



DIGITAL
CAMERAS

Digital Photography

Basics & Beyond

Is Digital for Me?

- Cost comparison of equipment, film, printing
- Number of photos you want to take
- Convenience
- Immediacy

Selecting your Digital Camera

- Do you want pictures of similar quality to the film camera you have been using or do they need to be better?
- What features do you need on the camera? What ones do you regularly use now?
- What do you want to do with the photos—email, print, publish?
- Do you plan to print enlargements? How large?

Understanding Mega Pixels

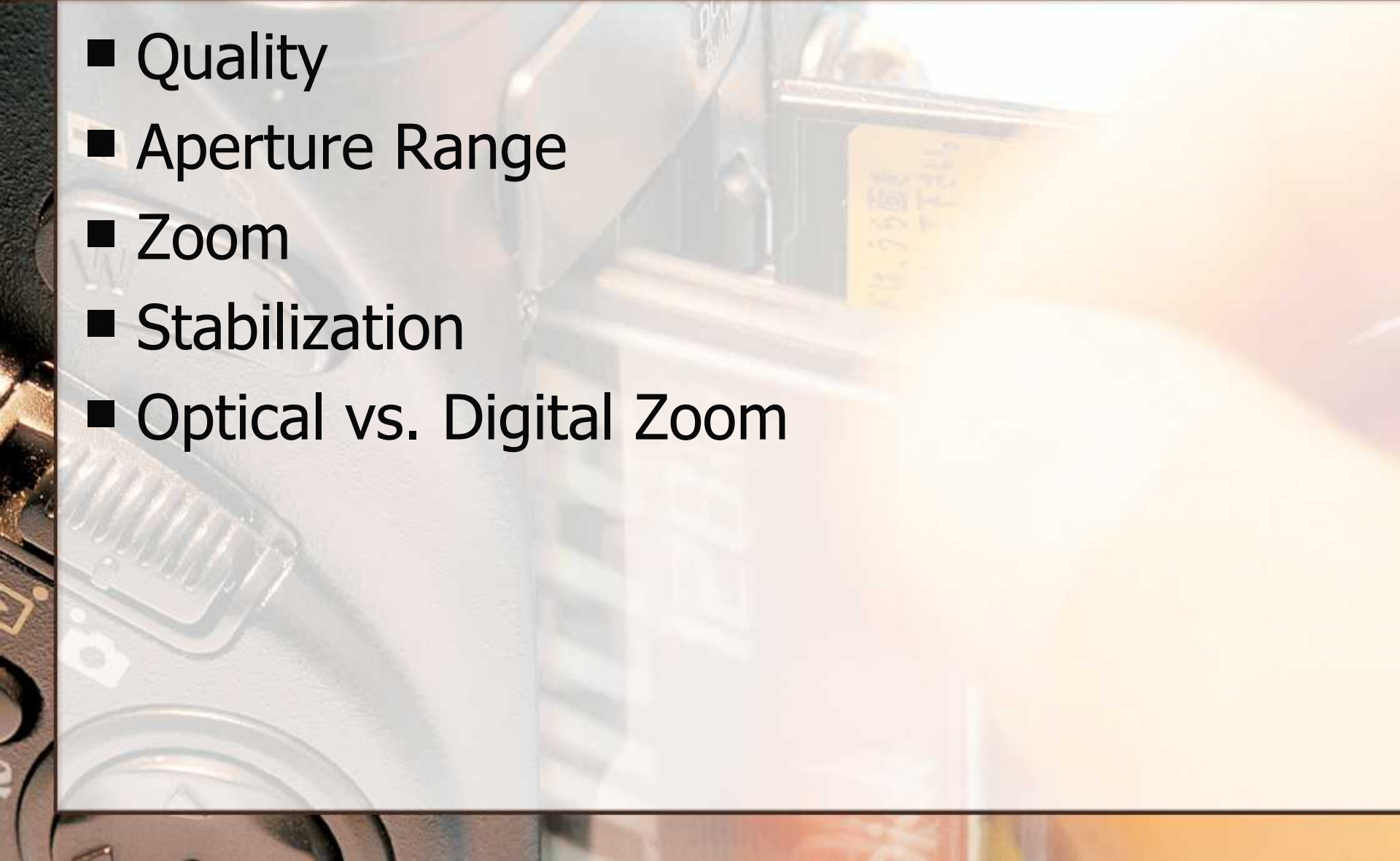
- How many mega pixels do you need?
- Are more mega pixels better?
- Do MORE mega pixels always give sharper photos?
- Mega Pixels and resolution

Sensors

- What is a sensor?
- Which sensor is larger: 1/3.2 or 1/1.8?
- Why does sensor size matter?

