Camera Cheat Sheet

Set your date and time: It is how your photos will be organized by on the computer.

Buy a spare camera battery: Your LCD using Live View really burns through power.

Choosing ISO:

Bright Sun	**Cloudy**	**Indoors**
ISO 100-400	ISO 400-1600	ISO 800-6400

Aperture Priority Mode: For Background Blur

Blurred Background Portraits	All in focus Landscapes
Lower f/stop numbers f/1.8-3.5	Higher f/stop numbers f/11-f/22

Shutter Priority Mode: For Capturing Motion

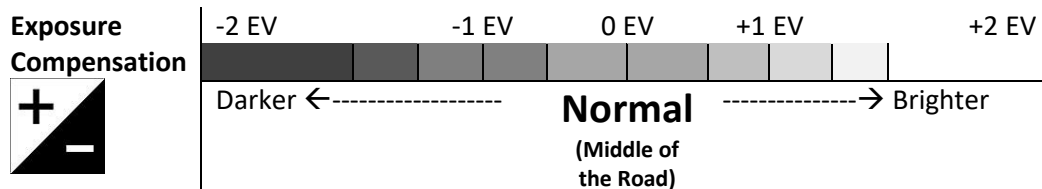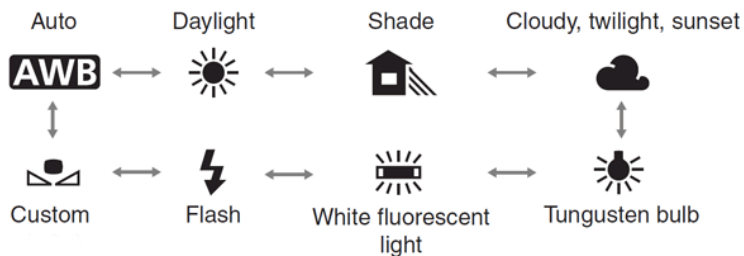| Blurring motion	Freezing motion
½ sec-10 seconds	1/125 sec -1/4000 sec

Program Mode: Equivalent pairings of Aperture/Shutter speed = same amount of light.

Aperture	**f/5.6**	**f/8**	**f/11**	**f/16**	**f/22**
Shutter Speed	**1/500**	**1/250**	**1/125**	**1/60**	**1/30**

White Balance is a camera setting that assures that you get optimal colour reproduction by setting the camera to understand the colour of the **main light source**. This is essential for jpeg's!

Auto	Daylight	Shade	Cloudy, twilight, sunset
AWB	☀	🏠	☁
Custom	Flash	White fluorescent light	Tungusten bulb

Exposure Compensation

-2 EV		-1 EV	0 EV	+1 EV		+2 EV

Darker ←----------------- **Normal** --------------→ Brighter

(Middle of the Road)

Intro to Digital Compositions: Week One – Physical Design

Instructor: Roger Buchanan   These notes are available at: www.thenerdworks.com

Charge camera batteries & bring a spare if possible. Activities may be familiar depending on your previous courses.

Week One: Physical Design - Working with the camera and using general compositional "rules".
**Week Two: Design Elements** - Design Elements and the Techniques for using them effectively.
Week Three: Lighting - Good tips for the Quality, Quantity, Colour and Direction of Lighting.

You take a photograph for a reason; something about the image was striking enough to want to capture it. To do so, there are several recommended steps to follow which will allow you to be happier with your final capture. This is a process and doing it often will turn it into a habit that you don't have to think about.

- ✓ **Think** about what you want to capture,
- ✓ **Shoot** in such a way as to emphasize your subject,
- ✓ **Assess** how well your capture emphasizes your subject,
- ✓ **Adjust** how you made the capture,
- ✓ **Shoot** the subject again,
- ✓ **Assess** the capture again.
- ✓ **Repeat** as necessary until you have the desired photograph.

