Digital Photography for the Genealogist

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Course Description: Turn the digital camera into one of your most valued genealogical research tools. Effectively acquire records and preserve documents. Cut your reproduction costs by a minimum of 50%, achieve three times more with your available time. Also learn how to preserve, catalog, and file images for easy access.

Introduction

As I have sought to learn about my ancestors, I've been fortunate to travel to some of the areas where ancestors lived and have had the opportunity to do on-site research at local courthouses, libraries, genealogical societies, family cemeteries, long-ago home sites as well as meet new "cousins."

These experiences have ranged from half-day excursions to a month long stay. I have used the full extent of resources which include photocopiers and scanners to digital cameras. The appropriate tools to use have been dictated by the keeper of the records/situation, fragile one-of-a-kind nature, time available, and the purpose and use of the image.

1. Defining Digital Imaging

1. The picture is encoded as a series of numeric values, with each value representing some aspect of a tiny spot in the picture.
2. Images are by scanning--or 'digitizing'--a printed image.
3. Once digitized, the image is just a series of numbers, and those numbers can be copied by others without any further loss of data.
4. Copies can be copied over and over again so long as the data is transmitted (copied) without error.
5. Digital images may also be transformed, manipulated, and combined in various ways that make them a versatile and convenient format for preserving images.
6. Storage can be in various computer formats, but the most stable and long-term form currently available is CD/DVD.
7. It is currently believed by many that images encoded on DVD/CD's will continue to be available, with absolutely no degradation, a hundred years from now.

2. The Digital Advantage versus Film Advantage

Film cameras use
1. Reoccurring film costs.
2. Processing costs.
3. Wasted shots.
4. Full rolls of film to expose before you can see any of the pictures.
5. Film expiration dates to worry about.
6. Necessity of protective film bags when passing through airport security.
7. Negatives or slides to scratch or collect dust.

After exposing a roll of film with 24 or 36 pictures

1. You have to reload the film camera.
2. Take the exposed film to be developed.
3. Pick it up and hope you have the pictures you wanted.

Most Digital cameras
1. Record and store photos on some sort of removable media card.
2. Allows you to shoot numerous photos.
3. Easily download them to a computer.
4. Clear the card to be used again.

With a digital camera
1. You can look at the pictures as soon as you snap.
2. Decide whether it's good enough to keep.
3. If not, you can re-shoot before you leave the library or cemetery.
4. Create opportunities: For example, you can visit relatives, have them pull out their old photo albums and take photos of them on the spot.

3. Desired Features When Choosing a Digital Camera

Are you ready to buy a digital camera? Recommendations for specifications will fit the needs of most genealogists.

1. Match megapixels to your use. Most point-and-shoot cameras offer at least 4 megapixels, which is plenty for producing 8-by-10-inch prints. Cameras with more megapixels will yield even larger prints and allow you to blow up a part of an image with less likelihood that the print will be blurry. If you plan to make only 4-by-6-inch prints, you don't have to shoot at the camera's highest resolution--and as a result, you can fit more shots on your memory card.

2. Look for rechargeable batteries and a charger. The cost of disposable batteries adds up over the long run. Some cameras can use AA batteries of any type--disposable or rechargeable. That capability can be helpful if your rechargeable batteries run out of juice and you don't want to wait while they replenish.

3. Get at least 3X optical zoom. Most cameras offer digital zoom in addition to optical zoom-- and sometimes vendors combine the two specs to tout a high total zoom. But digital zoom results in photos that aren't nearly as good as those produced with an optical zoom.

4. Look for a low-light focusing aid. Some cameras have auxiliary lights that help them focus in dim settings. That's important for many indoor shots.

5. Try the camera before you buy. Some cameras have commands and menus that are easier to use than others, a comparison you can make only with a hands-on trial. Also evaluate the lag time between when you press the shutter button and when the camera actually takes the picture. Try the zoom lens--does it operate quickly and smoothly? Find out how long you must wait between taking pictures. And try the LCD viewfinder--in the sun if possible--to determine how easy it is to read.

6. Give extra consideration to a camera with a good selection of software. Look for useful packages like Adobe Photoshop Elements and Ulead Photo Impact for editing images, as well as applications for sharing them.

7. Don't base your decision on video capability. Any still camera's ability to take moving pictures is limited. If you want to shoot video, invest in a camera dedicated to the job.

8. Consider investing in a memory card reader. These readers act like an external hard drive attached to your PC or laptop, allowing you to download pictures directly from the storage media your camera uses. Many newer laptops have one or more memory card slots built in, as do some inkjet printers. If you have a second memory card, you can keep shooting while the images download, rather than having to keep the camera hooked up to your PC.

Summary
1.   4-megapixel camera.
2. Selling for $350 to $500.
3. Good quality glass lens.
4. Automatic and manual exposure controls or scenes.
5. Built-in flash.
6. Ability to shoot multiple formats (JPEG, TIFF, RAW).
7. 3X or greater optical zoom (Not Digital Zoom).

8. 4" or closer macro resolution and quality controls.
9. Can use rechargeable batteries.
10. Minimum 3X zoom on playback.
11. Lens cover that closes automatically when the camera is turned off.

Notes:
Automatic mode vs. the ability to choose both the aperture and the shutter speed.
My camera offers "Scenes" instead of aperture and shutter modes.
You can see on the camera the type of shooting you are going to do, i.e., close-up, bright backlit, landscape, portrait, or action scenes so that the camera can automatically adjust the shutter speed and aperture for the best results.

Macro: The closer the macro the better, 4 inches or closer is the minimum.
This feature is necessary for photographing inscriptions in heirloom jewelry, and other objects that require close, detailed photos.

4. Defining Image File Formats
Each picture is stored in the camera as a digital image file. Two most common formats are:

JPEG (*.jpg)
1. Smallest file size for email and web sites.
2. Higher quality JPEG format is usually good.
3. This file format compresses the actual data from your camera records and reduces the file size, without a noticeable change in image quality.

TIFF (*.tif)
1. Best quality for master copy.
2. Image format is the closest to the raw data recorded by a camera as you will get in a commonly readable file that is recognized by nearly every image-editing program.
3. Some cameras allow you to save the data as .tif files which are much larger than .jpg files and require more storage space.
4. These files require more time to open or save.

5. Moving Photos from Your Camera to Your Computer

There are several ways to transfer photos, and they're all relatively simple.

- **USB cable**. Connect your camera directly to any PC or printer. Since newer products have USB ports, you can transfer photos to nearly any computer or printer with ease.

- **Memory card**. Remove the memory card from your camera and insert it into a card slot on your printer or a card reader on your PC. Its small size and portability make the memory card great for on-the-go printing.

- **Camera dock:** Set your camera in this device and transfer photos to your PC with the press of a button. The dock also charges your camera's rechargeable batteries, and connects to a TV for slideshows

- **Bluetooth:** Send photos wirelessly from a Bluetooth-enabled device (such as a camera phone or handheld) to an enabled PC or printer. No cables or components are needed!

- **Using photo-editing software**. If you'd like to transfer photos to your PC, you can download them to photo-editing software where you can edit and manage the images.

A Word on Memory Cards. Additional memory cards allow you to take more pictures before you have to transfer images to your computer. This way, you can increase your chances of capturing the perfect angle, just the right light, or the most revealing, candid moment.

To make sure you don't miss a thing, digital memory cards offer high storage capacity (from 64MB up to 1G-plus) in a product the size of a postage stamp. Keep one on hand for an extended trip or vacation, or for those times when you just need to free up space on your camera.

This chart shows you how many photos you can store on your camera's memory card if your camera's image quality is set on the default setting (usually Better) creating a .jpg image. The actual number of photos will vary depending on which camera you have, image quality settings, and how detailed the photos are.

Memory Cards and Megapixels

Camera Mega pixels	Number of images that fit on a 64MB memory card	Number of images that fit on a 128MB memory card	Number of images that fit on a 256MB memory card	Number of images that fit on a 512MB memory card	Number of images that fit on a 1GB memory card
4MP	40–50	91–100	171–189	362–400	724–800
5MP	35–40	70–78	141–157	283–313	565–625
6MP	27–32	57–63	113–125	226–250	452–500
8MP	20–23	38–42	75–83	151–167	301–333

Downloading Images from Digital Camera

Each time you download pictures from your digital camera, store them in a unique subfolder of the current year. For example, if I've been taking pictures at the a cemetery, I would create a temporary folder that includes my name, photo shoot, and date (day, month, year) such as "Barry Ewell_Beaver_Cemetary 120407". It makes it really easy to find the photos when I am ready to sort, delete, name, and file.

Deleting Bad Images Is OK

As the years go by and your collection grows, it will be easier to retrieve photos if you've named and sorted them.

Simplify your photo-sorting process by eliminating pictures you don't need. As soon as you download images, delete the shots that are unusable—whether they're overexposed, underexposed, duplicates, or pictures where your thumb got in the way. But be sure to keep the ones that image-editing tools can improve.

