshop's Hue/Saturation adjustment layer in order to get a more realistic color. The natural color was *that* powerful!

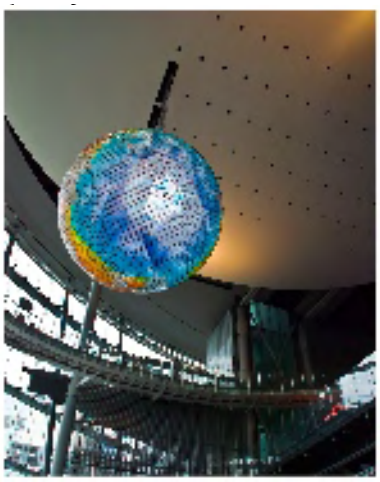
Improve Composition: Get Underneath

Its easy for photographers to get lazy. The worst culprit, is having a tripod, and not using it. That's an obvious one. Another lazy act by photographers, is forgetting to shoot images in both portrait and landscape orientations, as we've just learned. Failure to take to the time to compose our images when shooting in the field, is another infraction of our code of conduct.



The National Museum of Emerging Science and Innovation (Miraikan) is Japan's major science center located in Daiba, Tokyo. In the main entrance area, is a giant LCD globe hanging from the ceiling. The only real way to photograph this abstract is to lie on your back, and shoot up. I'm going to forgive the young lady for not using a tripod.

Here is an extension of that. We're on site, taking lots of photos of a scene, but, we're standing upright, and photographing the scene at eye level. Do yourself a favor, when out shooting go ahead and evaluate your position, and see if it by changing your level, can you make the image more interesting? How about getting under an object that's suspended from



The National Museum of Emerging Science and Innovation. By changing position, and getting underneath and object, you can change the perspective in a very dramatic way.

Getting underneath an object can give you a much more dramatic rendition of an image, lets say as opposed to standing further away and capturing the object from afar. Getting underneath and shooting straight up can be a challenge though, to your neck. If you are using a tripod, this is where a ball head is a must.

Improve Composition: Get Down Low

There are a couple of rules to know when it comes down to photographing people. The ardent portrait photographer will tell you to either shoot at eye-level, or from a little above. Good reason for that. When you're doing lets say a head shot, you don't want to be photographing from an angle where you're shooting up your subjects nose. Shooting from above, just slightly, is preferred on head shots.


Shoot from below, ask questions later. Its OK for candids.

You can however get a little more creative out of the studio, especially when taking candid photographs of people. In the image here, I took this on a boat, and was able to shoot this from the stairs that led to the lower deck. A much better snapshop resulted than if composed from eye level.

For pets, eye level is a must. Its easy to photograph them from our height, looking down, as long as your dog is 5' in height. If your pet is of the shorter stature, like Rocky the Digital Darkroom Doggy, get down to their level, you'll have much better success.


Rocky the Digital Darkroom Doggy. For pets, get down to their level.

Improve Composition: Get Up High and Shoot Down From Above

A once in a great while opportunity, who could resist?

We've discussed getting low, now lets bring up the opposite, getting up high. Rise above your photographic compositions for greater impact to your images. Shooting down isn't what we see in most photographs, so take advantage of it while you can.

Given the fact that most of us don't have ladders strapped to our backs, its a good idea when out shooting photo's to look around, and see if you can elevate yourself to get some interesting images of whatever is below. In the example above, same boat as the image in the previous chapter, but, a large number of Japanese schoolchildren boarded the boat for the ride. I was in perfect position to capture this image, a once in a great great while opportunity.

When shooting landscapes, shooting from a high platform isn't always that convenient.

As stated previously, we don't exactly travel with ladders. Tripods are heavy enough.

Pictured Rocks National Lakeshore.

On the northern shore of Lake Superior, about 80 miles from where the Edmund Fitzgerald went down is the Pictured Rocks National Lakeshore. We're talking cliffs of rock over 300 feet that fall directly down to the waters of Lake Superior. Here, I have a shot that points straight down at the clear blue water, giving a a great angle for this colorful abstract.

