



Digital Photography



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Digital Photography

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We Will Cover

- Features to look for in a digital camera
- Camera accessories
- Basic tips for taking good photos



We Will NOT Cover

- Non-digital (SLR) or DV cameras
- Advanced photographic techniques
- Advanced photo touchup techniques



Features to look for in a digital camera



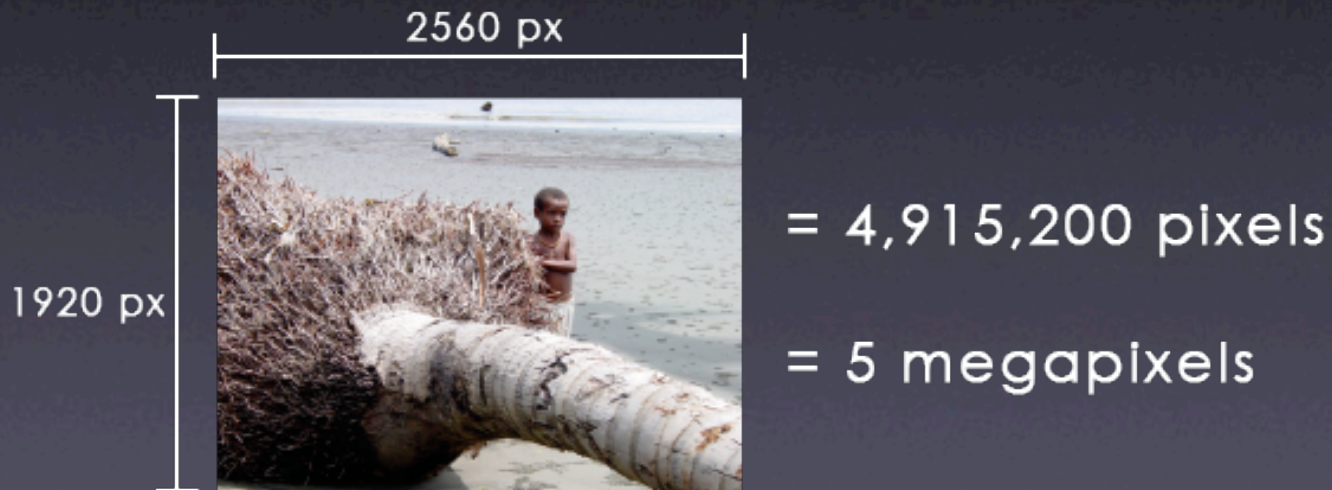
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Features to look for

- Resolution
 - at least 3 - 5 Megapixels for good results
 - new consumer cameras up to 7 MP - pro up to 14 +
 - the more megapixels the better the image quality



Features to look for

- Lens quality & features - zoom
 - at least 4x - 6x **Optical** zoom
 - **Digital** zoom is **BAD**
 - number of steps between wide and tight



Full frame



Optical zoom



Digital zoom



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Features to look for

- Lens quality & features - expansion
 - barrel must be threaded for add-on lenses/filters



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Features to look for

- Image formats
 - Most use JPEG with different quality levels - standard, fine, etc. (compressed, lossy)
 - Many can also save as TIFF (compressed, lossless)
 - Prosumer and Pro cameras can also do RAW (lossless, unprocessed)



Features to look for

- Movie clips
 - Most still cameras can now take low- to mid-quality video clips (MPEG and QuickTime .mov)
 - 320x240px, 16 fps, with audio
 - 640x480px, 30 fps, with audio (60 seconds)
 - Some feature timelapse ability as well



Features to look for

- Body & design
 - Avoid cheap plastic bodies
 - Metal tripod mount, NOT plastic
 - Tripod mount position



Features to look for

- Size & weight
 - Small size usually sacrifices features



Features to look for

- LCD Quality & features
 - Avoid cheap LCDs
 - Try it out in bright light
 - Some can move and rotate



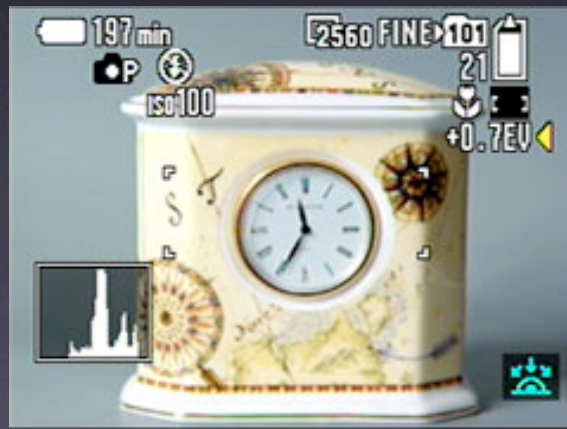
Features to look for

- Viewfinder
 - optical or electronic
 - optical is not exactly what your lens sees
 - electronic will also display status and info icons



Features to look for

- Camera display & menus
 - Learn what each symbol means
 - Make sure menus are intuitive and easy to navigate with controls on back of camera



Features to look for

- Storage
 - depends on your desired image size & quantity
- Memory Stick
- CompactFlash
- MicroDrive
- etc...