There are pros and cons to various organizational methods. These guidelines will help get your files under control. You'll want to experiment to refine your own system.

Organizing Photos Using Windows XP

I try to organize my photos within a few days after downloading if not the same day. I use will either use the Windows XP Scanner/Camera Wizard or a program like iView Promedia 3 batch captioning software to sort and name.

To use the Scanner and Camera Wizard:

1. Connect your camera or memory card to your computer.

2. When prompted, click Copy pictures to a folder on my computer using Microsoft Scanner and Camera Wizard. Then, click OK.

3. On the Welcome to the Scanner and Camera Wizard page, click Next.

4. On the Choose Pictures to Copy page, click Next.

5. On the Picture Name and Destination page, type a name that describes all or most of the pictures you have recently taken. Then, click the Browse button to select a folder.

6. In the Browse For Folder dialog box, click the current year's folder within My Pictures. Then, click the Make New Folder button. Type a name for the new folder, and then press ENTER on your keyboard. Click OK.

7. When the Scanner and Camera Wizard appears, click Next.

8. On the Other Options page, you can choose to publish your pictures to a Web site or order prints. If you have finished working with your pictures, click Nothing, and then click Next.

9. On the final page of the wizard, click Finish.

The Scanner and Camera Wizard downloads your pictures to your new folder. Your pictures will have the name you typed at step 5 with a unique number, such as, "Beaver Cemetery 001," " Beaver Cemetery 002," and " Beaver Cemetery y 003."

A Few Words on Batch Naming

A key to organizing photos is to give batches of photos a similar name. "Batching" allows you to perform the same function (like naming) on multiple files at once. This saves time and ensures the changes you make to your files are consistent.

For example, give your Paris pictures a similar name at the beginning plus an additional descriptor to identify the specific photo, such as "Paris_eiffel_tower" and "Paris_cafe_night." Just open the folder, select all, and rename the photos so that all files for an event are grouped together. Once you've moved the files into the appropriate subfolders, you can rearrange them however you like.

Name Pictures Logically

One way to get organized quickly is by renaming your photos when you download them from digital camera to computer. Digital cameras assign pictures alphanumeric names. But who remembers that JX1000054 was that wonderful sunset shot during your last vacation? Giving pictures descriptive names as soon as you download them will help you remember what they are.

What makes a good name? Think about how you might search for a picture later: Are you more likely to want to retrieve all of your sunset shots at once, or all your Virginia Library shots on the "Jones" line? And when you're naming your files, use an underscore (_) instead of a space between words to prevent problems later if you post your pictures online.

When it comes to photos that has multiple persons, I will try to name all the persons. If I have more than five individuals as is the case in many family photos, I may title the photo "Ora Jones Family" and then in the catalog name all the persons.

Another key to organizing photos is to give batches of photos a similar name. "Batching" allows you to perform the same function (like naming) on multiple files at once. This saves time and ensures the changes you make to your files are consistent.

Tip: If you have a folder of pictures with the camera's default names, such as "DSCN3089," you can easily rename these photos all at once. Batch renaming of photos is a simple task that can be done quickly and will keep your pictures organized.

Searching for Pictures

Now that you have named your pictures to identify the people in each one, you can easily find pictures with a particular person in them. To search for a picture by file name:

1. Open your My Pictures folder.

2. Click the View menu, point to Explorer Bar, and then click Search.

3. In the All or part of the file name box, type the name of the person you're looking for, and then click the Search button. After a few moments, Windows XP displays pictures with that person's name in the file name.

Digital Photo-Organization Software

Photo-organizing software will automatically track information about each picture you add, including the date, file size, and image dimensions. That means you'll be able to search for photos taken at a particular time, or images taken at high resolution that you want to print. Follow these steps to get started.

Another great way to store and find your pictures is to use digital photo-organization software, such as Microsoft Digital Image Library (included with Microsoft Digital Image Suite). Digital Image Library has a batch rename tool that can automatically include the date and time the picture was taken in the file's name.

Creating a Photo Library

Digital Image Library or the software digital image software of my choosing makes it easier to find pictures you haven't named by showing you thumbnails from all your folders simultaneously. For example, if were to click on the "Barry Ewell_Beaver_Cemetary 120407", My digital image software will show thumbnails of all the pictures you've added to any subfolder within 2005. It can show larger thumbnails than Windows Explorer, too, which makes them easier to see. You can also give star ratings to pictures to designate the best ones that you may want to share with someone at a later date.

Organizing and naming your pictures logically is a good practice that pays off later when you really need to find that special shot. Follow these best practices, and you'll have a computer full of easy-to-find pictures.

Protecing the Your Photos on Secure Media.
Backup to harddrive. Once your back home, take the time to transfer and back up you digital images. I have on more than one occasion be greatful that I took the time to transfer and backup my photos. My normal mode of transfer is simply to down load the photos to a file in my pictures folder and name something like "Barry Transfer_ (Name of Shoot)_ (Date of transfer-Day/Month/Year such as--041207) and then I backup the file to a secondary harddrive. And then with in a few days I will bring the photos into my photo editing software to sort, delete, edit, name, and file.

Backup to CD/DVD. If you desire more security or don't have a backup drive, you can backup your images to a CD/DVD. For the average photographer the best medium for backup is a CD.

If you're using Windows XP, it's easy to back up your photos to a CD.
1. Open the folder that contains your photos. You will want to work with the Picture Tasks area on the left side of the window. If you don't see the Picture Tasks area, click on Tools, then Folder Options. Under the General tab, select "Show common tasks in folders," then click OK.
2. Highlight the pictures that you want to backup by holding down the CTRL key and clicking on the ones you want to choose.
3. Then click "Copy all items to CD" in the Picture Tasks area.
4. A balloon saying, "You have files waiting to be written to the CD" will appear in the bottom right corned of your screen.
5. Click the balloon message to see the files.
6. Then click on "Write these files to CD" in the CD Writing Tasks area on the left.
7. A wizard will appear that will walk you though the simple process of burning a copy of your pictures to a CD.
8. At the end of the process, the wizard will even ask if you would like to make another copy of the CD. This may be a good idea.
9. To make sure your photos are really safe you can make an extra copy to leave with a friend or neighbor.

If you don't have Windows XP but you have a CD writer you can archive your photos by using the program that came with your CD writer. If you don't have a writable CD drive you might

Online Storeage. You can also use a photo website like Shutterfly http://www.shutterfly.com/ and Kodak Easyshare Gallery http://www.kodakgallery.com/ to store a copy of your photos. Two important things to remember. 1. Remember that they you have them there make sure you make a backup to Hardrive or CD/DVD.   2. Remember that if the website goes out of business, you are out of of luck with no recourse to find your images.

Why Do I Like Certain Photographs?

If you like me, photographs decorate my home and office. Photographs are part of every medium we medium we consume from books and magazines to newspapers and calendars. Pictures communicate our thoughts and feels. Within genealogy, the photo us used to document our sources and provide depth to our family history as we record and tell our history. The only boundaries are within your mind.

Have you every thought about why you like certain photographs? The answers are relatively simple and you can improve your images by following a few basic rules which you will use a majority of time.

Rule 1: Get in Closer. Real Close

Get in as close as possible, thereby eliminating anything in the background that may detract from your subject. For example when you are taking photographs of flowers, focus in on one flower. Get as close as you can get so that you can see nothing more than the pedals of that one flower.

Look around your room, there are many pictures that are waiting to be taken. Perhaps it's the a child's toy on the floor, stack of papers on your desk, the wooden antique wooden table, books on the shelf. Always ask yourself whether you are emphasizing the things you really want in the photograph.

Practice Example 1: Set your camera up on a tripod, get as close as you can to a flower, while still keeping the flower in focus. You may choose to include some of the greenery or vase, but make sure you are getting rid of all other images in the photo which cause "clutter." If you can move the clutter, move it physically taking away or moving the lens so it no longer in the photo. The image you now see should fill 90-plus percent of the rectangle you see in your viewfinder/LCD display. You should be seeing nothing but the flowers petals, with enough detail you feel you could reach out and touch them. The light hits the blossom just right, creating just enough shadow to make each petal stand out from the others, and you get lost in that beautiful swirl and curves. And there is not distraction.

Practice Example 2: With the same setup as in example 1, ask a family member or friend to simply sit in a chair why you take close-ups of their face. As you get close, don't be afraid to crop out potions of the head and face. Focus on the eyes and smile.

Shooting close, really works.

Rule 2: Photographic Composition

One of the very first lessons I learned that there is are "sweet spots," places in the rectangle of the photo where placement of the main subject of the photo will make the photo really pleasing to the eye. This is called composition.
Our first instinct is to want to place the focus of our picture right in the middle. Another term for that is called "bullseye." From now on forget about centering your subjects. You will notice a difference in your photos immediately. There are several methods you can use to help you compose your pictures betters.