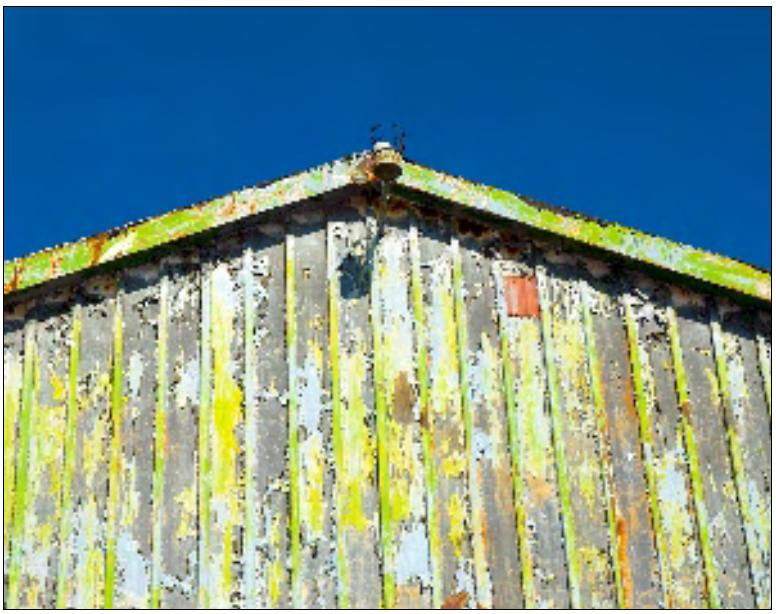
Improve Composition: Shoot A Little Wider, Leave Room To Crop Later

Here is a rule the can help your composition during post-processing, shooting your images a little wider, giving you room for cropping later. Why crop you ask? Well, first of all, if you're shooting with a digital SLR, an 8 inch wide image is going to be 12 inches high. You're going to lose 2 inches when you go ahead and place that image behind an 8 inch by 10 inch matte.

Full frame, 4:3 ratio with cropping area in Photoshop

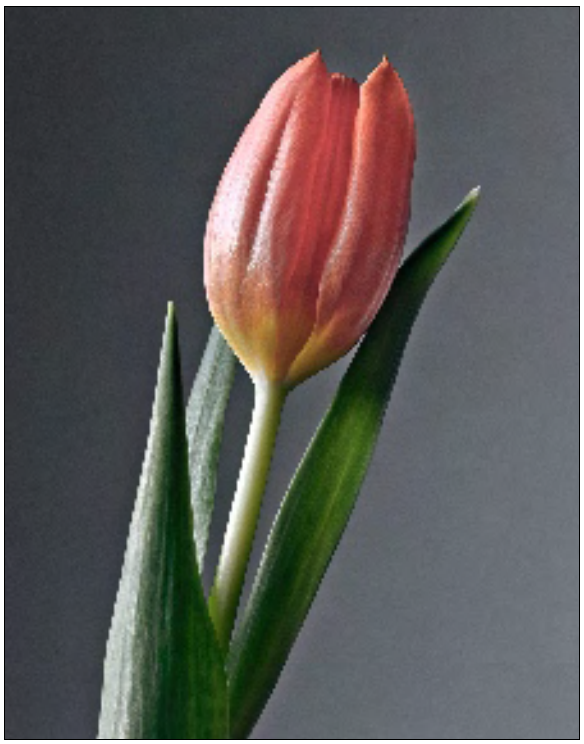
The same can be said for cropping images to an 8 inch by 12 inch matte from an image made with a 4:3 image ration digital camera sensor as found in some digital SLRs and compact digital cameras. As a rule of thumb, shoot a little wider, and give yourself plenty of room later for cropping.

In this example, I wanted a crop for an 11 X 14 inch print, which would naturally take off a few inches of the left or right side of the image to get those dimensions. Having the "extra room" provided by shooting wider helped me in post-processing.



