

Intro to Digital Photography: Week One

Instructor: Roger Buchanan

NOTE: this document is available at www.thenerdworks.com as a PDF.

Week One Outline: - Survey, Activities: Image Review controls, Camera function, Modes, “Shutter-lag & Panning”, Terminology, Accessory Gear and your Homework.

Activity 1: Reviewing your pictures: being able to zoom in on your pictures allows you to check focus, etc....




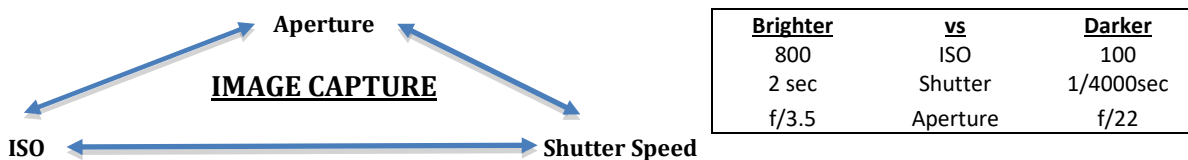
Press the playback  button. **Point and Shoot** cameras zoom in for detail, zoom out for thumbnails, **dSLR** use   buttons

Image Capture Settings:

- **Aperture** refers to the diameter of the opening that lets light from the lens through to the sensor. It is noted as the “f-stop”, with smaller numbers being larger openings. *Aperture controls how much blur the background gets.*
- **Shutter Speed**, is how long the sensor is exposed to light. *Controls how the camera depicts motion.*
- **ISO**, commonly referred to as “Speed”, denotes how sensitive the sensor will be to light.








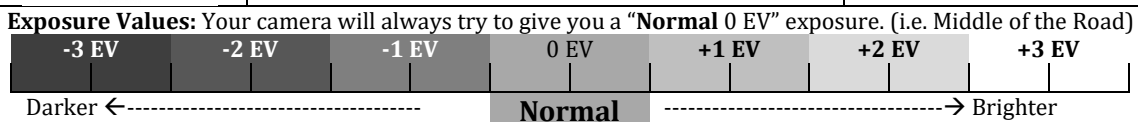
NOTE: Changing any setting will require changing one other setting to bring the photo back to being the **Normal** exposure value. (An excellent learning tool called **Camera Sim** shows how Aperture/ShutterSpeed/ISO interact. www.camerasing.com)

Activity 2: Work in Pairs: Examine the Sample Handouts. 1) Depth of Field; 2) Aperture and Shutter Speed

Activity 3: Finding your “Shooting Mode Controls”

- Picture Taking Modes: a) Auto, b) Scenic (Semi-Auto) and c) Manual;

Camera Mode Dial	Picture Taking Mode	Photographers Control of Menus and Buttons
	Auto	+ almost no control
	Scenic (semi-auto): Camera uses a “Recipe” for Subject <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> Portrait</div> <div style="text-align: center;"> Sports Action</div> <div style="text-align: center;"> Macro</div> <div style="text-align: center;"> Landscape</div> </div>	++ a little control
	Manual: P, S, A, M.	+++ full control



Activity 4: Requires a partner:

- Shutter lag – how to avoid “camera delay” when taking a picture.
- Panning – capturing a well-focused subject that is moving by moving the camera while taking the picture.

Terms:

- Sensor: Pixel, Resolution, Megapixels;
- JPEG: image format for transport and sharing of Photos, but NOT for editing;
- Memory Cards: **Type** = Physical Shape of Card, and **Capacity** = Storage Volume measured in GigaBytes (GB);
- **Histogram:** Exposure graph showing the amount of light each pixel captured. (See Reverse of this page)

Activity 5: Camera Accessories: Gear to help improve your photography success. (Not meant to be expensive!)

Homework. “Composition” – What is Composition? Why is it important?