Use these considerations for photographic composition. (Use this as a checklist to start out)
- ☐ Often composition is described as "**What** you include, and **how**, and **when** you take the picture"
- ☐ How the photograph is to be **used** will often dictate, to a degree, how it should be captured.
- ☐ **Motion (Shutter Speed)**, will you freeze motion (sports) or emphasize motion (waterfall);
- ☐ **Depth of Field (Aperture),** will you blur the background (portrait), or keep it all in focus (scenic);
- ☐ **Lighting** is important, see the light for Quality, Colour (i.e. White Balance), Amount & Direction;
- ☐ Light illuminates the subject; **Shadows create the details**;
- ☐ Your **Subject** should be in **sharp focus**, in Portraits put the focus on the Eyes.
- ☐ Balance, Contrast, Relative Size, Proportion and Dominance are all **key attributes of your subject**.
- ☐ Depth and Dimension create **Perspective**, as does your **Point of View** (camera placement);
- ☐ Including some items in the **foreground** is vital for providing good perspective and context.
- ☐ Does the **background** support the context of the image.
- ☐ Eliminating nuisance items from the **background** helps to avoid distraction.
- ☐ A good photograph should have **one leading subject**, and one or more supporting items.
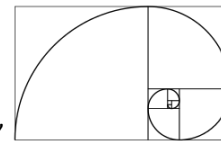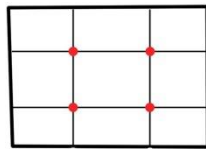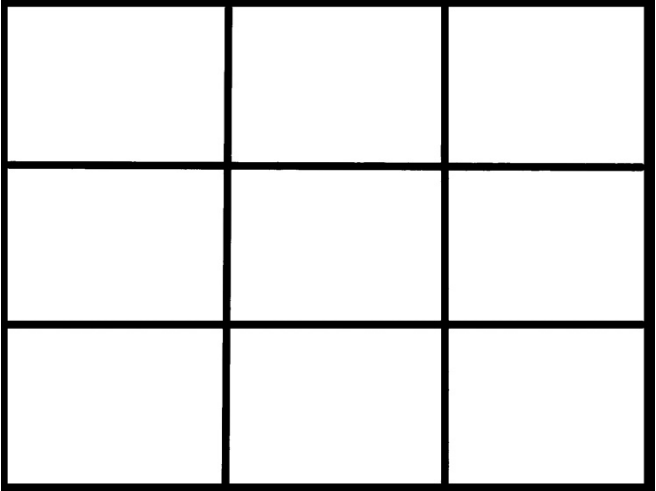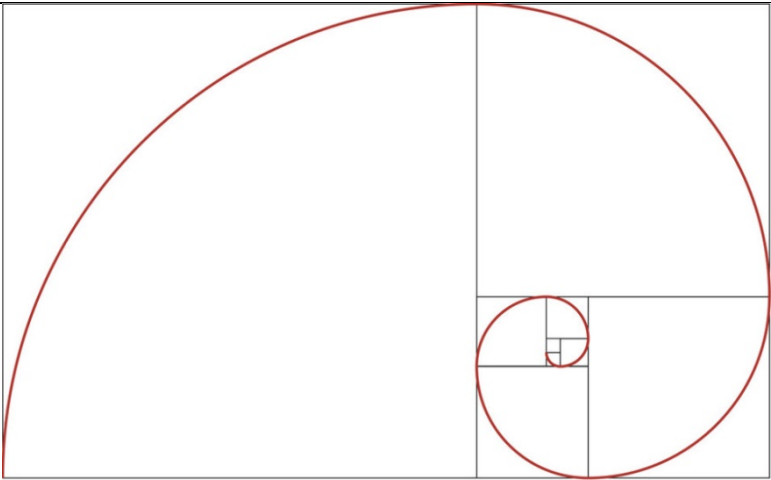

- ☐ Use "**The Rule of Thirds**"   or "**The Golden Mean**"   in your composition.
- ☐ **Slow Down**. Think about the composition and Do Not Rush!

Camera Orientation: Landscape = viewfinder is wider than tall, **Portrait** =viewfinder is taller than wide.
Portrait orientation is better suited for **demonstrating depth** in an image as the eye moves up and down, rather than side to side, as in a Landscape Orientation image. Imagine railroad tracks moving off into the distance…

Composition "Rules": Suggestions Actually

Rule of Thirds	
Described	Applied to Image

Golden Ratio	
Described	Applied to Image

Activities for Week ONE

Note: Set your Camera Dial to **"Av" (Aperture Priority)** and the **ISO to 3200** to start todays' activities.