Squint. Yes, I'm serious. Squint your eyes until the image is almost a blur. At this point you will see the lines and shapes created by the shadows and light.   You will notice how shadows blend together creating shapes and forms that you would not have seen otherwise. It will impact the composition of your picture.

The Rule of Thirds and the Golden Mean. Any image can be divided into nine equal parts by two equally-spaced horizontal lines and two equally-spaced vertical lines (i.e., Tic-tac-toe board.) The four points formed by the intersections of these lines can be used to align features in the photograph which is called the "Golden Mean." I am a firm believer that aligning the photo at these points of intersection creates photos of more interest and energy. Photos are simply more aesthetically pleasing.

For example, when you are talking outdoor shots, place the horizon in the top-third. Rather than placing people in the center, put them on the right or left third of the photo.

The Golden Triangle. The Golden Triangle Rule is a spin-off on the Rule of thirds. To follow the rule, simply draw a diagonal line connecting two opposite ends of the picture. Then draw connecting lines from the two unused ends so that they are parallel to the first diagonal line. At the two points where the lines intersect, that's where your subject should be. The idea behind this is that keeping the composition in a diagonal line defies the logical straight line that our brain is used to seeing, making the overall composition a lot more intriguing than a simple shot of the subject bang in the cente

Odd Numbers. Photos stand out when they move away from the element of order and symmetry. Even numbers of objects make an image look simple because it immediately brings out a sense of symmetry. Simple take a photo two similar objects then take the same photo with three objects. Notice the lack of symmetry, making the image more appealing to look at. This rule works really well with people, birds, animals, flowers, inanimate objects, and just about anything you can think of.

The Frame Within A Frame. This rule works well with architecture and landscapes. Use materials near you in the foreground and include them in you photograph around two or more edges to create a frame. Archways, doorways and other such features work well.

Leading Lines. Roads and footpaths are a great way to use leading lines to your advantage and draw your viewer into your photograph. When looking at a picture, our eyes look for a pattern or a lead-in to the subject. That's where lines can be highly effective in any composition. When our eyes spot a line in a composition, they automatically follow it from the edge of the frame to wherever it may lead.   For example a painted line on the road leads your eye into the image, meeting the horizon line, which is one third of the way down into the image. The edges of the petals of a daisy can be leading lines moving into the center of the flower. A row of trees or street lights that vanish in the distance can create very strong leading lines that take the viewer's eye all the way through an image.

The Circle. The circle can be used very effectively when composing a photograph, if the subject is right. The circle keeps the viewer's eye from escaping from the picture, taking the viewer's attention such as in the center of a dartboard. "The Circle" is a tricky element to use in a photograph effectively, but when done well, makes for an outstanding photograph.

Rhythm. Dynamic impact in your photograph is created by using "visual rhythm". This is a way to use repetition of form and shape in an image to create interest.

Negative Space. Negative space is a term used in photography that implies only a tiny fraction of the frame is taken up by the actual subject. Negative space is usually used either to make the subject seem very small, or to give the impression of the subject being in a wide-open space.

It's Ok to Break the Rules. Sometimes you subject just doesn't fit into any of the composition rules. What do you do? Take the picture the way it looks best.

Taking Better Digital Photos: Overall Tips
The following are some basic tips to consider the next time you head out with your digital camera. These tips are easy to implement and make the biggest difference in your use of the camera in you genealogy research.

Be prepared. Gather everything you'll need, such as a tripod, extra batteries, and any props you'll use. (A camera bag really comes in handy for transporting everything.) If you plan to take photos in wet weather, bring a plastic bag to protect your camera.

Hold your camera steady. Camera movement causes most of the blurry pictures you see. Prevent your camera from shaking by planting your feet firmly on the ground, and then

steady your upper body by tucking your elbows in close to your sides. If you feel unstable, use a tripod or try leaning against a wall or a tree. Gently press the shutter release in one motion; if you press too hard, you could jerk the camera downward.

Get closer. Try to get within two to four feet of your subject. Ideal photo composition is 90 percent subject and 10 percent background. If you're photographing people, getting this cozy might seem awkward at first, but try it anyway—you'll get better photographs.

Cut the clutter. Nothing ruins a photo like stray objects that detract from your composition. If there's a phone wire, an aluminum can, or anything else unsightly, remove it from view by either rearranging the area or blocking it out of the frame. Also, notice how objects in your background interact with your subject. A plant that appears as if it's growing out of someone's head, for example, will ruin an otherwise great picture.

Take more pictures. Most of us are frugal with the number of pictures we take. But with a digital camera, you can simply delete the images you don't like, so don't hesitate to capture every memory. Why not fill the entire memory card with photos of your new puppy? The odds are better you'll take a few pictures that will really thrill you.

Find the right lighting. Use the flash sparingly, especially when photographing people. Natural light, such as the light coming in from a window, provides a more flattering tone and a higher-quality photo. For a dramatic effect, experiment with shadows created by natural light.

Another way to improve a picture's lighting is to use HP adaptive lighting technology. You'll achieve a better balance between light and dark areas, bringing details out of shadows. As a result, your photos will look more like what your eye sees.

Remove red eyes. There are a few factors that cause people to have glowing eyes in photos, including the amount of pigment in their eyes. While red-eye isn't 100% preventable, you can take measures to avoid it.
- Snap pictures when your subjects aren't looking directly at you.
- Avoid using the flash whenever possible.
- If you decide to use the flash, turn on the red-eye reduction flash on your HP camera.

Try a new angle. Get creative by using different angles. Get down on the ground or up on a chair, and look at your subject from a different perspective. Take time to find the best viewpoint and take several shots of the same subject from various angles.

Don't say cheese. Sometimes you want a perfectly posed picture, such as a portrait of the kids with their grandparents. But you don't need to pose your subjects every time. Part of the beauty of digital photography is that it's much easier to capture life's candid moments. So forget "cheese" and tell a joke or two! Your subjects will look relaxed and natural, allowing for pictures with more personality.

Avoid the bull's-eye effect. There's nothing wrong with placing your subject in the exact center of the frame, but there's nothing particularly interesting about it either. It's actually more aesthetically pleasing to place your subject off center than mid-frame. In photography there is a what is a called the "rule of thirds," a trusted compositional

technique. Here's how it works: In your mind's eye, divide the picture area into vertical and horizontal thirds (like a tic-tac-toe grid).

Rather than placing your subject directly in the center of the grid, try placing it on one of the four lines to create a more interesting picture. You might line up a human subject on line A or line B, for example. Or in a landscape photo, you could experiment by aligning the mountains or horizon on line 1 or 2. Use the rule of thirds to create a picture with a more dramatic sense of scale.

Photographing as a Genealogist

1. Genealogy Photographing is 10% Outdoors and 90% Indoors
Goal: To get the highest and best quality picture from your camera.

Indoors: 90-plus percent of genealogical work.
Common Places
1. Libraries.
2. Courthouses.
3. Museums.
4. Historical societies.
5. Homes.
6. Family reunions.
7. Other places where documents and pictures are.

Types of indoor projects
1. Text, existing photographs, or other images.
2. Some will be black and white; some grayscale and some will be in color.
3. Some will be in books, some will be unbound.
4. Some will be old and brittle or so fragile that they are stored and viewed in a room where they won't let the light of day in.

Outdoors: 10-plus percent
1. Cemeteries.
2. Land or buildings where family members once lived, worked or worshipped.
3. Many outdoor shots are of historical consequence, but not of genealogical substance.

2. Digital Photography is all about Lighting and Location
Photography: The first problem you will always face is lighting.
1. I use flash less than 10% of the time.
2. Instead of flash use:
    a. Natural lighting (e.g., near a window).
    b. Light stands with diffusion screen and lights.
    c. Self-contained photo studio includes: tripod, diffusion lights and screen, copy stand.
3. Shooting documents with flash indoors usually creates a "hot spot" caused by using a flash too close.
4. When you have no choice but a flash, use it sparingly like in a group setting or for a gravestone that is in a shaded area.
5. Many libraries and research facilities prohibit flash photography.
6. Come prepared to shoot without flash.

Note 1: Sunlight is known as "white" light and gives what we recognize as true or natural colors. Any other type of light source has light of a different color temperature and gives off different color tones.

Note 2: Digital cameras try to automatically adjust for different kinds of lighting but sometimes need additional help.   The camera's "white balance" setting provides this help.
This setting "reads" the light coming into the camera lens and by assuming the brightest area in the image is white attempts to balance the entire image so that
the bright area looks white. All other colors should then appear natural.