- Orientation – One in Landscape orientation, and One in Portrait orientation, for each subject.
 - Subject One **Landscape: a scenic picture;** (take in each orientation, Landscape and Portrait)
 - Subject Two **Portrait: a person posing.** (take in each orientation, Landscape and Portrait)

Intro to Digital: Histograms Explained

The Histogram feature of your camera is the best way to confirm that your image has been exposed properly.

After the sensors' pixels record the light, the onboard image processor calculates a graph of the exposure. This graphical representation of the Pixels Tones vs Amounts is what is called a "Histogram".

The various Tones that were captured are represented along the Bottom Axis. The Left starts with the Darkest Tones moving to the Right for the Brightest Tones. Hence the phrase "Left to Right, Dark to Light".

The Vertical Axis is simply an Amount of each of the Tones recorded.

ACTIVITY:

Below are three images, and below them a Histogram. Which of the 3 images does the Histogram represent?

HINT: Count the tones, count the amount.

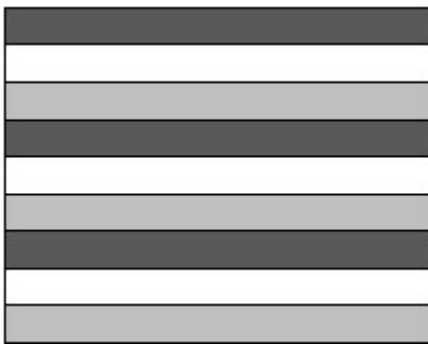


Image 1.



Image 2.

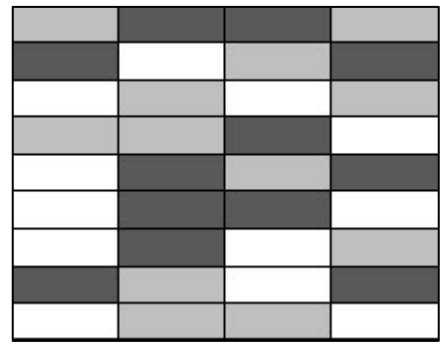


Image 3.



To ensure you get the best exposure possible, always check your Histogram.

Intro to Digital Photography: Week Two

Review of Homework “Composition” – Camera Orientation – Landscape and Portrait

Camera Set-up: Usually only done once to give the camera the organizational settings for managing your photos, and is usually accessed through a “Setup” or “Menu” button on the camera. There are usually THREE options:

(1)  CAPTURE; (2)  REVIEW; (3)  SETTINGS.

We are going to go to “(3)  **SETTINGS**” in order to set up the following:

*Date/Time *File Numbering *Format ***Zoom:** Optical vs Digital

ACTIVITIES:

1) **Colour Skills Test:** See sample Chart provided by Instructor!

2) **Histograms:** For each of the images shown by the instructor draw a “representative” Histogram in the appropriate box below:









Image 1



Image 2

3) **Camera Control Icons**

	ISO – Controls how sensitive your camera will be. The higher the number the more sensitive the camera will be, but higher ISO is noisy ISO 100-400 is good for outside, ISO 800-3200 for inside.
	Flash – Cycle through the many settings... Forced-Off, ON, Auto (shown here). Use flash to add light to a scene. Know how to turn your flash OFF when flash is prohibited!
	Self-Timer – Used with a tripod the self-timer allows you to get in the picture. Self-timers range from 2 seconds to 10 seconds, or even a user defined custom amount of time & number of photos.
	Drive Mode – For taking many pictures in quick succession. Start shooting before the action happens and you will more likely get at least a couple of good shots. Better than timing one shot!
	Macro – Used for very close up photography. Imagine a ladybug filling the viewfinder, that type of photo. Keeping the camera steady is very important. Macro is the time for a tripod of some kind.
	Delete – NOT RECOMMENDED. The trashcan leaves your memory card fragmented, making your camera slower when storing pictures. You also waste power from your battery reviewing pics.

