# Study Guide DIGITAL photography

1. History of digital photography (first digital cameras were low res. and expensive)
(film and digital are just the way a picture is recorded)
(George Eastman - Kodak - first affordable film camera) (Sony Mavica - *Magnetic Video Camera*)

2. Careers in photography (portrait, wedding, events, product, fashion, photo journalist, forensic, etc.)

3. Focal plane curtain shutter (time and light) (shutter speeds - how long the camera is active)

4. A leaf (iris) shutter (fractions of light - through the lens aperture) Aperture and depth-of-field

5. Zooming: 3x 4x 10x 12x (this is how many times closer your subject appears in the lens to you)

6. Digital and optical zoom (telephoto effect) (digital zoom simply brings the pixels closer, not as attractive, optical zoom is much better quality and leaves the pixels small)

7. DSLR (Digital Single Lens Reflex) more options and control, lenses come off and hot shoe on top to mount a flash or other accessory…Point & Shoot cameras are smaller and easier to use)

8. Lenses (zoom) (prime) (zoom lenses can change "focal lengths" from one to another, bringing your subject closer or further away without you physically moving closer)
(prime lenses are called a fixed focal length so you have to move closer or back up)

9. Camera modes ———— (see chart to the right) ————

10. ISO (International Standard Organization) (Sensor sensitivity) (100 sunny outdoor, 200 partly cloudy, 400 portraits and indoor with good lighting, 800 sports and action, 1600 lower light indoor, 3200 low light and concerts, 6400 very low light and introduces color grain noise in shadow areas)

11. Grain and Noise (looks like colored grains of sand and not too pleasing) (Grain for film and Noise for digital)

12. White balance (balances colors) (Control of white is vital because backgrounds or artificial lights can cause colors to be introduced) Auto white balance measures the whites for you and manual controlled white balance can be achieve in your camera using the WB button)

13. Cropping photos   (changing the size of the image and sometimes to match a frame size or fit in a space)

14. Tripods and Monopods (three legs and one leg)

Digital contact or proof sheets (Larger photo with small thumbnails on it)
15

16. Action photography and freezing or blurring action. (fast shutter speed = freeze action)
(slow shutter speed = blurred action) (fast shutter needs more light) (slow shutter speed = less light)
(use a tripod for slower speeds under 1/125th of a second shots to avoid camera shake)

17. Size of digital files (standard (small) fine (medium), extra fine (large) (you can change the quality or pixel count in your camera to the size of files needed)

18. Flash photography and red eye (blood (retina) in the back of the eye shows up on the front) (flash too close to the lens)

19. Resolution = 72 ppi vs. 300 dpi (72 digital & 300 printing such as an 8x10 print size or better)

20. Kinds or format of digital files *RAW (uncompressed pixels) JPEG (Most common - compressed and looses   pixels and info.) PNG (portable network graphics - usually not used for photography)*
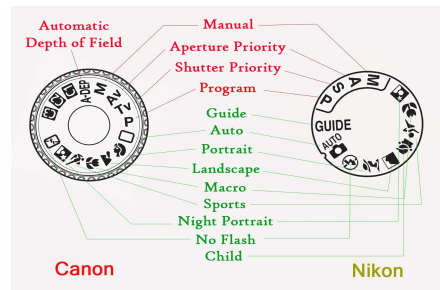
21. Memory cards *SD, CF, XD, Memory Stick (SONY), Smart Media (not photo cards) (images are stored on card)*

22. Portfolio (compilation of your best work - usually about 10-15 images)

23. Storing, editing and printing (output of your work) (storage on media devices such as SD Cards, External Hard Drives, Cloud Storage, etc.)

24. Organization that competes and leads in photography (SkillsUSA)

25. Composition rules (rule of thirds, simplicity, forced perspective, framing, leading lines, etc.

26. Pixels and Pixilated (if you see the pixels, the quality is not so good)

27. Histogram (can change the darks and lights or mid tones of an image) ——-
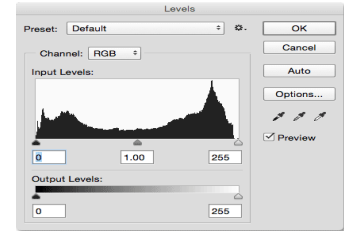
ADOBE PHOTOSHOP

28. LAYERS - (making a new layer places it just above the layer you are on) & Opacity of layers

29. Undo = the history

a. *One step at a time is Cntrl/z and Cntrl/alt/z is another step back in history*

30. Shortcuts in Photoshop

a. *Brackets make brush sizes bigger.*
b. *Right clicking gives many options*

31. Photoshop tools:

a. *Lasso (selects any shape of pixels) (selection tool)*
b. *Polygonal Lasso (selects pixels in multi-sided straight lines) (selection tool)*
c. *Marquee (rectangles, squares, ovals, circles) (selection tool)*
d. *Crop (select size and resolution)*
e. *Text (makes type)*
f. *Clone stamp (selects or duplicates pixels)*
g. *Magic wand (color related pixels) (selection tool)*
h. *Eye dropper (sample colors)*
i. *Dodge (lightens) and Burn (darkens)*
j. *Levels (changes contrast, lightness & darkness)*
k. *Brush / pencil [bracket keys] (makes any active tool larger & smaller)*
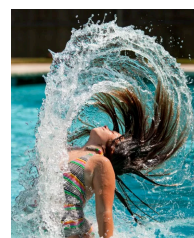l. *Zoom tool (makes your photo smaller and larger)*

32. HUE = *the actual color and SATURATION = color intensity*

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

34. Point and shoot and DSLR (pros can use both cameras), butr the DSLR's give more opportunity for better photos because the the larger size of sensor and lenses AND you can add a flash on top called the "hot shoe!"