3. Photographing Unbound Pages
1. Mount your camera on its stand, in shooting position.
2. Use a white sheet of paper, or a white painted cookie sheet.
    a. Set the pre-set white balance on your camera.
    b. Choose auto white balance if your camera doesn't have a pre-set option.
3. Place your document in position and anchor it with magnets.
4. Select the camera's macro mode if necessary.
5. Zoom in so your document is properly framed.
6. Check to make sure the focus is clear and sharp.
7. Under most conditions you should be able to simply press the shutter button and go to the next page. Depending on the light conditions, you may need to manually set your shutter speed to stay open a little longer. If this is the case, set the timer and press the shutter button halfway down and hold in position for a few seconds to give the camera time to adjust the automatic focus and exposure settings.
8. View the picture on the LCD, and zoom in and check for the proper focus, exposure (brightness and contrast). Can you easily read the text?
9. If the focus and/or exposure are incorrect, make the camera corrections, and re-shoot the document.

4. Photographing Bound Pages
Books can be a problem, because the pages seldom lay completely flat when the book is opened to a normal reading position.

1. Shoot book pages with the cover held up at about an 80-degree angle. This allows the page you are photographing to lay flat.   Depending on the book, you may be able to lay the book flat and photograph both pages at the same time.
    Note: Double check your LCD to make sure that you can get the full page, there are no shadows on the page and other interference that would keep you from being able to read the page at a later date.
2. Rotate the book so the spine is facing the back of the copy stand.
3. Open the book to the first page you want to shoot.
    a. Make sure there are no shadows falling on the page.
    b. Hold the front, or back cover and the pages preceding the one you are shooting.
4. Under most conditions you should be able to simply press the shutter button and go to the next page. Depending on the light conditions, you may need to manually set your shutter speed to stay open a little longer. If this is the case, set the timer and press the shutter button halfway down and hold in position for a few seconds to give the camera time to adjust the automatic focus and exposure settings.
5. Check to make sure the focus is correct before pressing the button all the way down so the timer releases the shutter.

6. Before photographing the next page, place the opposite cover down on the table
7. Slide the book back into position so that it is under the camera, with the spine of the book next to the stand. Note: if the page is upside down, that's ok. You can fix that during your editing.
8. Repeat for each page, turning the book around each time

Note: Once you have taken pictures of the first couple of pages, the rest of the book should flow easy.

Note: If you come across a page that includes photo (s) that are of interest to you, take the time to set up your picture especially to capture the photo. You may find that it is easier to frame just the photo and crop out most of the page. Taking this extra time will simply ensure that you have the best possible photo to work with when you begin to edit.

5. Photographing Oversized Pages
1. Set up your stand, and adjust your camera.
2. Open the large book/page.
3. Adjust the camera and take photos.
4. If the page is too large for your camera (e.g., map, newspaper) consider taking multiple photos which can be "stitched" together in editing program.
- Use card: START (On top of page to be filmed)
- Use card: 1 (Quadrant 1) (Top nearest spine)
- Use card: 2 (Quadrant 2) (Top nearest right edge)
- Use card: 3 (Quadrant 3) (Bottom nearest spine)
- Use card: 4 (Quadrant 4) (Bottom right edge)
- Use Card: END (Placed on top of the page just filmed)
5. Rotate the book/paper as needed.

6. Common Experiences of Photographing Photos
1. Photos are tucked away in a trunk, or glued in an album, etc.
2. Access to the photos requires owner to be there with you.
3. Sometimes photos are already in a book or magazine.
4. Photographs are best captured with a scanner.
5. When scanner is not available, digital camera is next best thing.

Type of photos expected:
1. Usually black and white.
2. Tintypes and sepia toned portraits.
3. Postcards.
4. Color photographs.
5. Old negatives.
6. Slides.
7. Transparencies.
8. Printed in book/magazine.
9. Cut out from/printed in newspaper.

7. Photographing Photos
Best shot with a mobile studio set-up (Better lighting with copy stand).
1. Mount your camera on its stand, in a shooting position.
2. Use a white sheet of paper/copy stand.
3. If you are using a cookie sheet as your platform, place your photo in its position and anchor it with magnets.
4. Select the camera's macro mode if necessary.
5. Zoom in so photo is properly framed.
6. Check to make sure the focus is clear and sharp.
7. Press the shutter. If you are using the camera's self-timer, set the timer and press the shutter.
8. View the picture on the LCD, and zoom in and check for the proper focus, exposure (brightness and contrast).
    a. Make sure you don't see any reflections, hot spots, etc.
9. If the focus and/or exposure are incorrect, make the camera corrections, and re-shoot the document/photo.

8. Photographing Microfilm
Note: These are the backlit or rear projection readers that shine a light through the film and use a series of mirrors and/or lenses to display an image of the film on a vertical or flat surface. The image displayed on either style can be easily photographed.

1. Depending upon your circumstances you may or may not need to mount your camera on a tripod. I have been able to raise my camera up near the projection lens and click the shutter button and gain a clear photo with no distortion. If you choose to use a tripod, place your camera on a tripod located in front of the reader screen.
2. Place a white paper on the reader surface as the target area for shooting.
    Note: Try other blank sheets of colored paper (e.g., pink, blue, yellow) to see if these colors help you with readability of the image.
3. Adjust the camera/tripod position so that the information you want to copy fills the LCD frame, not the viewfinder.
4. Set the macro mode if necessary. This will depend on your camera model and how far away it is from the microfilm reader.
5. Make sure the flash is turned off.
6. Set the camera's self-timer if needed.
7. Gently press the shutter button halfway to lock the exposure and focus.
8. Press the button completely down. If using the self-timer, move away from the camera and wait for the self-timer to trip the shutter.
9. Take several shots. Consider using the "best shot selector" and/or auto bracketing your shots if your camera has these features or manual bracketing if it doesn't.

9. Photographing Slides and Film
Copying slides and film with your digital camera is possible and can be a great way to convert your files to digital images without noticeable loss of clarity from the originals.

First you will need to find an adaptor that usually fits on front of your camera. Check out www.specialtyphotographic.com. This company manufactures adapters for copying slides with a digital camera. When you speak with the company they will ask you questions that will help them find the right attachments for you.

If you are able to secure the adaptor:
1. For best results, mount your camera on a tripod.
2. Mount your adaptor to the camera.
3. Place the camera in front of a light source that will provide consistent steady light. Examples of such light that can be used include the slide projector (light is cooled by the projector fan) or the light stand from Photo-studio-in-a-box from American Recorder http://www.americanrecorder.com/.
4. Insert memory card. I suggest 256 meg or higher. This will allow you to take more photos before needing to download them to the computer.
5. Insert the first slide/film and click the shutter button.
   Note: When you take pictures of the first few slides, download them to your computer and review them to make sure you are getting the quality you desire. Quality variations can be due to the intensity of the light. If you are not getting the desired image quality, try adjusting the distance of the light or changing light sources.
6. Insert the next slide and continue the process.

If you are unable to secure an adaptor for your camera:
I strongly suggest using scanners equipped for slides and film.

10. Photographing People
1. Enjoy taking photographs.
   a. Don't work too hard to position your subject.
   b. The goal is for him or her to relax and fall into a natural pose.
   c. Try shooting in your subject's favorite place, or at least a comfortable place.
   d. Meaningful props, like a trophy, a musical instrument, or even a fish, can add interest.
2. Take close "tight" photos of your subject.
   a. Fill the camera's LCD display with your subject to create pictures with greater impact.
   b. Step in close or use your camera's zoom to emphasize what is important and exclude the rest.
   c. Check the manual for your camera's closest focusing distance.

3. Take candid pictures.
   a. Ignore the impulse to have subjects pose staring at the camera.
   b. Take a variety of shots.
   c. Take candid photos of subjects working, playing, and leaning against a banister chatting, or relaxing.

4. Use natural light.
   a. Cloudy, overcast days provide best lighting for pictures of people.
   b. Bright sun makes people squint, and it throws harsh shadows on their faces.
   c. On overcast days, the soft light flatters faces.
   d. Indoors, try turning off the flash and use the light coming in from a window to give your subject a soft appearance.
5. Avoid harsh shadows.
   a. Avoid harsh facial shadows by using the soft lighting of a cloudy day or a shady area.
   b. On sunny days, if your camera has several flash modes, select fill flash. This will fire the flash even in bright sunlight. This "fills" the shadows on nearby subjects, creating more flattering portraits in direct sunlight.
   c. Check your camera's manual.

11. Photographing Children
Make picture-taking a part of your everyday life with children. Children are always climbing, building, exploring, and trying out new things.
1. Begin a photo tradition.
   a. Take pictures regularly so that you, your family, and friends can see how much your child has changed.
   b. Capture your child setting off for the first day of school each year.
   c. Or mark your child's growth against a tree as you watch your child and the tree grow.
   d. Or every Father's Day, surround grandfather with all the grandkids.
2. Be patient.
   a. Don't expect to get the perfect shot immediately.
   b. Sit back and wait for the right moment, then shoot quickly.
3. Shoot at eye level.
   a. Eye-to-eye contact is as engaging in a picture as in real life.
   b. Try sitting on the ground and snapping some photos from the child's perspective.
   c. Expressions will look more natural, your flash photos will be more evenly lit from nose to toe, and the background will probably look a lot better, too.
   d. This also works great for pets!
4. Take candid pictures.
   a. Ignore the impulse for subjects to pose staring at the camera.
   b. Variety is important.
   c. Take candid shots to show them working, playing, leaning against a banister chatting, or relaxing.