Lenses

- Quality
- Aperture Range
- Zoom
- Stabilization
- Optical vs. Digital Zoom



Aperture

- What is it?
 - Compare to pupil of eye
 - Compare to size of window
 - Compare to varying size of stream of water from faucet
 - Which is larger? 1.8 or 16? Think of fractions: $1/1.8$ and $1/16$
- Small aperture = focus from near to distant objects
- Large aperture requires precise focusing

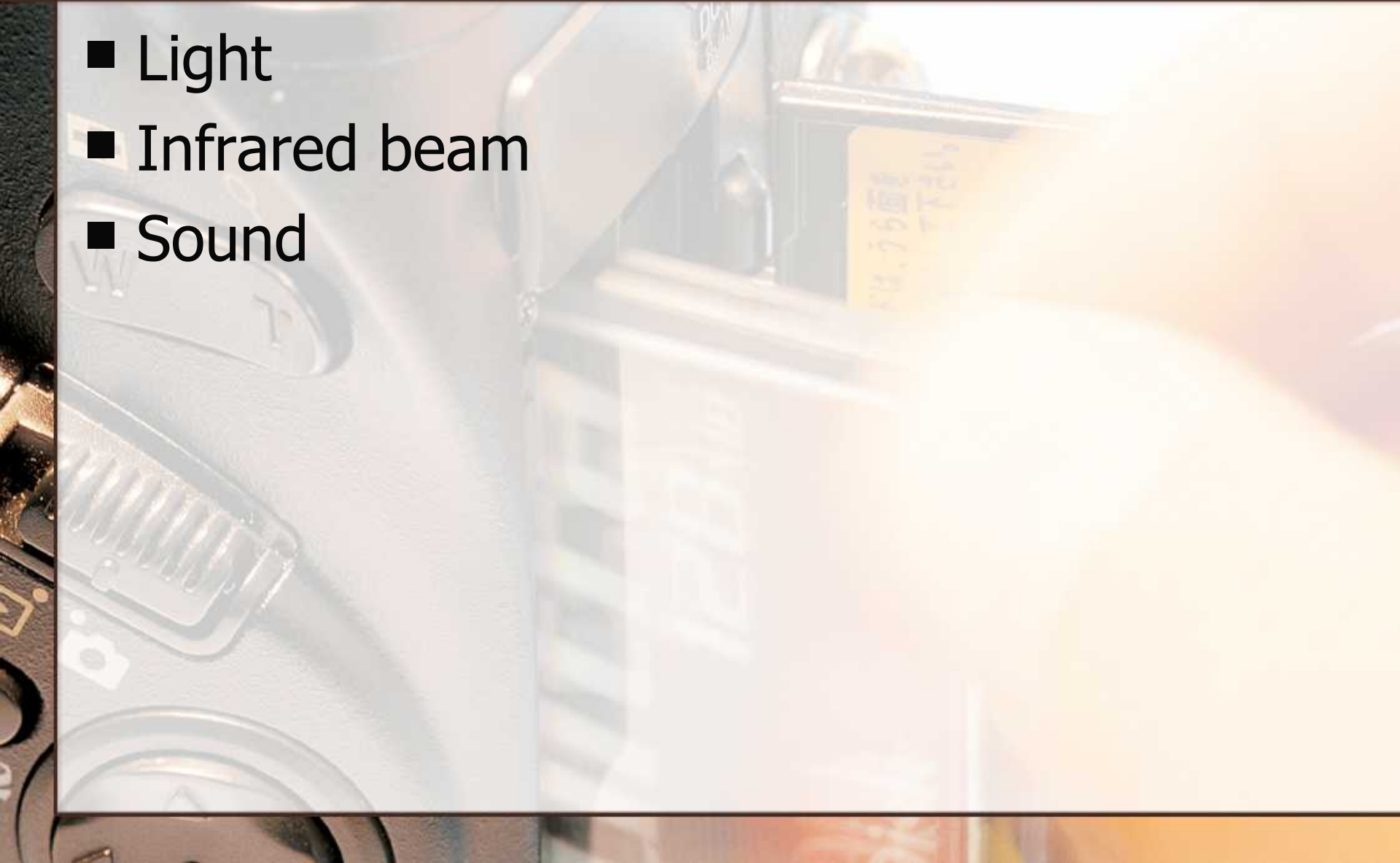
Shutter Speed

- Range of shutter speeds
 - Compare to blink of the eye
 - Compare to length of time the drapes are open
 - Compare to length of time the water runs

The longer the shutter is open, the greater the risk of blurring due to shaking. This is one reason for using a flash. If you don't want to use a flash, use a large aperture. Large apertures allow for faster shutter speeds.