35. The shutter button (focuses and meters the lens and camera)

36. Mega pixel (1,000,000 - 1 million)

37. Work Flow (capture, edit, output)

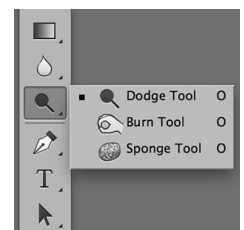SLOW SHUTTER SPEED (under 1/30 of a second) ——
(Blurs Action)

FAST SHUTTER

FAST SHUTTER SPEED
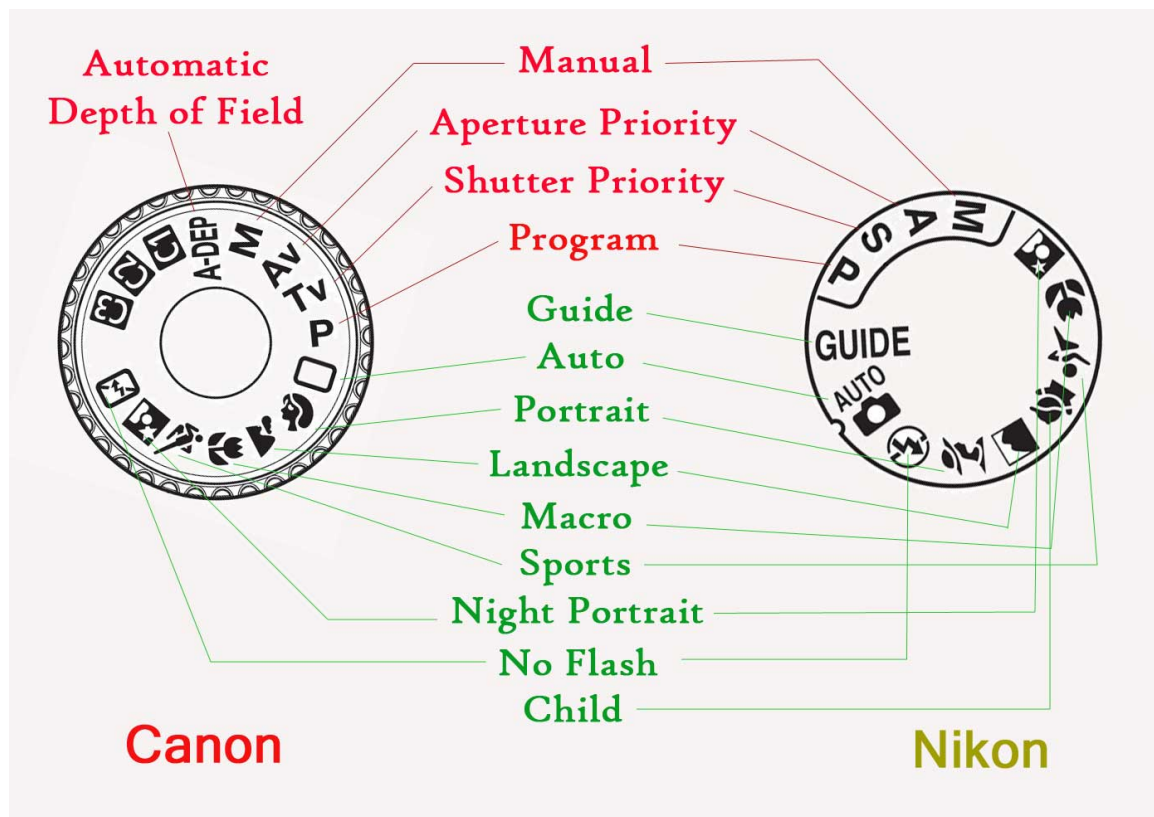(usually over 1/500 of a second)
(Freezes Action) ———————————————————

SLOW SHUTTER

Automatic Depth of Field — A-DEP

Manual
Aperture Priority
Shutter Priority
Program

Guide
Auto
Portrait
Landscape
Macro
Sports
Night Portrait
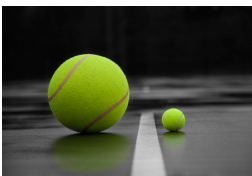No Flash
Child

Canon   **Nikon**

COMPOSITION RULES

Framing

Forced Perspective (mergers)

Asymmetrical (informal balance)

Simplicity

Symmetrical (formal balance)

MORE NOTES:

LENS SIZES AND ZOOMING:
10-35mm (wide angle)
50-70mm (Standard)
80mm and above (telephoto)

Rule of Thirds

CAMERA MODES:
(Continuous is SHOOTS MULTIPLE PHOTOS FAST)
GREEN - FULL AUTOMATIC
M - MANUAL - YOU CONTROL EVERYTHING
AV- APERTURE VALUE (Aperture Priority) - You control Aperture and the camera does the shutter speed
TV - TIME VALUE (Shutter Priority) - You control the shutter the camera does the aperture
P - Program - You control both or let the camera control both

Leading Lines