Cropped image, final color correction in Photoshop

Improve Composition: Fill the Frame



Just as you should shoot a little wide to make sure you can crop to your desired final print size, you also need to keep something else in mind. Fill the frame with your subject matter. Upon critiquing many images from my photography students, one of the most correctable premises of improving composition, is filling the frame with the subject matter. Many times, all I have to do is tell my students to crop the image a little more, and getting rid of distracting features surrounding the subject matter. Sometimes, a little cropping can go a long way.

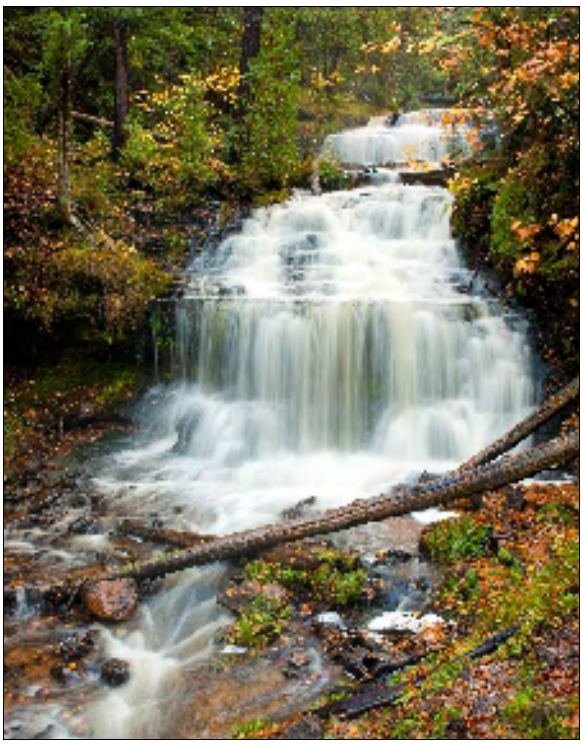
Images with good impact are often a result of simplifying composition, and what better way of simplifying an image, is to fill the frame. The example on the left shows the maximum cropping for this type of subject. There is adequate room on top between the tip of the flower and the top of the frame. Any more vertical space, and image would lose its impact.

Original image with crop box highlighted

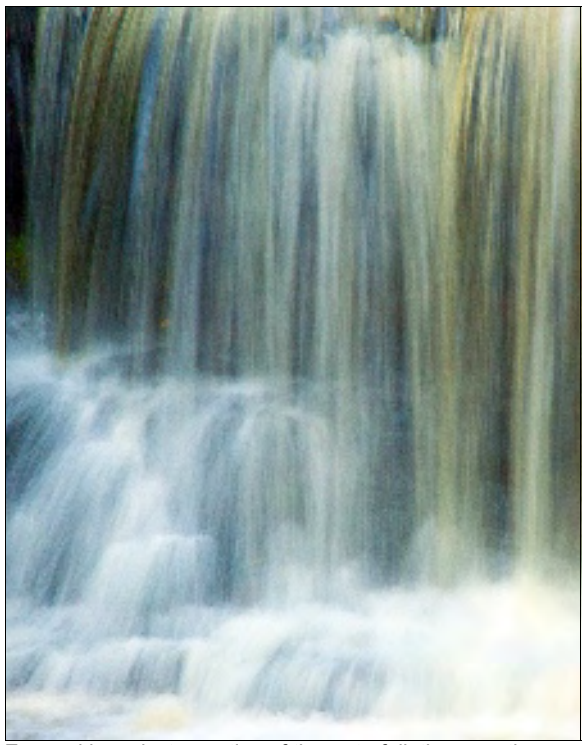
Cropped image, color correction in Photoshop

Improve Composition: Zoom Out, and Then Zoom In!

In addition to other shooting tips to improve your photographic composition, I have one more obvious one. When you're out shooting, make sure you also look for an "image *within* the image". Zoom in on an interesting part of a composition, and take some more shots. I guarantee, you're going to get more usable images that way when you're out in the field.



Wagner Falls, Munising, Michigan. The first photo, zoomed out



Zoomed in on just a portion of the waterfall, thus creating a new "image within an image".

