Digital Photography
Digital Photography

University of Utah
Student Computing Labs
mac@scl.utah.edu
www.macos.utah.edu
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
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

= 4,915,200 pixels
= 5 megapixels
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
Features to look for

- Lens quality & features - expansion
- barrel must be threaded for add-on lenses/filters
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
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 rechargable 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!
Taking good photos
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
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
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)
Taking good photos

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

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

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