5. Include friends.
   a. Remember to include your kids' friends in some of your pictures.
   b. In years to come, these pictures will remind them of happy times and the bonds that were so strong.
   c. "Look! That was right after Carrie tried to cut her own hair!" "Whatever happened to Tyler?" "I wonder what we were giggling about."
6. Get close.
   a. Fill the camera's LCD display with your subject to create pictures with greater impact.
   b. Step in close or use your camera's zoom to emphasize what is important and exclude the rest.
   c. Check the manual for your camera's closest focusing distance.
7. Let kids record their world.
   a. It's a whole new world when seen through a child's eyes.
   b. One time use cameras and digital cameras provide easy ways to let kids take pictures of each other and to capture what's important to them.
8. Place your subject off-center.
   a. Placing your subject to one side of the frame can make the composition more interesting and dynamic.

12. Photographing Babies
1 Take pictures frequently.
   a. Catch each step of baby's development—the first smile, the first bath, the first tooth, the first step.
   b. Babies change so rapidly, make sure you capture all the milestones before they become history.
   c. Or show a day in the life of baby. From the morning's waking stretch to the evening's yawns, track your child for one full day. You'll have a series you'll cherish for years to come.
2. Capture feelings.
   a. A smirk, a frown, a wail—capture all the emotions, not just the pretty smiles. Babies are uninhibited and uncensored. Show it in your pictures.
3. Get close.
   a. Fill the camera's LCD display with your subject to create pictures with greater impact.
   b. Step in close or use your camera's zoom to emphasize what is important and exclude the rest.
   c. Check the manual for your camera's closest focusing distance.
4. Try different angles.
   a. Start by shooting at the baby's eye level.
   b. Prop the baby on someone's shoulder.
   c. Or line up several wee ones on the sofa.
   d. Then try something different—stand on a (sturdy!) chair and shoot down at the baby in the crib.

5. Include other people in pictures.
    a. Capture others with the baby—Big sister feeding the baby, Grandpa dancing with his baby granddaughter.
    b. Or introduce two babies to each other and catch that instant bonding in their eyes.
6. Use a simple background.
    a. An uncluttered background focuses attention on the subject, resulting in a stronger picture.
    b. Place your subject against a plain, non-distracting background
    c. Alternatively, sometimes just moving yourself (and the camera) a few feet one way or the other can eliminate distractions from view.
7. Use natural light.
    a. Cloudy, overcast days provide the best lighting for pictures of people.
    b. Bright sun makes people squint, and it throws harsh shadows on their faces.
    c. On overcast days, the soft light flatters faces.
    d. Indoors, try turning off the flash and use the light coming in from a window to give subject a soft appearance.

13. Photographing Landscape
1. Include a strong point of interest.
    a. Your eye needs a place/something of interest to rest in the picture.
    b. For example: A clump of colorful flowers, a cloud in the sky, a mountain, a tree, or a boat.
2. Include an interesting object in the foreground.
    c. Adding a branch, a boulder, a fence—include an object in the foreground to add depth to your picture.
3. Place the point of interest off-center.
    d. The picture is more interesting if the horizon or your point of interest is not in the center of the picture.
4. Include people for scale.
    e. The cliff may not look all that big, especially in a photo—until you put a person next to it.
5. Use lines to lead the eye.
    f. Lines, such as a road, a river, or a fence, direct attention into your picture. Select a spot or an angle where major lines in the scene lead your eye toward the main center of interest.
6. Wait for the right light.
    g. The best light is in the early morning, shortly after sunrise, or late afternoon when the sun is low. Noonday sunlight is harsh and less appealing, so if you have the option, take pictures early or late in the day.
7. Take pictures, even in bad weather.
    a. Don't let rainy days discourage you from taking pictures.
    b. Polished by the rain, colors seem to glow.
    c. On overcast days, try to include a spot of color to brighten your picture.

8. Turn-off your flash.
    a. For more effective lighting when you're outside in dim light and your subject is within 10 feet away, turn off your flash and capture the scene in the existing light.
    b. Hold your camera extra steady or use a tripod.
9. Avoid distractions.
    a. Is there a trash can in the foreground? A telephone wire overhead? Check everything in the viewfinder and reposition yourself to eliminate distractions.

14. Photographing Buildings

1. Choose your angle and avoid distractions.
    a. Choose your angle carefully to minimize the clutter of telephone poles and street signs.
    b. Try photographing from several angles.
    c. Watch out for cars and trucks that might pass between you and the building you are trying to photograph.
2. Include an interesting object in the foreground.
    a. Adding a branch, a boulder, a fence—include an object in the foreground to add depth to your picture.
3. Take pictures of the building's architectural details.
    a. Consider taking photographs of unique architectural details that help tell the story of the building and/or its crasftsmen: windows, eves, staircases, awnings, or masonry work.
4. Include people when appropriate.
    a. Consider adding a person in the photo to add scale of size.
    b. Add people who live in the home especially if they are family.
5. Use lines to lead the eye.
    c. Lines, such as a road, a river, or a fence, direct attention into your picture. Select a spot or an angle where major lines in the scene lead your eye toward the main center of interest.
6. Wait for the right light.
    a. Photographing a building when the sun is shining directly on it will ensure the sharpest picture and the clearest detail.
    b. The best light is in the early morning, shortly after sunrise, or late afternoon when the sun is low.
7. Consider the direction the building is facing.
    a. Some buildings you will need to shoot in the morning, while buildings on the other side of the street may be best shot in the afternoon.
    b. North and south-facing buildings may be even trickier. Depending on which way they face, some buildings seem to be perpetually in shadow.
8. Take pictures, even in bad weather.
    a. Don't let rainy days discourage you from taking pictures.
    b. Polished by the rain, colors seem to glow.
    c. On overcast days, try to include a spot of color to brighten your picture.

9. Turn-off your flash.
    a. For more effective lighting when you're outside in dim light and your subject isn't within more than about 10 feet away turn off your flash and capture the scene in the existing light.
    b. Hold your camera extra steady or use a tripod.
10. Remember the green grass and blue sky.
    a. Try to get some green grass and blue sky into the picture, if possible.
11. Choose your angle, avoid distractions.
    a. Choose your angle carefully to minimize the clutter of telephone poles and street signs.
    b. Try photographing from several angles.
    c. Watch out for cars and trucks that might pass between you and the building you are trying to photograph.
12. Winter, spring, summer, fall.
    a. Consider questions like: How important is it to capture the entire building without blockage of plants? Some buildings are best viewed and photographed in the winter, when leaves are off the trees and the building is more clearly visible.
13. Take your time to frame the photograph.
    a. Take your time to frame the photograph so there is balance and it includes the desired detail.

15. Telling A Story
Take a sequence of pictures that conveys the main points of the project—tearing down a wall, digging a hole, shoeing a horse, taking a trip, or walking in the steps of ancestors. Include all the steps. Make a sequence by standing in the same spot and taking a series of pictures from the same vantage point at various stages of the project. Who knows, that magazine just might want to do a story on your project!

1. Start with a "before" shot.
   a. Take a picture of your starting point before you begin any work.
   b. You'll be amazed how plain the lawn looked before that garden was there.
2. Include people.
   a. Don't just show the project in its stages; include pictures of people at work.
   b. Projects that are accomplished by magic only happen in storybooks.
3. Show details.
   a. Take close-ups of the final product or along the way of hands putting in a screw, goldfish being released, or a paintbrush putting on the finishing touches.
4. Shoot at different angles.
   a. Vary the level of your viewpoint.
   b. Kneel or crouch down, or stand on something sturdy, and see how a different angle can dramatically change the appearance of your subject.
5. Fill the frame.
   a. For a close-up view of small objects or details.
   b. Shoot at your camera's closest focusing distance.
   c. Some cameras have a close-up (or "macro") setting or accept accessory close-up lenses. Check the camera manual.
   d. If the subject still isn't big enough, you can crop and enlarge it in the editing software.
   e. With a digital camera shoot at the highest resolution and then crop the picture in the computer.

16. Photographing Family Gatherings
Family gatherings can include funerals, reunions, weddings, events, holiday gatherings, or special occasions (e.g., anniversaries, birthdays, award ceremonies). Each provides a unique opportunity to take photos of the newest arrival, friends of family, individuals, couples, cousins, brothers and sisters, generations of families and any unique combination you desire.

1. Capture the emotion.
   a. With every special occasion comes some unforgettable emotion.
   b. Capture those spontaneous giggles, hugs, tears and surprises that will crop up when you don't expect them.
   c. Be ready to shoot!