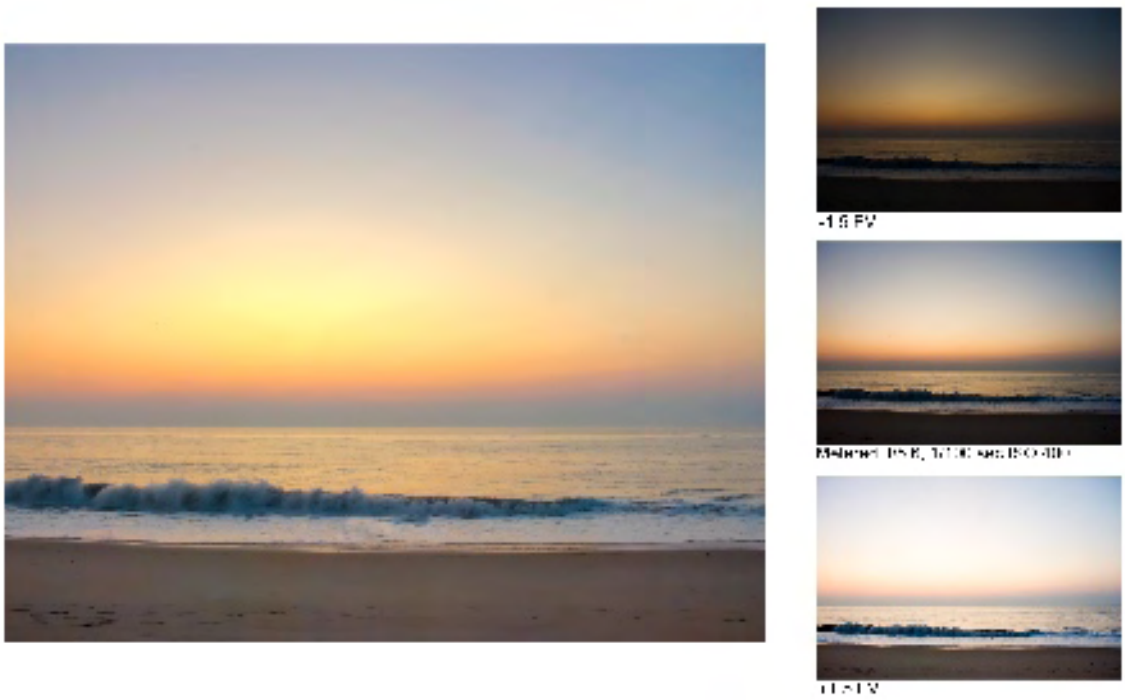
Not all photographs are "zoomable", but for grand landscapes like Wagner Falls, there are many interesting close-up images with the same frame. I've added the second "zoomed" version to my Water portfolio. I bet you could do the same for many of your photographs in your existing body of work.

Discover High Dynamic Range (HDR) Images

Liberty Motors Plant, Detroit. Combination of 3 bracketed images +2, 0, -2 EV and processed in Photomatix with a “hyper-realistic” painterly effect.

As digital photographers, we've seen leaps in technology for a few years now. 10 years ago, it was the advent of the digital camera. Soon after, we were able to purchase 5MP compact digital cameras for under $1000 U.S.! Then a few years later, we saw the first digital SLRs hit the market that were around the same price. The Nikon D70 and the original Canon Digital Rebel really fueled the digital SLR proliferation, putting feature-packed tools in the hands of the budding photographer at a decent price point. Today, we're even getting full HD quality video out of our digital SLRs, with quality that challenges $40,000 cinematic movie cameras! Live LCD image review are now becoming standard equipment. We've come a long way.

In the last decade, software has also advanced. Photoshop is currently in its 11th or 12th version. Camera Raw is now a standard file format for capturing images. There are many highly respectable third-party image-editing add-on's for Photoshop, Elements, Aperture and Lightroom. We've also seen a new trend in the past few years that is remarkable. High Dynamic Range (HDR) imaging has become a reality for the digital photographer.



Rehoboth Beach Sunrise, Delaware Shore. F/5.6, ISO 400

What is High Dynamic Range (HDR)?

HDR is actually a simple concept, but somewhat tricky (until now) to implement for digital images. HDR is a number of images, taken at different exposures that when combined in software, contain an entire dynamic range of the scene, elements from the extreme shadows to the extreme highlights, and everything in between. Got all that?

