

Tools and Program Needed:



Name: _____

Period: _____ Date: _____

Camera Modes Worksheet

Targets

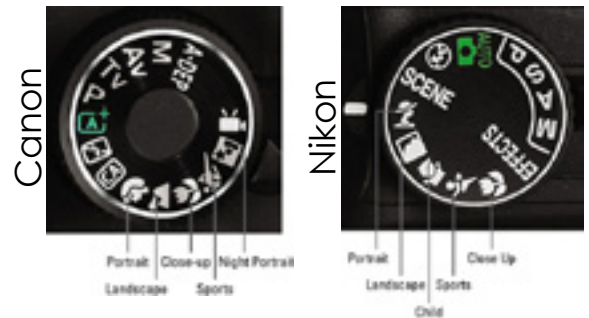
1. Students will create images demonstrating an understanding of Auto Scene Modes and Creative Zone Modes found on most digital cameras in three different lighting conditions.
2. Students will use Adobe Bridge and PhotoShop to edit images to include correct terms and data for each image they take.
3. Students will print images to demonstrate their understanding of the process of printing in classroom.

What to turn in

1. Camera Modes worksheet filled out.
2. Three labeled contact sheet of 10 photos for each lighting location. See Example
3. Labeled (name, period, exposure data) printout of favorite image.
4. Camera Modes Rubric

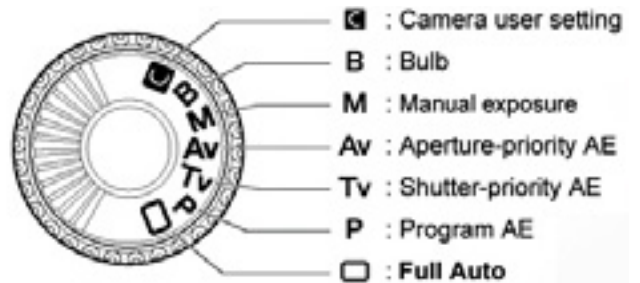
Auto Modes

In the Auto Modes the camera selects all functions of the camera. These are the most basic functions because the photographer has no decisions to make after choosing the mode.



Creative Modes

In the Creative Modes the camera and the photographer may select some or all of the camera functions. These are considered more advanced functions because the photographer has some to total control of camera functions (except for Full Auto).



Fill in the following boxes Creative Modes Chart using the following terms:

Camera Controlled

Photographer Controlled

Mode	Shutter Speed	Aperture
Example Answers	<i>Camera Controlled</i>	<i>Photographer Controlled</i>
P (programmed auto)		
S (shutter-priority auto)		
A (aperture-priority auto)		
M (manual)		

Name: _____

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Match the definition to the mode on the dial. Note: not all makes have all modes

Creative Zone		
Term	Draw Symbol	Symbol
		In this mode the user completely controls all camera functions.
		This mode enables user the manual control of the aperture (f /stop), and shutter speed is calculated by the camera for proper exposure (given an ISO sensitivity).
		This mode enables user the manual control of the shutter speed, and aperture is calculated by the camera for proper exposure (given an ISO sensitivity).
		The aperture is set to yield the desired depth of field: one points at the nearest object that one wants to be in focus, half-presses the shutter, then points at the farthest object that one wants to be in focus, half-presses the shutter, at which point the camera sets both focus and aperture so that both objects are in focus. One then reframes the scene and fully depresses the shutter to take the photo. Unlike other modes, this also sets focus, and requires two separate metering/focus stages.
		This mode enables camera to calculate exposure based on set parameters. Allows some exposure adjustments.
		In this mode the shutter remains open for as long as the shutter release button (or shutter release cable or remote) remains depressed.



CANON



NIKON

Basic Mode		
Term	Draw Symbol	Symbol
		This is useful for close-ups, or shooting flowers, insects and other small objects.
		This mode will set your camera aperture to a large opening (low F-value) throwing background out of focus. The camera may recognize and focus on a human face.
		This mode increase ISO and uses a faster shutter speed to capture action. It avoid motion blurring and usually a very large aperture opening (low F-value) to provide as much light as possible.
		In this mode the camera calculates the aperture (f stop)/, shutter speed, ISO, flash and other settings to get the best picture possible. The camera is in control here.
		Uses a small aperture to gain depth of field.
		This mode uses flash to illuminate your subject, but this is balanced against the background lighting to produce a natural looking result.
		A type of mode use to produce the best results when photographing moving subjects. This mode lets you frame and select the subject before you begin shooting the pictures. Once framed the camera will then track and focus on that moving subject enabling you to shoot faster with clearer images as a result.
		Create video, moving images, with this mode.