2. Show the candles aglow.
   a. For those "candle holidays" like birthdays, Christmas and Hanukkah, consider capturing the special glow that only a lit candle can provide.
   b. To do this, turn off your flash and hold your camera very steady by bracing it on a railing, tabletop or door frame.
3. Avoid red-eye when using flash.
   a. Of course you can always use the picture-editing software to eliminate red-eye.
   b. One great way to avoid red-eye is to have your subject look over your shoulder instead of directly into the camera.
   c. Turning all the lights on in the room is helpful as well.
   d. Make sure you use your camera's red-eye reduction feature if you have one available to you.
4. Stay within the flash range.
   a. Make sure to check the flash range of your camera.
      • Subjects too close to the flash will appear washed out.
      • If they are out of range they will be too dark.
   b. The typical digital flash range is between six and ten feet; a film camera has a flash range of up to fifteen feet.
   c. Install fresh batteries and have an extra set ready (recharged).
   d. Weak batteries will give you dark photographs.
5. Avoid flash reflections.
   a. When you have a mirror and window in the background of a flash photograph, count on the reflection ruining your photograph.
   b. If a reflective background is unavoidable, stand diagonally from the subject of your photograph to reduce the glare of the flash.
6. Use natural light.
   a. Cloudy, overcast days provide the best lighting for pictures of people.
   b. Bright sun makes people squint, and it throws harsh shadows on their faces.
   c. On overcast days, the soft light flatters faces.
   d. Indoors, try turning off the flash and use the light coming in from a window to give your subject a soft appearance.
   e. Hold your camera extra steady or use a tripod.
7. Get Close.
   a. Don't be afraid to get close to your subject.
   b. Too much background can clutter the photograph and take the focus off the subject.
   c. Close up night-time scenes will be brighter, and detail will be much sharper with a close-in shot.
8. Ask family to gather in groups.
   a. Don't be timid in asking persons to gather and take photos; it may be the only chance you get to take that photo.
   b. Get permission to take people's photos.
   c. Encourage individuals to be in a photo even when they don't want to.
9. Use your zoom.
   a. When you use the zoom you have the ability to be inconspicuous and find special moments.

10. Tell a story of the event.
    a. Take pictures of the event as it unfolds.
    b. Take a picture of grandma as she gets out of the car, participates in the festivities with family and friends and her final departure for a timeline of events that will be a family treasure.
    c. Take photos of children playing Frisbee, or playing Monopoly.
11. Use a simple background.
    a. Remember that a lot of stuff in the background can clutter your shot and alter the focus of your picture.
    b. Try and put the subject of your photograph in front of something plain and uncluttered.
    c. Nobody wants to see Dad with a potted plant or light post growing out of the top of his head.
    d. If this is impossible, reposition yourself to get distracting background objects out of view.
12. Take candid shots.
    a. Resist the temptation to pose everyone perfectly for photographs.
    b. Candid shots often capture the personalities of the people and give a better representation of the event.
    c. Variety creates a lot of visual interest, so mix up your photographs for the best possible results.
13. Provide one-time-use cameras.
    a. Remember that everyone has a different point of view.
    b. If you provide several one-time-use cameras for everyone to use, you will find a variety of types of pictures (and vantage points) that will give a wonderful collection of photos to choose from when you begin to put together an album of the event.
14. Put yourself in the picture.
    a. Hand your camera to someone else to take pictures of you with friends and family.
    b. Return the favor by taking a snapshot of your photographer with his or her camera.

17. Photographing Scrapbooks/Artwork
1. Photograph your children with their art.
    a. Take photos of your kids with their artwork. It will help you remember their age when they created it.
2. Take individual photos of each piece.
    a. Photographs of your child's creations will last longer than the originals.
    b. Take the pieces outside on an overcast day, or find an indoor location with even, non-glare lighting.
    c. Find a simple background.
    d. Use the close-up mode on your camera for smaller pieces.
    e. If you are indoors, experiment with your flash, since it may cause distracting reflections.
    f. Use your camera's review mode to make sure you didn't cut off any corners.

3. Frame it.
    a. Framing your child's art is the perfect way to show how much you appreciate it.
    b. Photography is the perfect way to accommodate big pieces, three-dimensional ones, or pieces made from inexpensive materials that will fade or dry out.
    c. Don't forget a nice mat, and have the artist sign and date their work.
4. Document the process.
    a. When kids are young, everyday events become just as important as birthdays and holidays, and just as worthy of photography.
    b. Remember to capture the artist at work. For those big projects, chart the project's development with a photo diary – from brainstorming to research to rough sketches and completion.

18. Photographing a Walk in the City
1. Collect brochures and flyers from the city.
    a. Gather brochures and flyers about the city in which you walk. They will help you tell the story later on.
    b. Many cities have walking tour brochures. This may be a good start to photographing the city.
2. Photograph points of interest to you.
    a. Don't be afraid to take photos of the elements of the city that are of interest to you.
    b. If the city is reflective of the time your family lived there, walk the streets and imagine what they would have seen. Take photos of streets, homes, signs, persons in period dress, allies, and stairs. See the city from all angles.
3. Include a picture of a street sign and house number.
    a. When shooting in a city, try to include in a picture a street sign, whenever possible.
    b. If you like a building or house then photograph a street sign and a house number separately.
4. Include pictures of city names.
    a. Take pictures of signs with city names when arriving at a railroad station or when crossing city limits by car.

19. Photographing in the Libraries
1. Know the policy about digital photography before you go.
    a. 80% of libraries have allowed me to use a digital camera with some criteria.
2. Do not use flash.
    a. Usually prohibited due to photo sensitivity of artifacts.
3. Set up photo stand or tripod.
4. You may need to sign an intended uses statement.
5. May need to have one of their staff handle rare objects.
6. Only take photos of intended artifacts.
7. No photos allowed of interior of building or people.
    a. (Especially in government buildings).
8. Set up camera in a corner away from others so as not to disturb.
9. Set up near a window to gain most from natural light.

20. Photographing Museums and Archives
1. Check first to see if photography is allowed.
    a. Most museums and archives will allow photography without a flash.
2. Objects covered with glass or plastic are best shot at an angle.
    a. Glass/plastic will reflect a flash or act like a mirror and reflect your image under natural light. Consider photographing the object at an angle.
3. Snap a separate picture of a caption or a label of the exhibit.
4. Use the tripod along with your camera's self-timer night/lowlight setting.
    a. Lack of good lighting is usually the norm in museums.
    b. Use the tripod to steady your image.
    c. When you encounter very low light situations, try putting your camera on night setting and enabling your self-timer.
    d. With the steadiness of the tripod and camera settings you should be able to get some good quality photos.
5. No Tripod? Then brace yourself.
    a. If it is too dark and there is no tripod, leaning against a wall, a pillar or supporting your camera against a bench, a chair, or a staircase rail will be a good remedy in that situation.
    b. If a subject is important enough, by all means take an extra shot.

21. Photographing at the Cemetery
Over the centuries, several different types of stones have been used to create gravestones. Some of the stones are quite porous and fragile, while others are resistant to damage. Be careful when attempting to improve the readability of the inscription. Types of stone:
- Prior to the nineteenth century: sandstone or slate.
- Nineteenth century: marble and gray granite.
- Late nineteenth century to the present: polished granite or marble.

1. Take photos of the cemetery entrance, sign, book of records, and church.
    a. Before you start taking photos of headstones, make sure you capture the details of the cemetery that include the name, street signs, proximity, and church adjacent to the cemetery.
    b. All these details will help you and others that follow know where you have been.
2. North, south, east, west: Best time of day for photographing headstones.
    a. Sunlight emphasizes imperfections in the stone and can make the carving look flat.
    b. Headstones facing west are best photographed at midday.
    c. Headstones facing north should be photographed in the late afternoon.
    d. Headstones facing south are well-lit all day.
3. Large headstones require close-ups of inscriptions.
    a. Taking photos of large headstones alone sometimes makes the inscription too small to read.
    b. Take a photo of the large headstone and then move in close to take a photo of the inscription.
4. Family grave plots require group and individual photos of each headstone.
    a. A family plot constitutes two or more graves.
    b. Take a group photograph of the graves that shows the number and proximity.
    c. Take each headstone separately.
    d. If you are photographing a cemetery, photograph all family plots the same, for example: group plot, headstones left to right, top to bottom.

