

Study Guide and things to know in DIGITAL photography

History of digital photography

1969-first digital images sent from the moon

1994-first point and shoot camera affordable for the general public

2000-first digital DSLR (Digital Single Lens Reflex)

1. Resolution = 72 ppi vs. 300 dpi
Resolution is how many pixels are in the image
72 ppi is how many we need for a computer monitor
300 dpi is how many needed for printing an image or at least 200
2. Careers in photography
Wedding, nature, landscape, product photography
Events, sports, photojournalist.
3. Focal plane curtain shutter. *In back of camera*
4. A leaf (iris) shutter. *In lens – lets light in*
5. Shutter speed on a digital camera is how long the sensor is active and shutter stays open.
On a point and shoot, it does a fast and slow shutter speed. For freezing and blurring action.
6. Aperture and lens openings *More and less light comes through lens*
7. Zooming: 3x 4x 10x 12x *How many times closer your subject becomes*
8. Digital and optical zoom.
Digital- brings pixels closer
Optical- lens brings image closer, better quality
9. Aperture and depth-of-field *Blur in background or not*
10. Lenses
Wide angle – short. Normal – medium. Telephoto – long. Zoom to change the focal distance.
11. Using a tripod *Keeps the camera steady*
12. White balance *Lighting can be corrected or changed in Photoshop or the Camera.*
13. ISO (sensor sensitivity like film speed) *Light recording. (fast and slow) how much light it can record.*
14. Grain and Noise *Tiny colored dots (like colored sand) when ISO is too high*
15. Cropping photos
 - a. Crop tool = sizing the image to a printable size 200-300 dpi
 - b. Sizing for a Computer monitor 72 ppi
16. Direction of light
 - a. Rembrandt (little Triangle on cheek)
 - b. Loop (to the side, loop by nose toward the mouth)
 - c. Butterfly (shadow straight under the nose – Butterfly above lip)
17. Digital contact or proof sheets (index prints) *One sheet with many photos on it (proofs)*
18. Action photography and freezing or blurring action.
You use the flash, big lenses and fast shutter speed to freeze. Blurring is just the opposite.
19. Size of digital files (fine, extra fine, standard, etc.) *Camera can change the pixels that you shoot.*
20. Flash photography and red eye *Blood in the back of the eye shows up on the pupil.*
Help correct red eye by moving the flash away from the lens and also fix it in Photoshop.
21. Kinds or format of digital files *RAW (uncompressed data and pixels) more control.*
JPEG (compressed data and pixels to save memory space and loses data every time you save it.
TIFF = Tagged Image File Format (Some compression but will not lose data).

22. Memory cards *SD, CF, XD, Memory Stick (SONY), Smart Media*
23. Loading and transferring digital files *Memory cards, cds, dvds, disk*
24. Storing, editing and printing *External hard drive, USB, flash, CD's, DVD's, Online.*
25. Scanning photos *Makes printed photo digital*

26. Processing of images in camera and buffering
How the images are stored on your card. Time takes for image to be written Card. The processing time.

27. Composition rules. *Rule of thirds, Dominant center, framing, leading lines, symmetrical, asymmetrical, merger, birds eye view, bugs eye view*

27. Pixelization and/or interpolation *When sizing the image too large and we see the pixels (not good quality)*

28. Histogram = *a graph that represents all tones in the image*

29. Constrain proportions by holding down shift and also unclicking it under image size

30. Undo = the history
 - a. *One step at a time is Cntrl/z and Cntrl/alt/z is another step back in history*

31. Shortcuts in Photoshop
 - a. *Brackets make brush sizes bigger.*
 - b. *Right clicking gives many options*
32. Photoshop tools:
 - a. *Lasso (selection in any shape or curve)*
 - b. *Polygonal Lasso (selection in lines)*
 - c. *Marquee (selection in circles, ovals, squares, rectangles)*
 - d. *Crop (resize the image and crop out unwanted parts of the image)*
 - e. *Text (words and fonts placed on your photograph)*
 - f. *Clone stamp = (clone pixels)*
 - g. *Magic wand =(select similar pixels)*
 - h. *Eye dropper = (copy a color)*
 - i. *Dodge and Burn = (Dodging lightens the pixels and Burning Darkens the pixels)*
 - j. *Levels (all the tones in the photo and shown with a Histogram)*
33. Aperture priority and shutter priority
You control aperture, camera controls shutter, or vice versa. Keeps the camera exposure balanced.

34. The shutter release button *(It does more than just shoot a picture. Measures and focuses).*

35. Hue = *the actual color and Saturation = color intensity*

36. Drawing and painting lines = *hold down shift to draw straight lines*

37. Copyright, ethics, rules, photojournalism practices, etc.
We don't manipulate photos, don't copy images from the internet, once you shoot a picture, it's copyrighted to you.

38. Camera modes
Full Auto-anything green, portrait, landscape, sport, macro, nighttime, movie Manual- Shutter priority, Aperture priority, program
39. Program, manual, shutter priority, aperture priority, automatic, etc.
Aperture value- depth of field. Program keeps the camera in balance. Auto control.

40. Sensor Activity = how long the sensor is active
Shutter speed

41. DSLR=Digital single lense reflex *(not a point and shoot) TIFF=(tagged image file format JPEG = (joint photographic expert group) RAW=(uncompressed file) RGB=(colors for digital photography) ISO=(International standards organization)*

42. Parts of a digital camera (DSLR)
 - a. *Hot shoe – top of camera. Flash.*
 - b. *Eye piece or view finder (look through it.)*
 - c. *Shutter release (measures & focuses) Takes the Picture*
 - d. *Burst mode (how many pictures continuously then buffered to the card)*