1) Your viewfinder, or LCD panel, does not show you exactly what will be recorded.

> <u>Activity 1:</u> Shoot the Target (Any item on the wall with a corner). Note: Compare the capture to what you saw.

2) Emphasize movement of your subject by panning while you take the photo. Following your subject by moving the camera along with them while you complete the photograph will blur the background while keeping your subject in sharp(er) focus. This takes some practice! **Use "Aperture Priority – Av" at the "f-stop" number f/5.6 and use ISO 400 to start! Point and Shoot Cameras will use the Portrait "Scene Mode" NO Flash!**

> <u>Activity 2</u>: Capture panning shots using different settings/scene modes and zoom amounts.

3) Cropping vs. Zooming is the choice you make of how to isolate your subject from the background elements. However, both cropping and zooming have their strengths and weaknesses.

> <u>Activity 3</u>: From a medium distance **use your zoom** on your subject so that they almost fill the frame. Next, reduce the zoom completely and **move the camera** (cropping) closer to the subject to obtain the same framing. Compare how the photos each reproduce the shape of your subject at different zooms.

4) Isolate your subject from a distracting, or cluttered background, by using a Shallow Depth of Field.

> <u>Activity 4</u>: This is created with a small Aperture Number (f/2.8), or by using a Scene Mode like "Portrait" and getting in close to the subject and use a bit of zoom.

> <u>NOTE:</u> The camera should be much closer to the subject than the subject is to the background!

5) Point of View (POV) - The angle of the camera towards the subject has a great influence on the outcome of the photograph. This is especially true with photographs of people.

> <u>Activity 5:</u> Shoot: "Down" on subject, at "Eye Level", and finally "Up" towards subject, doing head & shoulders.

6) Perspective – Perspective refers to how you show the shape of a subject. "One-Point" perspective just shows one side of an object, "Two-Point" shows Two sides, and "Three-Point" Three sides.

> <u>Activity 6:</u> Use the box provided, with different coloured dots on each side, to capture an image in "One-Point" perspective. Then continue to take images in "Two-Point" and then "Three-Point" perspective.

7) Shadows provide Detail- Light falling directly on a surface illuminates an object, but light raking across a surface creates shadows which provide detail and texture giving the subject dimensionality.

> <u>Activity 7:</u> Take a photo of the provided white sheet of paper. Then, using the flashlight provided, take a photo of the crumpled paper with the flashlight shining at a low angle across the surface. Compare the two photos

8) Light itself can be your subject by taking a photo while moving either the light or the camera!

> <u>Activity 8:</u> **(Reduce your ISO to 100)** Use a low light setting & take a picture while the instructor "draws in the air" with the light. Then, while the Instructor holds the light still, move the camera and take a photo.

<u>Homework:</u> **Panning with a Light Trail**

Panning the camera, take a photo of a source of light to create a light trail. Extra credit if you can pan and zoom while you take a photo of a light source! (**Note:** this is a "creative" exercise, <u>**there are no wrong results**</u>. If your camera was moving when it captured a picture of a source of light, you got it done properly. Have fun with this!)

Intro to Digital Compositions: Week Two – Design Elements

Instructor: Roger Buchanan   Get Notes from www.thenerdworks.com

Review Homework: Panning and Light Trails

All of the activities for this class will require the use of "Props" from the bags provided. Please be sure that neither you, nor your partner, mix contents with the bag of another group. This is a real thinking class… take your time!

The instructor will describe each activity, and how that activity will help improve your photography.

Design Elements are the fundamental units of structure that make up a scene or image. Once you know what design element/s you are working with you can then more effectively arrange setting up your photographic technique. "Recognize your Elements and then make your image with Technique!"