5. Consider taking photos of all headstones in a small community cemetery.
    a. If your family came from a small town and your roots go back many generations or many decades, chances are you are related to most, if not all, persons buried in the cemetery.
    b. If you have traveled a great distance to capture family graves on film, take an extra hour or two and capture the other headstones on film, you can sort out details later.
    c. You will often find direct family members buried amongst other families.
6. Look at the base, top, sides, and back of headstones.
    a. In addition to the inscription, look around the headstone for other important information that can be inscribed about the individual, family, maker of the headstone, or writings of the deceased.
7. Take eye-level photos of headstone inscriptions.
    a. When taking photos of headstone inscriptions, try to take the photo of the inscription at eye-level. You will find information much easier to read in the photo.
8. Talk to the sexton.
    a. Can't find family, see if you can talk to the sexton and ask to see the cemetery plot map.
    b. The sexton may have records you can simply photograph.
    c. Some cemeteries bury several layers deep to conserve space. In these situations, the headstone on top may only be for one of the several persons buried in the plot.
    d. Sometimes headstones are not available because the family is too poor for a headstone, but the sexton will have details of who is buried where.
9. Take time to clear grass and other foliage away from the inscription.
    a. Take time to clear cut dried grass away from and on top of the headstone before taking a photograph.
    b. If a branch is covering a headstone pull it back and take a photo.
    c. Clear overgrown grass to the edge of the marker/headstone. Important information/epitaphs may be separated from the main inscription (e.g., a bronze marker denoting group or religious affiliation, service in branch of the military, or fought in specific war).

10. Use a little chalk for the hard to read old headstones.
    a. Letters on the old stones are often hardly legible.
    b. Take a little piece of white (or black or any other dark color) chalk and fill in letters.
    c. Or rub the white chalk on the flat surface next to the letters.
11. Tilt your camera to the angle of the headstone.
    a. Older stones tend to lean or slant.
    b. Tilt the camera to the angle of the stone and your image will straighten up nicely.
12. Black and gray polished marble shoot at angle.
    a. Gray or black polished are sometimes hard to read or reflect flash making the image illegible.
    b. Shoot headstone at an angle and then view on LCD for clarity. Re-shoot at different angle if needed.
13. Try using flash on headstones covered with shade or on cloudy days.
    a. If an inscription you just took a picture of is hard to read, try using your flash. The light should provide you just enough extra light to fill in the dark shadows so you can read the lettering.
    b. Try using flash from angles if needed.
14. Try a soft brush or natural sponge and water to remove surface soil.
    a. Gentle brushing should remove surface dirt and bird droppings.
15. Try sponge and water on light colored stone. The stone will darken from the water and darken the inscription on the stone.
16. Never use hard objects or stiff brushes to clean the stone.
17. Removing lichens with sharp objects most often destroys the surface.
18. Keep a written record.
    a. Some of the items to consider as part of the written record include:
        1. Location.
        2. Map of the cemetery with the stones numbered.
        3. When photographed (time, date, and frame number)
        4. Transcription of the epitaph.
19. Post your photos of headstones on family websites or sites such as Virtual Cemetery.
    http://www.genealogy.com/vcem_welcome.html

Examples of How a Digital Camera Saves Time and Expenses

1. Month Long Genealogy Trip to Virginia/DC Area (2005)

    Average cost per day $155.00

	Expenses	Savings
a. Air travel: Delta Air Miles		$375.00
b. Car rental and gas: 5,000 miles	$1,750.00	
c. 30 nights food and lodging	$2,100.00	
d. Duplication costs	$325.00	
e. Misc. costs (e.g., batteries, tolls, entry fees)	$500.00	
f. Digital camera images (25,000-plus)		$12,500.00

- o Images include:
  - ▪ histories, documents, Bibles
  - ▪ family group sheets, photos, headstones,
  - ▪ and landscape/buildings/family
- o Savings in reproduction costs $.50

g. Additional travel and time savings associated directly with using a digital camera

Reproduction time versus digital photography of images
- o Average time used per digital image 10 seconds (includes research time)
- o Average time used in reproducing (photocopying) images 30 seconds

    a. 22,000 Document images X .30 seconds divided by 60 minutes
        ▪ Photocopying would have taken 183 Hours

    b. 25,000 Document images X .10 seconds divided by 60 minutes
        ▪ Photography time: 73 Hours
        ▪ Saving 110 Hours or 60% of reproduction time
        ▪ Saving 13.75 days of trip time at $155.00 per day for total of $2,131.00

Total cost savings for month-long trip to Virginia/DC (2005):
    a. Reproduction costs: $12,500
    b. Travel costs: $2,131.00
    c. Time savings: 110 Hours

Digital Camera Checklist for Research

1. Digital Camera with Built-in Flash
1. Two extra sets of rechargeable batteries.
2. At least 512 M of removable storage.
   a. I carry a total 3 gig of storage with me. About 3,000 photos JPG format.
   b. I have had disks that were full which I forgot to clean off or have failed.
3. Electric charger for rechargeable batteries.
4. Transfer cord that links from camera to computer.
5. Car charger with 1 or more plugs outlets.
6. Camera stand.
7. Carrying case.
8. Camera manual.
9. Tripod.
10. Copy stand (cookie sheet with markings) and extra strip magnets to perform indoor shooting will provide consistent results.

2. Laptop with DVD/CD Burner
1. External hard-drive to transfer large amounts of data.
2. Electrical cord.
3. Time to build electronic folders for transfer before you leave on trip.
4. Make sure the software loaded includes:
   a. Choice of family history software and needed family files.
   b. Word processing software.
   c. Digital camera utility software needed to transfer images from.
5. Carrying case.
6. Backup disks of favorite software in case you need to reinstall software while on the road.

3. Cell Phone with Key Call Numbers Stored into Database/Memory
1. Rechargeable cord.
2. Ear phone cord.
3. Extra phone cord.
4. Extension cord from phone to computer if you use your phone to connect to internet in emergency cases.

4. Scanner/Camera Support Software
1.   Scanner support software.
2.   Photo/image editing software.
3.   Internet software to connect to email, etc.
4.   DVD/CD burning software.
5.   Carrying case.

Note: Do not take a scanner when traveling via airplane.   The scanner will be banged up in transit. If you need a scanner on a trip when you are taking a plane, consider buying a low-end model once you get there for under $100.00 and leaving it behind as a gift when you come home.

5. Audio Micro Cassette Recorder to Record Thoughts or Interview Persons
1.   5 to 10 hours of blank tapes.

6. Research Folder
1.   Goals and objectives for trip.
        a.   Acquisition goals.
        b.   Travel plan and approximate times for each phase of research.
2.   Appointment calendar.
3.   City, county, state maps.
4.   Key contacts, address, phone numbers.
5.   "Mapquest" maps of destination.
6.   Internet printouts that include address, phone numbers.
7.   Library, historical society, city offices, etc.
8.   Printouts from catalogs of key documents you seek to view/film.
9.   Internet printout of things to see.
10. Packing list so you can recheck what you brought and not leave anything behind.

7. Scanner
1.   Electrical cord.
2.   Cord for transferring images from scanner to computer.
3.   Note: When researching in courthouses and libraries we usually keep the computer and scanning equipment stowed safely in the car in a large insulated lock box and only bring them in if needed.

8. Necessary Clothes
1.   Extra pair of old shoes for muddy, cow occupied fields.
2.   Long pants to protect legs from tall grass, briars, and climbing fences.
3.   Extra clothing for when you get wet or soiled.
4.   Hat to protect from the sun.
5.   Sun glasses when you are outdoors.
6.   Bug repellent.

9. Emergency Food for When You Can't Leave the Research Work
1. Energy Bar.
2. Water.
3. $5 -$10 for meals.

10. Larger Padded Carrying Case
1. To secure equipment that doesn't require protection.

11. Hard-shelled Suitcase
1. To protect camera and other digital equipment in their own bags.

12. Mapping Program
Example: Hardware in combination with its Street Atlas USA mapping software to take advantage of the Global Positioning System (GPS). Especially when you're going to multiple places over several days that may be hard to find. Rent or have a GPS system installed in vehicle such as Neverlost.

This is extremely helpful when finding cemeteries as well as other locations of genealogical interest.

13. Extra Notes
1. Note: Check all equipment upon arrival if you are staying long term.
2. Charge all equipment before you leave.
3. Clean removable storage disks.

14. Miscellaneous
1. Envelopes in which to put removable camera storage and cassettes.
2. Note pads.
3. 3 Pencils w/sharpener or 2 mechanical pencils with extra lead.
4. 3 pens.
5. Electrical bar strip with at least 4 outlets.
6. Camera cleaning kit.
7. Extra DVDs (large storage media) for data storage when external hard drive is not available.
8. Quart and gallon size ziplock bags to keep equipment dry.
9. See through mesh cases to hold cords and misc.
10. Roll of quarters for photocopying if needed.
11. 3X5 cards or flip pad for writing/notes in the field.
12. Handy backpack or fanny pack with multiple pockets to store and keep your hands free.