Focus

- Light
- Infrared beam
- Sound



Get Detailed Information

- Two of my favorite web sites for comparison:
- Dpreview: side by side comparison
- Steve's Digicams

Photos or Snapshots

- Anyone can take a snapshot
- Learn to “See” a photo
 - Tips for better photos
 - Fuji Film homepage
 - Tips & Tricks from Olympus
 - Kodak provides a hands-on web site experience
 - Short Courses

Perspective

- Look at life from a new perspective: 4 feet below or 4 feet above the normal line of sight
- Check the “worm’s eye” view for an even more unusual perspective
- Look for unusual lines: architectural designs, tree limbs that form letters of alphabet

Autumn Foliage

1



Autumn Foliage

2



Flags in the Breeze

1



Flags in the Breeze

2



Autumn Reds at Sunset

1, 2



Autumn Reds at Sunset

3



Communications Tower

1, 2



Communications Tower

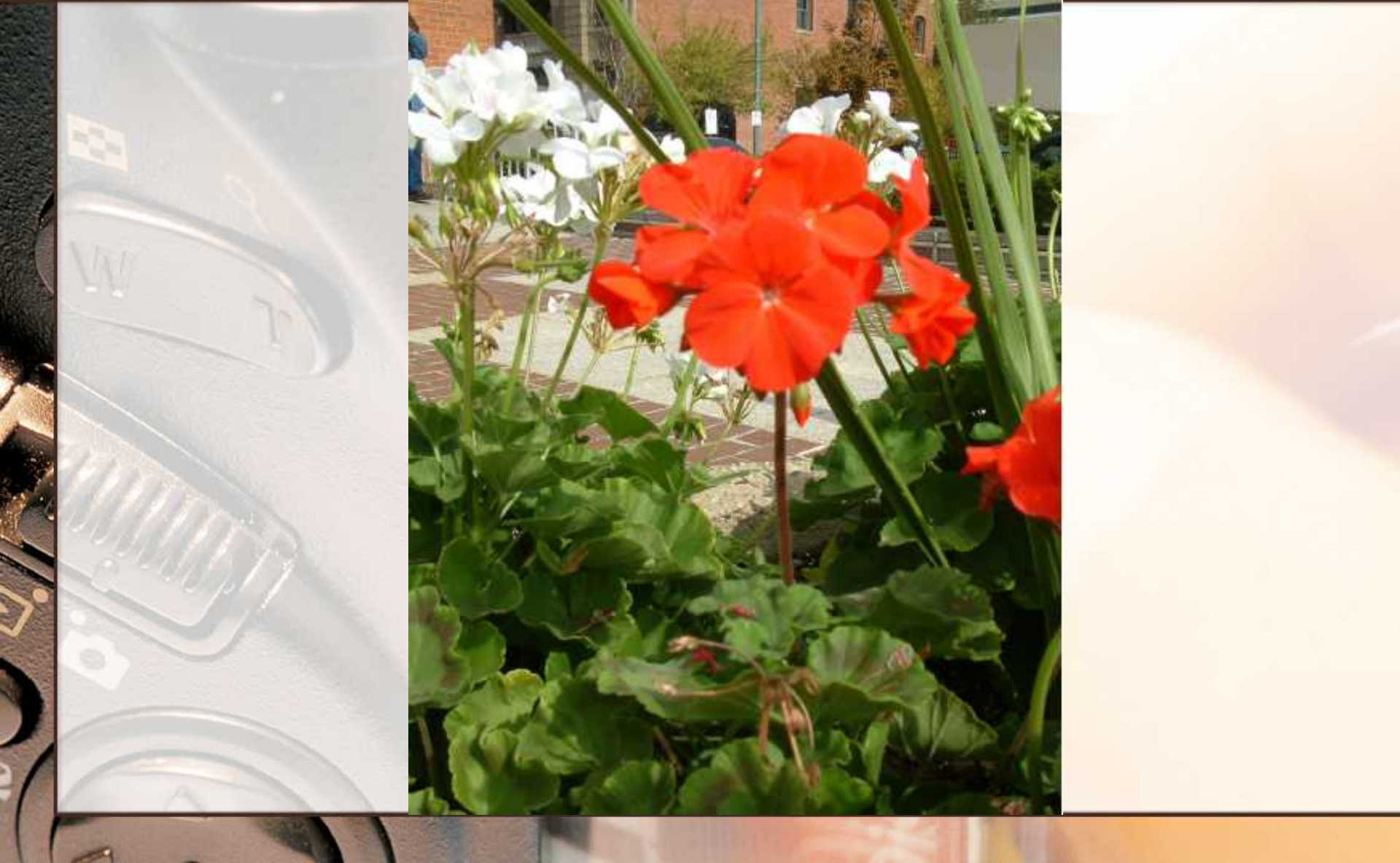
3, 4



Flower Bed Snapshot



Looking Flowers in the Face



Worm's Eye View of the Flowers



Detail

- Limit the subject matter
- Focus on the subject & let background be out of focus
- Take close-ups
- Look for unusual subjects
- Catch movement
- Don't always make your subjects smile!

Roses



In the time of roses



Centering & Focus

- Action subjects should be entering or exiting the center
- Side views may be less distorted than front views
- Focus your subject
 - E.G. A historical marker & the background may both need to be in focus
 - A close-up of a plant, insect, or flower may be better presented with the background out of focus

Lighting Tips

- Light should come from front or side
- If taking in front of a window, use fill flash
- Darken slightly for more intense color
- Use fill flash in shade
- Use correct white balance when setting light manually
- Add warmth—gold reflecting surface; add color—red reflecting surface; make details steely sharp—silver reflecting surface

Sunset & Sunrise

- Color visible on film before it is to naked eye
- At sunset, start metering when sun has dropped $\frac{2}{3}$ of distance below zenith & follow it down to the horizon
- At sunrise, continue to shoot until sun is $\frac{1}{3}$ up from horizon
- Colors strong when sun is below horizon
- More colors when sun's rays pass through more atmosphere layers or dirty atmosphere