Think of your typical single image metered with your digital camera. Your digital camera can meter a scene the best it technically can, typically in the range of 4 to 9 f/stops. Our own eyes and brain view a scene, and can interpret approximately 9 *to 14 f/stops!* That's quite a difference, one that you have no doubt experienced. This is the primary reason, as you recall, that you often shoot scenes that appear to you straightforward, but when you view them on your computer or LCD screen, the image lacks detail in shadow areas, or has blown out highlights in the lighter areas of the image.

An HDR image, when shot and processed properly, will give you detail in a much larger dynamic range than a normal photograph can present.

Factoid: A typical digital SLR camera can read a dynamic range of 4 to 10 f/stops (EV range). Our eyes and brain can see 9 to 14 f/stops (EV range)

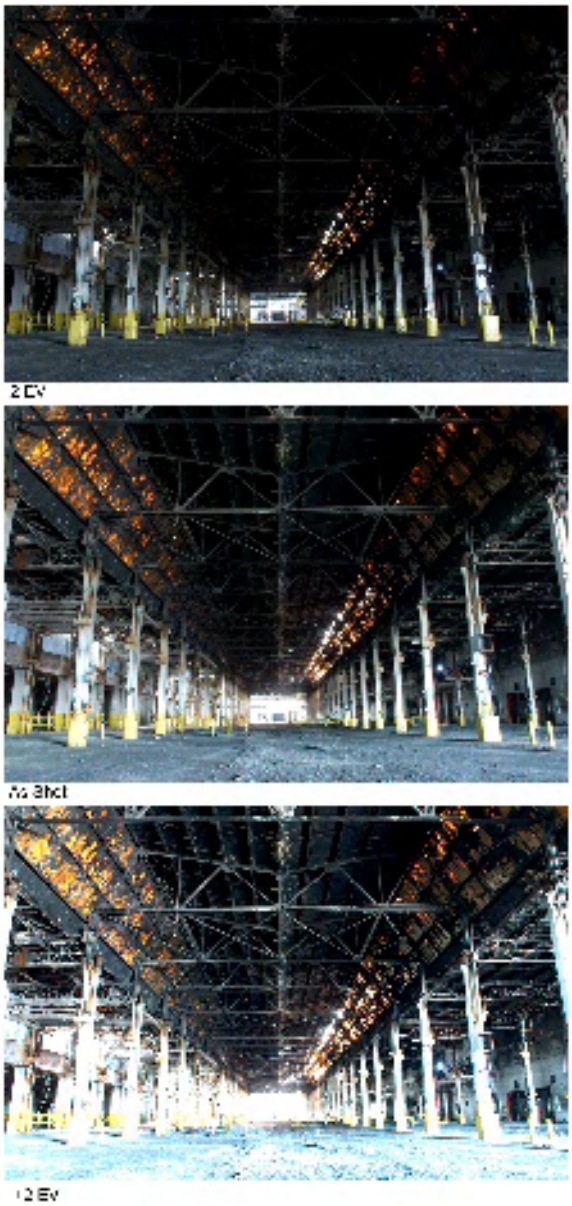
Overview of the HDR Process

Creating HDR images takes a few things that your currently may not be doing. First, if you aren't, you should be bracketing your exposures when you're out in the field taking photographs. Second, you'll need some additional software, I recommend Photomatix Pro (currently in version 3). Photoshop or Elements do not have the capability of fully processing HDR images, hence, the additional software need. Photomatix is the most popular.

With those thoughts in mind, lets look a the process:

1. **Shoot bracketed exposures:** Bracketing is a technique photo geeks like me used to do back when shooting in the film days. Back then (a mere 10 years ago), we didn't have LCD screens on our cameras where we could view the results of taking a photograph, or view a histogram. Bracketing entails taking multiple photo's of the same scene, using different exposures. That would mean shooting in Aperture priority mode, and setting your cameras autobracketing setting to taking 3 images, one at the metered exposure, one -1/3 to 2 stops, and the other +1/3 to 2 stops, depending on your taste. When shooting transparency film (slides), we had a limited dynamic range to work with, so I always bracketed my shots at 2/3rds of a stop. For HDR images, I actually prefer setting my autobracketing to 2 stops.