Editing, Cataloging, and Database Organization

1. Editing Your Photography

1.   Remember - your original photos are your negatives.
    a.   Never make changes to these – always work with a copy of the photo.
    b.   When you load a photo into your image manipulation program ALWAYS do a save as to make a copy of the photo and then work with that copy.
    c.   If you make a mistake, you can always go back to the original and try again.
2. Most common editing tasks you will perform are:
    a.   Reassemble large documents that have been photographed in sections.
    b.   Correct the effects of poor lighting conditions and/or remove shadows from your document photos.
    c.   Compensate for distortion of the document photo caused by a poor shooting angle or curled pages.
    d.   Enhance the quality of document photos suffering from low contrast and/or hard to read to text.
3. An example of editing document with poor lighting.
    (Using Adobe Photoshop or Elements).
    a.   Import image.
    b.   Create duplicate image.
    c.   Rotate image.
    d.   Use cropping/editing tools trim image.
    e.   Use auto level, auto color, auto contrast. Use manual if needed.
    f.   Save as: Use file name structure. Copy and paste from other document.

2. Cataloging Images and File Naming Structure
When you are cataloging your images, you can use word processing (e.g., Word, Word Perfect), or a database program (e.g., Excel). Choose software that will allow you to easily share information with others. When you share the catalog be sure to save it as other file formats such as ASCII, Text in addition to the file formats of the software you are using. This will provide others the option of importing your database into the software they are using.

Surname-Category-Individual Name**-Description/Title-**Date/Year-pp
(If needed, # to indicate extension of article, more than one copy, page number, etc.)

Example: JONES-OBIT-Mary Jones-Dies of Cancer-1998

Database Index Organization
- **Column 1:** Surname
- **Column 2:** Disk location of file
- **Column 3:** Main folder/sub folder of file
- **Column 4:** Category
    a. Correspondence (COR)
    b. Documents (DOC)
    c. Histories and reference (H&R)
    d. News (NEWS)
    e. Obituary (OBIT)
    f. Photograph (PHOTO)
- **Column 5:** Individual (key person in photo)
- **Column 6:** File name
    a. Ex. 1-Correspondence: JONES-COR--Mary Jones-Writes Barry Ewell on Mission- 2 Feb 1976
    b. Ex. 2-Document: JONES-DOC-Mary Jones-Marriage Certificate-1955
    c. Ex. 3-Histories & Reference: JONES--H&R--History of Mary Jones-1997-pp 2-3
    d. Ex. 4-News: JONES-NEWS-Mary Jones-Receives 25 Years Service Award-1990
    e. Ex. 5-Obituary: JONES-OBIT-Mary Jones-Dies of Cancer-1998
    f. Ex. 6-Photographs: JONES-PHOTO-Mary Jones Family-1965
- **Column 7:** File description/notes (types of information to include in column.)
    a. **Correspondence (COR):** Who wrote to whom, date of letter, location of each person, content of letter, relationships of persons writing, number of pages, or lineage of person writing letter
    b. **Documents (DOC):** Type of document, key persons in document, key dates, source of document, or lineage of person

    c. **Histories and Reference (H&R):**

        History: Describe whom or what the history is about, include title of history, author, year of writing/publishing, details unique to history, collateral lines included in history, lineage of person, # of pages, and library call numbers

        Reference: Describe the reference document/book, why reference has been kept and how to be used, # of pages/page numbers, and library call numbers

    d. **News (NEWS):** Title of article, persons included in article, date of article, newspaper, page number, and lineage of person

    e. **Obituary (OBIT):** Title of article, persons included in article, date of article, newspaper, page number, and lineage of person

    f. **Photograph (PHOTO):** Names of persons in photo and position in photo, place of photo, date of photo, source of photo if appropriate, page # and book title if from book, lineage of main person (e.g., father if photo of family is taken, family member if person with friends)

- **Column 8:** Format Type (TIFF, JEPG)

3. Designing DVD/CD Covers

1. Keep it simple: Focus on being descriptive for easy identification when sharing with others. For example:
   a. Organize by year, surname, category
   b. Include photos of key ancestors, family members
   c. Main contents of DVD/CD
   d. Completion date
   e. Developed by

2. Tools of use:
   a. Used Epson Styles Photo Printer Software
   b. Printer was Epson Stylus Photo 220 (Prints on Inkjet printable DVDs/CDs)
   c. DVD Brand: Verbatim DVD-R

Resources Used in Presentation

Where to find Photo Studio In-A-Box from American Recorder Technologies:
http://www.americanrecorder.com/

Where do I find slide/film adaptors that I can mount on my digital camera?
www.specialtyphotographic.com.

What Resources were used in developing the presentation?
National Genealogical Society
Following is a list of these articles and their subjects that are accessible on the internet:

Vol. 1, No. 4 -- 01 August 2002: Acquiring Copies of Source Documents -- a brief comparison of the various ways (including digital cameras) to acquire source documents and research notes.
http://www.NGSgenealogy.org/upfront/archives/01aug2002.txt

Vol. 1, No. 5- 15 August 2002: What to Look for in a Digital Camera -the major features to look for when purchasing a Gen-cam (digital camera for automating genealogical tasks).
http://www.NGSgenealogy.org/upfront/archives/15aug2002.txt

Vol.1, No. 6 - 29 August 2002: Denny's Digital Camera Recommendations - A camera rating sheet, plus Denny's recommendations for digital cameras with a street price of $400 (or less) that meet or exceed the minimum Gen-cam requirements. (Probably already out of date, but a useful discussion nevertheless.)
http://www.NGSgenealogy.org/upfront/archives/29aug2002.txt

Vol. 1, No. 7-12 September 2002: Using Your Digital Camera, Part 1 – Image file formats, transferring photos from camera to computer, take your best shot, use of flash when copying documents, copy stand plans and "kitchen" shooting method.
http://www.NGSgenealogy.org/upfront/archives/12sep2002.txt

Vol. 1, No. 8 - 26 September 2002: Using Your Digital Camera, Part 2 - continuation of using flash for copying document discussion, diffusion screens, external flash methods.
http://www.NGSgenealogy.org/upfront/archives/26sep2002.txt

Vol. 1, No. 9 -10 October 2002: Using Your Digital Camera, Part 3 -photographing documents without flash, lighting and location, white balance, shutter speeds, more on copy stands.
http://www.NGSgenealogy.org/upfront/archives/10oct2002.txt

Vol. 1, No. 10 - 24 October 2002: Using Your Digital Camera, Part 4 - exercises for photographing unbound, bound, and oversize pages, avoiding focus and exposure problems.
http://www.NGSgenealogy.org/upfront/archives/24oct2002.txt

Vol. 1, No. 11 - 07 November 2002: The Digital Darkroom, Part 1 - editing document photographs, choosing an image-editing program, typical editing tools, reassembling documents photographed in sections, manual stitch exercise.
http://www.NGSgenealogy.org/upfront/archives/07nov2002.txt

Vol. 1, No. 12 - 21 November 2002: The Digital Darkroom, Part 2- a document editing exercise, straighten text and correct density using mask and transform tools, etc.
http://www.NGSgenealogy.org/upfront/archives/21nov2002.txt

Vol. 1, No. 13 -05 December 2002: The Digital Darkroom, Part 3 - editing photos captured from a microfilm reader display, exercise dealing with common problems including hot spots and image distortion.
http://www.NGSgenealogy.org/upfront/archives/05dec2002.txt

Vol. 1, No. 14 - 19 December 2002: Tools for Your Digital Handbag -overview of digital tools that can be used for genealogy.
http://www.NGSgenealogy.org/upfront/archives/19dec2002.txt

Vol. 2, no. 1 – 01 January 2003: Digital Imaging for Genealogists, Part 1 – Photographing Photos.
http://www.ngsgenealogy.org/upfront/archives/01jan2003.txt

Vol. 2, no. 3 – 01 February 2003: Digital Imaging for Genealogists, Part 2 – A Byte'O Microfilm History & Tips for Photographing Images Displayed on a Microfilm Reader.
http://www.ngsgenealogy.org/upfront/archives/01feb2003.txt

Vol. 2, no. 4 – 15 February 2003: Digital Imaging for Genealogists, Part 3 – Tools for Photographing Slides, Negatives, and Microfilm Reels.
http://www.ngsgenealogy.org/upfront/archives/15feb2003.txt

Vol. 2, no. 7 – 01 April 2003: Digital Imaging for Genealogists, Part 4 – A Closer Look at Close-Up Photography, Part 1.
http://www.ngsgenealogy.org/upfront/archives/01apr2003.txt

Vol. 2, no. 8 – 15 April 2003: Digital Imaging for Genealogists, Part 5 – A Closer Look at Close-Up Photography, Part 2.
http://www.ngsgenealogy.org/upfront/archives/15apr2003.txt

(Digital Imaging for Genealogists, part 6, was a request for information about digital camera ownership, not an article giving "how to" information about how to use the digital camera for genealogy purposes, as are all the other articles in this series.)

Vol. 2, no. 10 – 15 May 2003: Digital Imaging for Genealogists, Part 7 – Heirloom Photography, Part 1: Building a Portable Tabletop Studio.
http://www.ngsgenealogy.org/upfront/archives/15may2003.txt

Taking Great Pictures
http://www.kodak.com/eknec/PageQuerier.jhtml?pq-path=2/3/38&pq-locale=en_US