The background image is a blurred photograph of a car's interior. On the left side, a gear shift knob is visible with 'W' and 'T' markings. A hand is seen on the steering wheel. The overall scene is out of focus, with a warm, yellowish light source on the right side.

After the Photo

Download and Back up

- Should I wait until card is full?
- Should I delete photos from card once they are copied to my computer?
- Additional back-ups highly recommended:
 - External drive
 - CD or DVD drive

Always Best to have 2 copies!!

Digital Darkroom

- Save in lossless format BEFORE making ANY changes to photo: lighting adjustments, cropping, framing, and more
- Lossless formats vs. lossey formats
- Lossless formats include png, tiff, raw
- Use "Save As" to change file type from jpg (lossey) to png (lossless).
- Make all adjustments. Then re-save as jpg
- Why use jpg?

Preserving Your Original

- Make 2 copies
- Save as a lossless file before making changes
- Re-name the file before making changes so that the original is not lost
- If emailing a photo, you may sometimes skip #2 above

The Great Divide: Screen vs. Print

- Small is better for email or screen viewing
- Match size to screen pixels or LCD projector
- Keep email recipients happy by reducing photo to 640 x 480 or 4x6 print size. Small file sizes look good on screen & keep email clients happy
- Print requires high resolution
- Digital cameras take prints at 72 dpi
- If printing on off-set press, resolution must be 300 dpi or higher; photo printers should be set for not less than 240 dpi. Re-size using lossless format.

Software for Digital Darkroom

- **FREE** Faststone: Max Viewer; Photo Resizer
 - **FREE** Photo Filtre V6
 - Paint Shop Pro XI
 - Photo Shop Elements
 - Photo Shop
-
- Which is better? Prices range from Free to well over \$600.
 - Compare Photo Shop vs Photo Shop Elements

You Own Your Darkroom

- My favorites:
- Faststone for resizing & for adding pixels
- Corel for ease
- Elements for uploading to printer
- PhotoFiltre for price

- Photoshop is the standard by which others are measured & usually chosen by those who make a living with graphics & photos.

Photo Albums

- Publishers
 - Picaboo
 - My Publisher
 - Wal-Mart
- Online Albums
 - Snapfish
 - Kodak Gallery (OPhoto)