> **Activity 1.** Shoot the following **Design Elements** (made from your props kit):
>
> a. **Points**; - (i.e. a flower)
> b. **Lines**; - (i.e. row of beads)   Points, Lines, Planes & Solids all play a role in the
> c. **Planes**; - (i.e. a sheet of paper)   creation of **shapes** and **patterns**… common photo
> d. **Solids**. – (i.e. a building block)   subjects.

The technique you choose should be chosen and used with your design element/s in mind. In other words, "**How**" you photograph is important to "**What**" you photograph so you capture the essence of the scene.

> **Activity 2.** Choose a Design Element & emphasize it with one of the following **Techniques** (try to make a photo for each of the techniques listed);

1. Use a **Focal Point**
2. **Symmetrical** or **Asymmetrical**
3. **Harmony** (Subjects go together) or **Disharmony** (subjects contrast or conflict each other)
4. **Depth of Focus** relates to **sharpness of background**

To Focus the Background	To Blur the Background
Narrower aperture (i.e. f/22)	Wider aperture (i.e. f/2.8)
Shorter focal length	Longer focal length
Move away from subject	Move towards subject

5. Do a **Crop**
6. Create depth by including "**Layers**" in the composition.
7. Use **Point of View**
8. 1, 2 or 3-point **Perspective**
9. **Positive Space** (subjects) and **Negative Space** (area surrounding subjects)
10. **Leading Line**.
11. **Convergence of Lines** and **Vanishing Point**
12. **Colours,** Complimentary or Contrasting (B&W falls into this category for lack of colour)
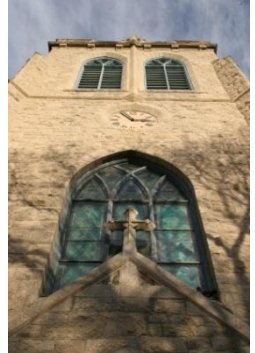
> Learn about colour: https://tinyurl.com/aboutcolours (Link confirmed Nov-2022)

> **Activity 3.** Apply the **Rule of Thirds** to a scene with a horizontal or vertical line.

Homework: - Make one photograph for each of the **design elements** (four in total). Use your choice of any TWO techniques in each photo. (Design Element + 2 techniques). Keep track with the Table on the back.

Intro to Digital Compositions – Week Two Supplemental – Design Elements and Compositional Technique

Points, Lines, Planes and Solids. These are the Elements that make up the photographic world in which we take our pictures. How we photograph these collections of Points, Lines, Planes and Solids is known as Compositional Technique. Below are samples of some, but not all, techniques used by photographers.

Design Elements

Point	Line	Plane	Solid	

Composition Technique

Rule of 3rd's	Balance	Leading Line	Symmetry or Pattern	Cropping
Viewpoint	**Background blurring**	**Depth via Layers**	**Framing**	**Diagonals**

Compositions Week Two Shooting List

Composition Design Elements:

Point – a single object as the subject of the photo; (i.e. a tree)

Line – a series of "Points" side by side; (i.e. a row of flowers in a garden)

Plane – two lines running together; (i.e. a sidewalk)

Solid – two or more planes crossing each other. (i.e. a brick)

Composition Techniques:

The table below is a way of keeping track of the photos you are creating using the Design Elements, and also listing which of the Composition Techniques you are using for each photo. The shaded columns indicate up to four photos for each Design Element that you use (for the sake of variety). **COPY this Table** to use when you practice!

	Composition Design Elements															
	Points				Lines				Planes				Solids			
Composition Techniques	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Rule of Thirds																
Balance																
Leading Line																
Symmetry or Patterns																
Cropping																
Harmony or Disharmony																
Point of View																
Background Blurring																
Create Depth using Layers																
1, 2 or 3-point Perspective																
Framing																
Using Diagonals																
Convergence or Vanishing Point																
Positive or Negative Space																
Depth of Field (shallow or deep)																
Use of Colours or B&W																

Remember - Identify the Design Element first! Then apply your compositional techniques to make your photograph!

NOTE: Try incorporating more techniques into the same photo! (This table will really help keep you organized)

Intro to Digital Compositions: Week Three - Lighting

Instructor: Roger Buchanan   Notes available via: www.thenerdworks.com

Review Homework**:** - **four photographs** (one of each design element) using TWO of the techniques in each photograph.