Demo of Composition: When framing your image a helpful guide is “**The Rule of Thirds**”.

Homework: Two photos each printed at two different locations for the purpose of comparing print quality. (ALSO includes doing it yourself)

Photo Subject	Print Location “A”	COST	Print Location “B”	COST
1. Landscape	Print 1A		Print 1B	
2. Portrait	Print 2A		Print 2B	

Note: All prints should be done with **NO adjustments**, at the same size (4 x 6) and surface type (**glossy**).

Intro to Digital Photography: Week Three

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For info on other Digital Photo courses check out the following websites:
www.thenerdworks.com or www.leisureonline.ca

Week Three: - Lighting Terms, Activity is "Lighting Colour and Exposure Settings", Review and Evaluation.

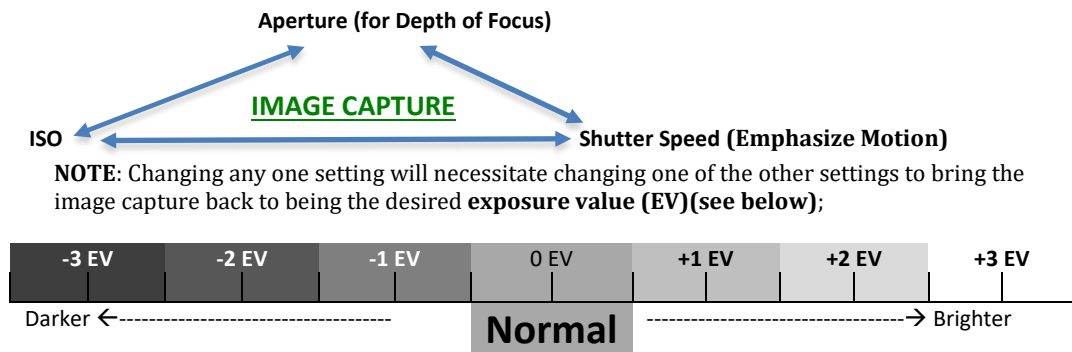
Homework Review: 2 sets of two prints.

Lighting Terms:

- **Light Intensity** – referring to hard, soft or diffused (artificially soft) lighting;
- **Light Direction** – referring to how the subject is lit... front, back or side lighting;
- **Key Light** – the light that is providing the major portion of illumination

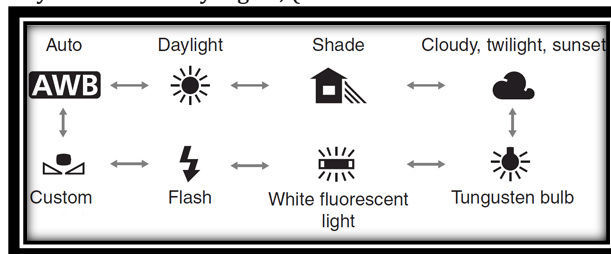
Image Capture Settings (see below)

An image capture setting may be described as **Shutter Speed @ f-stop using ISO #**
 (i.e. 1/125 sec at f/3.5 with ISO 200.)



ACTIVITY: Working with a partner. This requires one flower and a black background.

1. **White Balance (Colour of Light)** – adjusting the camera to represent white properly (i.e. "White Balancing") in different coloured lighting such as Daylight, Cloud, Shade, Tungsten, Fluorescent, Flash. White Balance is always set to the "Key Light"; (Note: Flash **must be OFF** for all but Flash WB)



2. **Exposure Compensation** – the camera's exposure compensation control lets you "+" (lighten) or "-" (darken) the image (depending if the original is too dark or too light)

45 minutes: Review and Q and A. **5 minutes:** Course Evaluation: When evaluating the worth of the course PLEASE consider ALL of the following:

Did you meet your **LEARNING EXPECTATIONS**? Was it also **worth the TIME** that you invested in being here?

Visit www.thenerdworks.com if you have any questions about this course, or anything photography related.