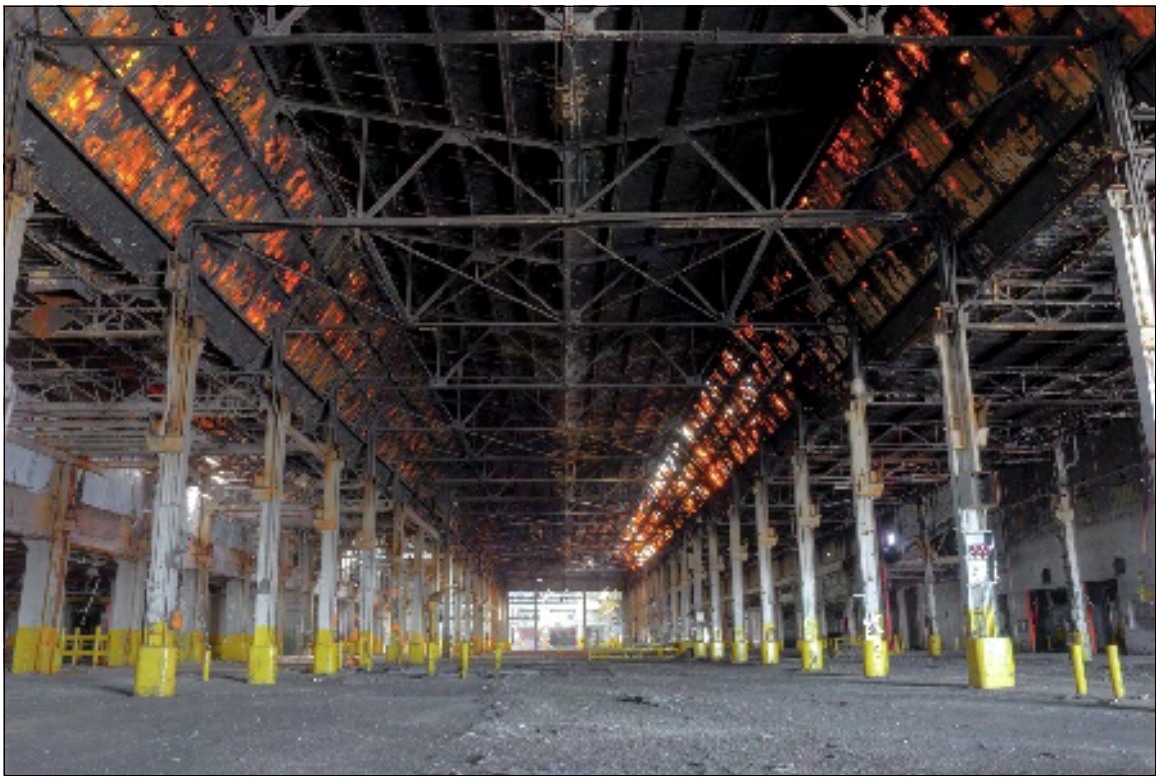
2. **Process your multiple (bracketed) exposures in Photomatix Pro.** This isn't a Photomatix Pro tutorial, but, choose the ***Merge to HDR*** option. Photomatix Pro will automatically create a 32 bit HDR file.



3. **Tone Map the HDR Image.** This is where Photoshop (at least not yet) can completely process an HDR image. Tone mapping transforms the image file to where the entire dynamic range of the exposures you provided are mapped in the image.

4. **Save the image.** I choose TIF as the format to save my HDR tone mapped images in Photomatix Pro.

5. **Open the new tone mapped image in Photoshop or Elements.** You'll need to fine-tune your image in Photoshop or Elements in this step. There may be a color cast that may need to be corrected. Additionally, you may want to make adjustments to Levels and/or Curves to improve contrast to your liking.