Lighting Activities**:** (Some of this may be review depending on other courses you may have taken)

The instructor will provide necessary props, and describe how each activity will help improve your photography.
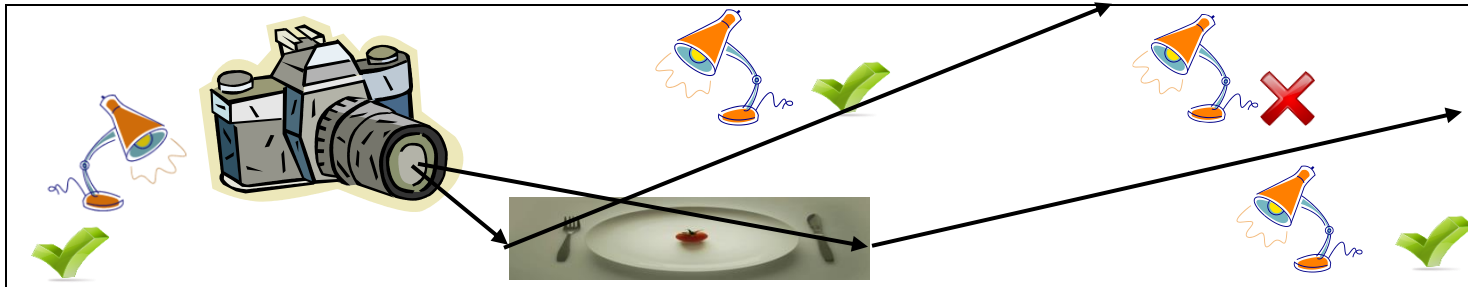
Activity 1.   Lighting to emphasize shape and texture;

Activity 2.   Brightening the image with **Exposure Compensation** ;

Activity 3.   Using the Flash or a Bouncer to add light to a subject;

Activity 4.   Using a Diffuser to Soften the effect of Hard Light.

Activity 5.   **Family of Angles (Worksheet):** Placing a light to avoid a "Hot Spot" (reflection) in your Photograph.

Lighting in Composition

- Lighting is one of the main ingredients of a successful photograph. Usually, the more light, the better. One of the great improvements of digital photography is its ability to take pleasing photos in fairly low light without a flash.

Low Light Photos

- When taking an indoor photo, for even lighting, try to avoid pointing any direct source of light towards the camera.
- Buy a lightweight tripod, like the "Gorillapod", that will allow you to take great photo's without flash. Just use your self-timer to trigger the camera while it sits on the tripod.

Photos Taken in Direct Sun

- Always be aware of the position of the sun for outside shots. For a brightly lit-up subject, take the photo with the sun over your shoulder. Try not to shoot directly into the sun.
- In direct sun use the flash to fill-in shadows on the faces of those you are photographing.

Activity 6. Learn to control the flash using **Flash Compensation**.

Seven tips for photo composition

- **Consider applying the Rule of Thirds -** Apply the Rule of Thirds for a more interesting composition.
- **Can you use lines to lead the viewer into the photo -** Use lines to lead the viewer's eye into the photo.
- **Explore unique angles -** Position your subject at a different angle than just straight ahead of the camera.
- **Get in close to the subject -** The subject is more important than the background, move in, crop nice and tight.
- **Get down low for children and animals -** Get down low, and use their point of view.
- **Photograph moving people by panning the camera -** Move the camera with them as you take the photograph.
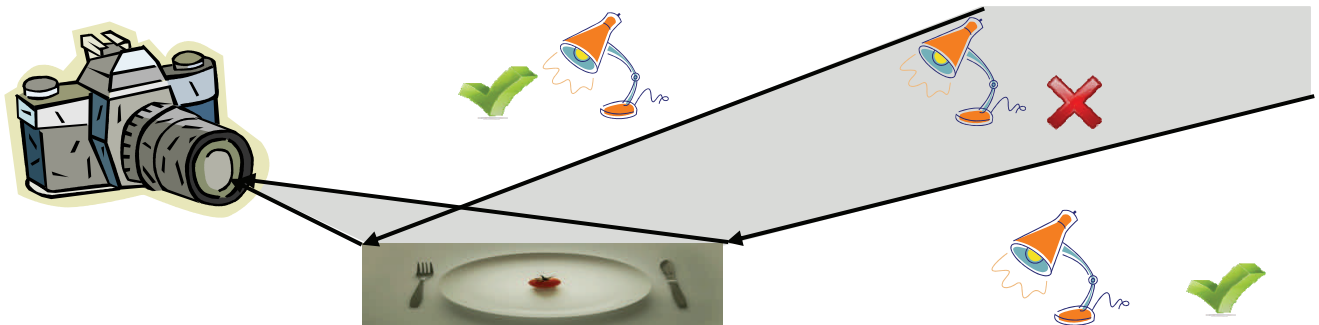- **Best size for e-mailing photos -** For e-mailing, 800pixels x 600pixels is the best size.

