

INTRO TO DIGITAL PHOTOGRAPHY

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I got lucky

Taken in Katmai, Alaska in
Halo Bay, 2006.

Nikon DSLR with 400mm
Zoom and tripod.

35mm equivalent 600mm.

f/5.3, 1/125 sec, 270mm

Approx. 30 feet away



Camera Options

- Point and Shoot
 - Pocket camera
 - Easy to use
 - Inexpensive, low as \$200
- Mid-range
 - Larger zooms
 - Some have view finders
 - More expensive, \$300 to \$700
- DSLR
 - Consumer or Pro versions available
 - Heavier, faster, has quite a learning curve
 - Expensive, \$1000 to \$2000 for body and kit lens

Choosing a Camera

- Good news
 - There are many options
- Bad news
 - There are too many options
- So what do you do
 - If inexperienced, start small. I've owned 15 to 20 cameras
 - Ask around and try as many cameras as you can
 - Be informed, do research before talking to salesperson
- Remember, DSLRs are great but 3-4 pounds around your neck gets old fast

Example Point & Shoot Cameras



Pocket camera – 5
oz.



Waist or Purse – 8
oz.



Neck Strap – wide zoom – 19 oz.

Example Interchangeable Lens Cameras



Micro 4/3 or Mirrorless cameras – 20 oz.



Digital SLR - 4lbs

Other Cameras



Tablets



Phones

Accessories



Recent Trend

- Mirrorless or micro 4/3 cameras with interchangeable lenses. See article at <http://edwardns.com/blog/what-are-micro-43-cameras>
 - More compact and lighter than DSLRs
- Some have touch screens
- Examples
 - Sony NEX-5n (more aligned with Point-&-Shoot)
 - Panasonic G3 (more aligned with DSLR)
 - Olympus Pen series
 - Nikon 1

Buying a camera

- Do your homework before you buy
- Places to review and check prices
 - www.dpreview.com or www.amazon.com
 - www.photographyblog.co.uk
- Places to buy
 - Bestbuy, has 15-day return with restocking fee
 - Samy's Camera, has 15-day return policy without restocking fee
 - Amazon, has 45 day return policy
 - WalMart or Target
 - Costco, has 90-day return
 - www.buydig.com, ask about return policy
- How to find camera review sites
 - On Google, enter "panasonic G3 review", for example
 - Select result of your choice

Features to look for

- Megapixels – anything over 5 can print 8”X10”
- View finder – becoming rarer – but I like them
- Dedicated video button
- Histogram display
- Various aspect ratios, 4/3, 3/2, 16/9, 1/1
- Zoom range – depends on your use
- Burst mode – for sports, kids and wildlife
- Size and weight, general look and feel
- Video quality if it’s important
- Response time
- RAW format if you have the knowledge and patience

Zoom Range

- Low end should be 25 to 28 mm maximum
- 35 mm equivalent Zoom range depends on class of camera. See table below.

Camera class vs. actual Zoom range			
Class	35 mm Camera	Digital Camera	Micro 4/3 Camera
Equivalent Zoom	18-200 mm	27-300 mm	36-400 mm

What is Magnification?

- Magnification is the amount that the object is magnified, obviously
- A 10X Zoom does not magnify by 10
- An 20mm to 200mm actually magnifies by 6 times at the farthest zoom
- A 30mm to 300mm magnifies by 9 times
- See the article at <http://bit.ly/cameramag>
- To compute the magnification, multiply and largest focal length by 1.5 to get the 33mm equivalent and divide by 50mm which is equivalent to the human eye.

$$\frac{\text{33mm equivalent focal length of lens}}{50\text{mm}} = \text{Magnification}$$

Magic Triangle

- Shutter speed
 - Length of time shutter is open
 - Smaller openings capture action – let in less light
- Aperture
 - Lens opening – larger number (f/11) is smaller
 - Small opening equals large depth of field
- ISO
 - Sensitivity
 - Higher settings improve low light performance but can be noisy

Key skills

- Setting up your camera
- Understanding your camera
 - Focusing, when to use flash, etc
- Transferring photos to PC
- Organizing and editing photos
- Presenting photos
 - Prints, slideshows, email, online, albums
- Which software to use
- Printing
- Knowing how to use Microsoft Windows would help
- Video and audio editing - eventually

Techniques can help



Inside OK



Outside OK



All OK

Key hardware

- External hard drive
- Flash drive
- Memory card reader
- Camera



Software choices

- Picasa (free)
- Windows Live Photo Gallery (free)
- Photoshop Elements (\$49 to \$79)
- Adobe Photoshop Lightroom (\$299)
- And many more

Final Tips

- Take a lot of photos
- Zoom in frequently – with your feet
- Use flash during the day for backlit subjects
- Compose photo carefully (background, horizon)
- Use Auto mode until familiar with camera
- Read the manual
- Get Electronic version of manual online
- For a list of cameras supported by Adobe RAW go to <http://adobe.ly/rawsupport>