

This series of tutorials should help alleviate any techno-anxiety that might occur on your road to taking good pictures.

Print them out, bring them along and have fun shooting!



■ **Choosing a digital camera**

Finding good light

Composing your shot

Sharing your photos

erinemanning photography
tutorials

Erin Manning Hosts the DIY's Network's "The Whole Picture," a weekly show that teaches you how to get the most out of digital photography. Erin spent several years honing her craft by working as a commercial, portrait, and stock photographer. She also worked for Getty Images, and completed a degree in Studio Art/Graphic Design from Loyola Marymount University. She is a member of the Advertising Photographers of America and the Los Angeles Digital Imaging Group, whose purpose is dedicated to advancing the art and science of digital imaging.

The Basics of Shopping for a Digital Camera

1 What's important to YOU?

Shopping for a digital camera online can provide you with a lot of information about the features of different cameras, but take the time to test drive the camera in person at a local retail outlet. You'll see if the camera fits in your hands, and experience how easy or difficult it is to adjust the camera's functions.

Also ask yourself if you want a tiny, groovy camera you can put in your purse or pocket? Or do you want to pay a little less for more features and get a bigger camera?

Keep in mind that some salespeople don't fully understand digital photography and may have a "special of the day" ulterior motive for recommending a certain camera. As a result, you could be steered towards a camera that might be perfect for someone else but doesn't meet your needs. You should be prepared to make your own decisions, and here are the key things you need to consider before buying.

2 What are pixels and megapixels?

Pixels: A digital image is made up of thousands of tiny, tile-like, colored squares called pixels. The more pixels you have, the higher your image resolution and image resolution determines how much detail you'll see in your images and how large a print you can successfully make.

Megapixels: Digital camera resolution is measured in megapixels. A megapixel is one million pixels. For example: At the highest resolution setting a 4MP (4 megapixel) camera will give you a maximum image size of approximately 4 million pixels – which equates to a good quality 8x10 print and the ability to crop your digital image with image-editing software. If you need bigger prints and require extreme cropping, choose a higher resolution camera. If you are only going to use the camera for emailing images and looking at them on your computer, you could save some money and get a lower resolution camera. A computer screen requires less resolution (referred to as ppi - pixels per inch) for viewing your images than seeing your images on the printed page (referred to as dpi - dots per inch).

| Purpose | Camera | Print Size |
|-----------------------------------|------------------|-----------------|
| Email pictures and print photos | 3 to 4 megapixel | Up to 8" x 10" |
| Enlarge photos | 5 to 6 megapixel | Up to 11" x 17" |
| Enlarge photos + extreme cropping | 7+ megapixel | Over 11" x 17" |

3 Optical Zoom? Digital Zoom? Total Zoom? What's the difference?

Digital cameras feature two types of zoom: digital and optical. Optical zoom is better because it gets you closer to your subject without sacrificing quality. Digital zoom will get you in closer but at the expense of clarity and detail. When shooting pictures, I usually turn off my digital zoom feature so I can do my own cropping and enlarging in an image editing software.

How much zoom do you need?

It depends on what kind of photos you want to take. I would recommend a minimum of 3x optical zoom on your camera. The 3x rating means the subject of your photo would be approximately 3 times closer at maximum zoom.

| Purpose | Optical Zoom |
|--------------------------------------|---------------|
| Close to medium family shots | 3x to 4x |
| Sports shots of kids from the stands | 5x and higher |
| Distances + extreme image cropping | 10x to 12x |

The following provides you with more information and the rationale behind my recommendation:

- **Optical Zoom** allows for better photo quality than digital zoom, because you are using the lens to physically zoom in closer to your subject. It allows you to zoom in (or out) on the subject, see it in the LCD or viewfinder, and take the picture without losing resolution.
- **Digital Zoom** kicks in after you've reached the maximum optical zoom on your camera. It tricks you into thinking you are getting closer to your subject, but it only magnifies the center of your image, cropping it inside the camera, which decreases your resolution! It's also more difficult to hold your camera steady to focus and you could end up with extra blur in your images due to camera shake.
- **Total Zoom** is marketing hype. More and more camera manufacturers are choosing to label their digital cameras with the total (optical x digital) zoom. This is an unfortunate development and only serves to confuse consumers. For instance, a camera claiming a 24x zoom could be a digital camera with 3x optical and 8x digital zoom. **Total zoom is not important - all you should pay attention to is the Optical Zoom!**

4 Watch for these camera features (and failures).

Shutter lag:

Shutter lag can drive a digital photographer crazy. You're taking a picture of Johnny on the soccer field, he runs by, you follow him with the camera, you press the shutter and POOF—there's a delay and you miss the shot! Typically the more expensive the camera, the less chance of shutter lag, but you won't really know unless you read a lot of online reviews or go down to the store and physically test it out.

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Viewfinders – LCD and optical viewfinders. It's best to have both.

- **LCD screens:** Most digital cameras have one. The LCD (liquid-crystal display) screen is on the back of the camera and displays a preview of your shot, let's you review images stored in the camera, and select capture settings and other camera options. It's the preferred way to preview your image when shooting in close-up, macro mode, because optical viewfinders can create something called "parallax error," which means that the viewfinder sees your image from a different angle than the lens and your image won't turn out the way you intended. LCDs seem to be getting bigger with the newer camera's which makes it easier to see your images, and that's great - however they are fragile, use up more battery life and when you're shooting outside in bright light, it might be difficult to see anything in the LCD screen.
- **Optical Viewfinders:** That little window located right above the LCD is the optical viewfinder. It's the traditional way to see what you're shooting (remember your film camera?) A few cameras with LCDs lack optical viewfinders, either to lower the cost or permit a non-traditional camera design. It's good to have both an LCD and an optical viewfinder. With an LCD screen you can preview and review your images and with the optical viewfinder you can see what you're shooting when it's bright outside.

5 Media cards - How many images do they hold?

Also known as storage cards and memory cards. Digital cameras store pictures on a variety of media cards which are available in various capacities, measured in **megabytes** (MB) and **gigabytes** (GB). The actual amount of images your card will hold depends on the resolution of your image. Here is a chart listing the approximate number of images a memory card will hold, using the highest resolution setting on the camera.

| | 3MP camera | 4MP camera | 5MP camera | 6MP camera |
|-------------------|------------|------------|------------|------------|
| 128MB card | 116 | 87 | 70 | 58 |
| 256MB card | 232 | 174 | 140 | 116 |
| 512MB card | 464 | 348 | 280 | 232 |
| 1 GB card | 928 | 696 | 560 | 464 |

6 Batteries

Digital cameras use a lot of power, so it's a good idea to buy rechargeable batteries. Buy an extra battery, too; you never know when you might run out of power, often right in the middle of an important event! Your camera's design will determine the type of battery you choose. If possible, try to find a camera with a lithium-ion battery; they tend to last longer than the NiCd or NiMH batteries.

7 Refurbished and grey-market cameras:

A good general rule is to stay away from these.

Refurbished cameras may sound great and cost less but you're really taking a risk and may end up with a lemon and a warranty that isn't valid. If you want to buy a used digital point-and-shoot, check out an online auction house like [eBay](#); you might have better luck.

8 Resource Links

It's always good to do your homework. Here are a few links you may find helpful.

- **Check out consumer reviews on digital cameras:**
http://www.epinions.com/Digital_Cameras
- **More information and shopping for digital cameras:**
http://reviews.cnet.com/4566-6501_7-0.html?tag=dir-
- **Shop and compare digital cameras:**
<http://www.froogle.com>