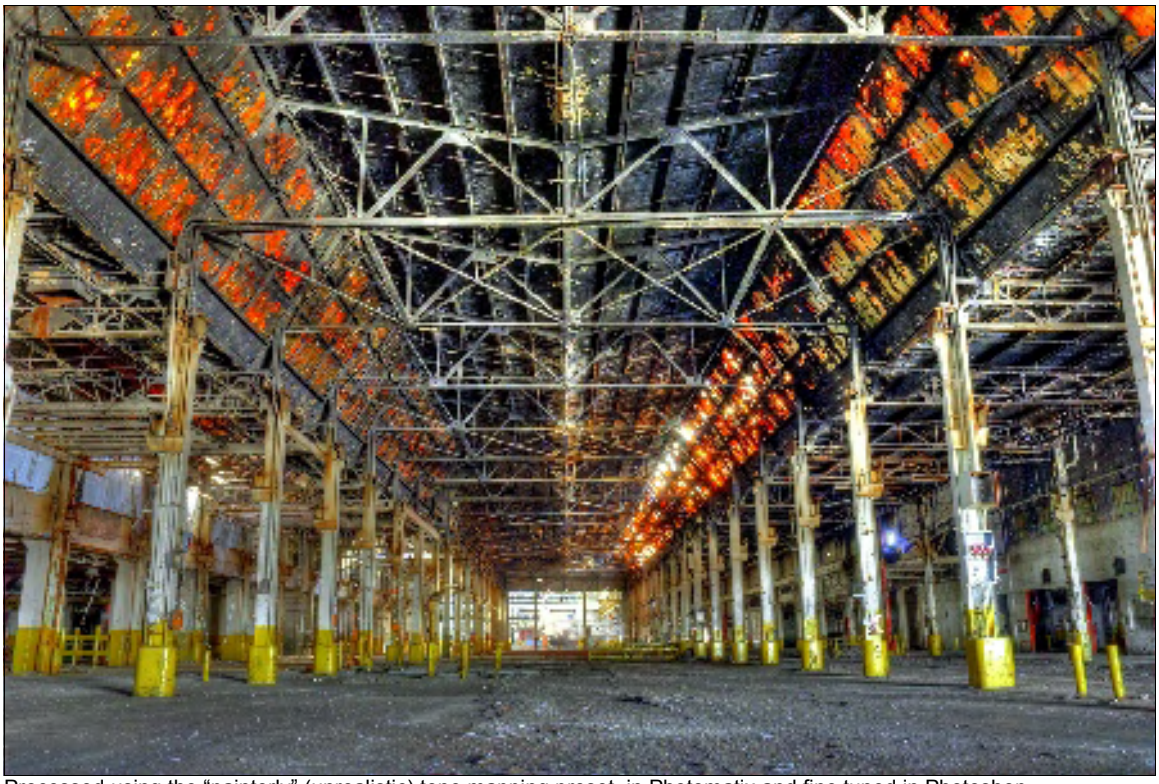
Liberty Motors Plant, Detroit. Processed as a normal HDR image and tone mapped in Photomatix, fine tuned in Photoshop

That Surrealistic Look

HDR images, or actually, the photographers preferred output of HDR images can be what is considered "hyper-real", or surrealistic images. Cruise the net for HDR images, and you'll see a lot of portfolios out there where the photographer displays very hyped up versions of their images. It seems to be a trend that goes hand in hand with HDR imaging. Actually, its one that I add to my "arsenal", and one that you should investigate as well.

I've heard some so called "experts" in the field call these images "cartoons", or not true photographs. *Au Contrair* Pierre! I beg to differ. I've seen absolutely stunning work from photographers using HDR techniques. Folks its here to stay. I actually prefer that surrealistic appearance for some of my work, particularly my portfolio work on abandoned structures and urban decay. For my nature and landscapes, most of my HDR work will remain in the "normal" range. It all depends on the subject matter I'm shooting, and the theme of the particular portfolio I'm shooting and processing images for.

In the least, whatever your personal taste is as an artist, you can have it both ways, straight or unreal.



Processed using the "painterly" (unrealistic) tone mapping preset in Photomatix and fine tuned in Photoshop

Index