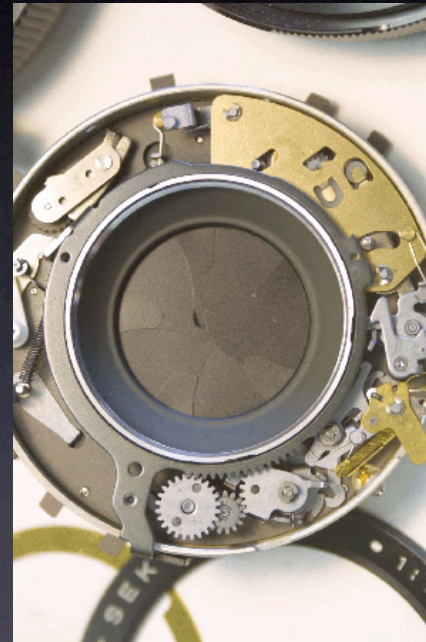
Features to look for

- Flash
 - Most cameras have built-in flash
 - Others just have a “hot shoe” or “cold shoe”



Features to look for

- Special features
 - Manual shutter options
 - Burst mode
 - Audio/video recording
 - Image effects
- Camera Speed
 - Avoid slow startup & image processing times



Features to look for

- Inputs and Outputs & port covers
 - Audio/video out, power, USB
 - Quality & durability of port covers
 - Avoid cheap rubber “snap” covers



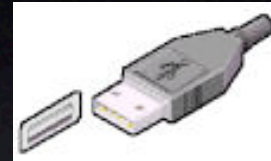
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Features to look for

- Data transfer

- Transfer from camera to computer
- USB 1 & 2
- FireWire (iLink, IEEE 1394)
- Media readers another option...



- Power

- In-camera rechargeable cartridge is easiest
- AA/AAA batteries are a pain



Features to look for

- Read reviews!
 - Bad decisions can be avoided by checking out others' opinions.

- **Great** digital camera review site:



- www.dpreview.com
- Incredibly detailed professional reviews

- Amazon.com is useful too



- Sort comments by **lowest** rating

- Epinions.com



Features to look for

- Go handle one before you buy it!



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Taking good photos



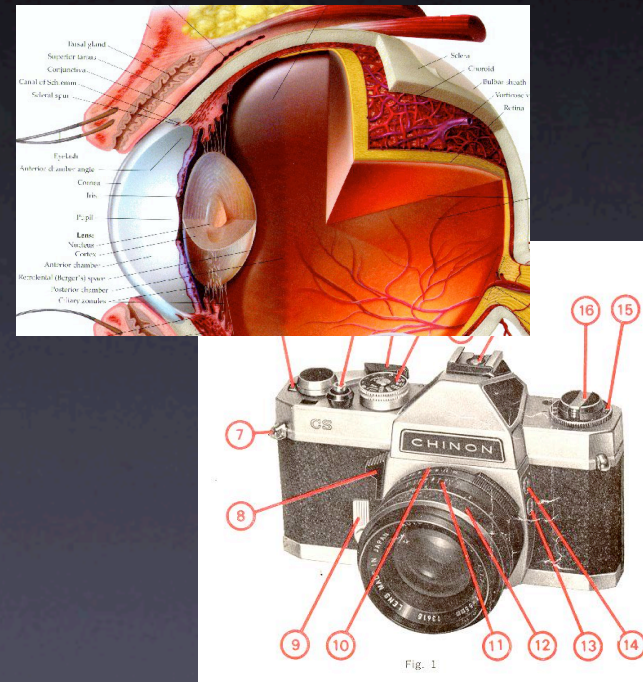
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Taking good photos

- Use your “photographic eye”
 - Don't just point and shoot
 - Compose your image first
 - Try a few different angles



Taking good photos

- Watch edges of frame for no-no's



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Taking good photos

- Auto-Everything
 - Most cameras auto-detect focus, flash, exposure, and aperture settings.
 - Results will be undesirable in certain lighting conditions.
 - Be prepared to stop and make adjustments.



Taking good photos

- Shutter speed
 - Changes the amount of time the shutter stays open
 - Ranges from 30s to 1/1000s +
 - Slow speeds in low light will result in grainy photos
 - Some cameras feature noise reduction for speeds slower than 1/25s



Taking good photos

- Aperture (f-stop)
 - Adjusts the amount of light let in & depth of field
 - Older and low-end digital cameras aren't adjustable



Taking good photos

- Depth of field
 - Affected by size of aperture
 - Large aperture (f/2.4) has shallow DOF



Taking good photos

- ISO (100, 200, 400, 800, 1000, etc)
 - Changes light sensitivity
 - Faster ISO good for action shots, poor for low light
 - The higher the ISO the grainier the image



ISO 100



ISO 800



Taking good photos

- Focus
 - Usually set to infinity (everything in focus)
 - Camera looks for sharp edges to focus on
 - Not always ideal - some cameras get confused
 - Avoid cameras with slow auto-focus ability
 - Practice switching to manual focus and making adjustments



Taking good photos

- Exposure Value
 - Most cameras let you make small adjustments:
+/- 2.0 EV (exposure value)



Auto (0 EV)



+2.0 EV



-2.0 EV



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Taking good photos

- Flash adjustment
 - Usually set to auto-detect
 - Be aware of the lighting in your frame, turn flash on/off when needed



Auto



Flash off



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Taking good photos

- White balance
 - Most cameras have a variety of presets
 - Auto, Indoor, Sunny, Cloudy, Fluorescent, etc



Auto



Indoor



Outdoor



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Taking good photos

- Sharpness
 - Most newer cameras have presets
 - +/- 2 sharpness levels
 - Samples...



Taking good photos



0 sharpness



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Taking good photos



+2 sharpness



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Taking good photos

- Practice makes perfect (or at least better)
 - Get to know where all of these settings are and the effect they will have on your photos
 - Practice quickly switching settings



Survey

How did we do?

Please take a minute to fill out the survey.



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Contact Information

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- Email — mac@scl.utah.edu
- Offices — Multimedia Center (Room 1705), ask at the service counter for someone from the “Mac Group.”



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Questions and Answers



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