A) Questions/Answers;   B) Review weeks One and Two;   C) Evaluation of Course.

Thank you for attending Intro Compositions – I hope it was worth your time!

Family of Angles Worksheet

Below are four sample drawings of camera to subject positioning.

For each of the samples draw in the corresponding Family of Angles. Then place an "**X**" where the light must not go, and a " ✓ " where it is safe to put a light.

1

2

3

4

Checklist for Analyzing a Photograph

Description:	
Photo Title	Photographer:
What is in the photo?	
Lines, planes, forms and volumes in photo?	
Tonal Structure of Photo?	
Relationships of the above!	

Shape of photo? ☐ square ☐ portrait ☐ landscape
Textures?
Angle of Camera, distance of camera
Motion of subjects, lines, planes or tones
Mood of photo? ☐ serious ☐ funny ☐ light ☐ dark ☐ pathos ☐ love ☐ anger ☐ evil ☐ excitement ☐ danger ☐ contemplative ☐ intimate ☐ expectant ☐ reactive
Space and planes of subjects. Negative space?
Lights and shadows, distance and direction

☐ Reality ☐ Non-reality	☐ Exotic ☐ commonplace	☐ Sharp? ☐ Blurred? ☐ Fogged ☐ Grainy?
Time place		locale
Known or unknown aspects of photo		
Color harmony and intensity		
Route of eye travel through photo		

Formal Analysis:

What geometric shapes are employed?

☐ Parallels or ☐ Repetitions? ☐ Physical or ☐ Conceptual?

Variations on a Theme?

What Contrasts exist?

Compositions of Picture?

Is the photo balanced? ☐ yes ☐ no ☐ Physically ☐ Conceptually	Is the Photo unified? ☐ yes ☐ no

Interpretation:

Is this about   a ☐ specific?   a ☐ universal?

Are the objects in the photo symbols? ☐ yes ☐ no

Is the statement ☐ straightforward, ☐ subtle, ☐ ambiguous…?

What feelings are involved?

What does the photo remind you of ☐ visually, ☐ emotionally and ☐ intellectually?

What is the picture really about? Broadest possible manner of description!

    I.   Sensory;

    II.   Tangible and Conceptual;

Is the photo important because of the ☐ subject, or the ☐ treatment of the subject?

What is the photographers relationship to the statement? ☐Detached? ☐Sympathetic? ☐Sardonic?

Evaluation:

By what standards should this photo be evaluated?

How well does this photo stand up? How deep is the feeling that has been triggered by this photo?

How suitable or acceptable is the manner of making the statement?

Is the statement Valid? ☐ Agree? ☐ Disagree?

Where does this photo stand? ☐Most Trivial ☐ Trivial ☐Most Important

How original is the statement and the manner of making the statement?

Will the photo live on? ☐ yes ☐ no

Postlude:

Relate the photo to the following:

I. Other photos by same photographer of the same theme;

II. Other photos in the same genre

III. The position of the photo in the history of photography

IV. Art and Sculpture on the same theme or subject;

V. Other Arts – poetry, music, etc… that deal with the same subject

VI. Psychology, sociology, philosophy, history, - any pertinent intellectual discipline;

Restate in terms of the photograph and humanity