Getting the Exposure

Using the Light Meter

Exposure Balancing Act

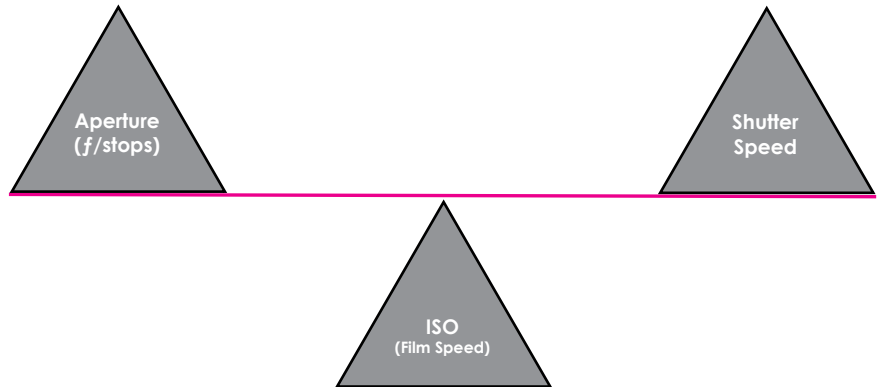
A good exposure has these three elements in balance

3 Elements of Exposure

Aperture (f/stop)

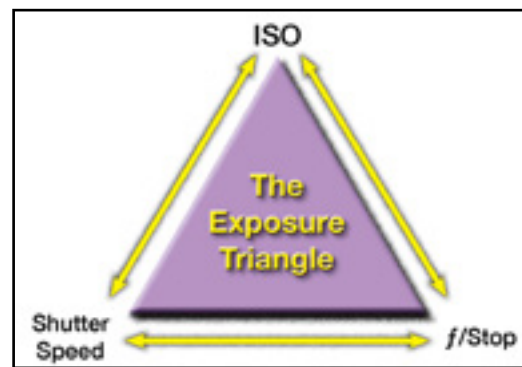
Shutter Speed

ISO (Film Speed)



Rules

- **Same or equal exposure** —
 - If you change one you must change another to have the same equivalent exposure.
 - Exposure must balance.
 - If you add light you must subtract the equivalent amount.
 - If you subtract light you must add the equivalent amount.
- **Bracketing** — the exposure is purposefully out of balance, not equal.



Basic Light Meter Use

A good exposure is neutral, it equals 0

Adjust Light Meter

Change the following until the exposure scale is set at 0.

- Aperture (f/stop)
Adjust first.
- Shutter Speed
Adjust next if needed.
- ISO (Film Speed)
Use as last resort.

Remember the setting at which you take the photo should equal 0.

In the Viewfinder

Where indicator should be

-1 .. 1 .. 0 .. 1 .. +2
correctly exposed meter

-1 .. 1 .. 1 .. 1 .. +2
under exposed meter

-1 .. 1 .. 1 .. 1 .. +2
over-exposed meter

Section 2

Camera Modes: Photo Assignment

You are to take photos using each of the major Auto Scene Modes and Creative Zone Modes. These will be taken in **three types of lighting conditions**; outside in full sun, outside in the shade and in a classroom. It is important for each location and subject to be photographed **in exactly the same way**; same objects and composition. Be sure to have an object/subject close to camera, a few feet away and in the distance. Do not change the camera's angle or subjects for once set up for lighting type location.

You must take your photos with the white balance set to sun (icon of sun) and take both JPG large and RAW files (RAW files will be used in later assignment).

Adjust your light meter for each mode as camera allows. Some modes will not allow you to make exposure adjustments.

Fill in the following chart for each location and image you take **as you are taking the photo**. You will use this information later.



Outside in Sun Remember to use WB Sun Setting

Describe location and weather & light conditions in detail:

	ISO	f/stop	Shutter Speed	Describe Image in Detail @ Time Taken Make Additional Comments & Notes Here
Auto Scene Modes				
Portrait				
Landscape				
Close-up				
Sports				
Night				
Full Auto				
Creative Zone Modes				
Program				
Shutter				
Aperture				
Manual				

When done taking *all* images, save all files in a folder labeled "Modes Assignment." You should have at least 30 files.

Name: _____

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Outside in Shade Remember to use WB Sun Setting

Describe location and weather & light conditions in detail:

	ISO	f/stop	Shutter Speed	Describe Image in Detail @ Time Taken Make Additional Comments & Notes Here
Auto Scene Modes				
Portrait				
Landscape				
Close-up				
Sports				
Night				
Full Auto				
Creative Zone Modes				
Program				
Shutter				
Aperture				
Manual				

When done taking *all* images, save all files in a folder labeled "Modes Assignment." You should have at least 30 files.



In Classroom (fluorescent lighting) Remember to use WB Sun Setting

Describe location and weather & light conditions in detail:

	ISO	f/stop	Shutter Speed	Describe Image in Detail @ Time Taken Make Additional Comments & Notes Here
Auto Scene Modes				
Portrait				
Landscape				
Close-up				
Sports				
Night				
Full Auto				
Creative Zone Modes				
Program				
Shutter				
Aperture				
Manual				

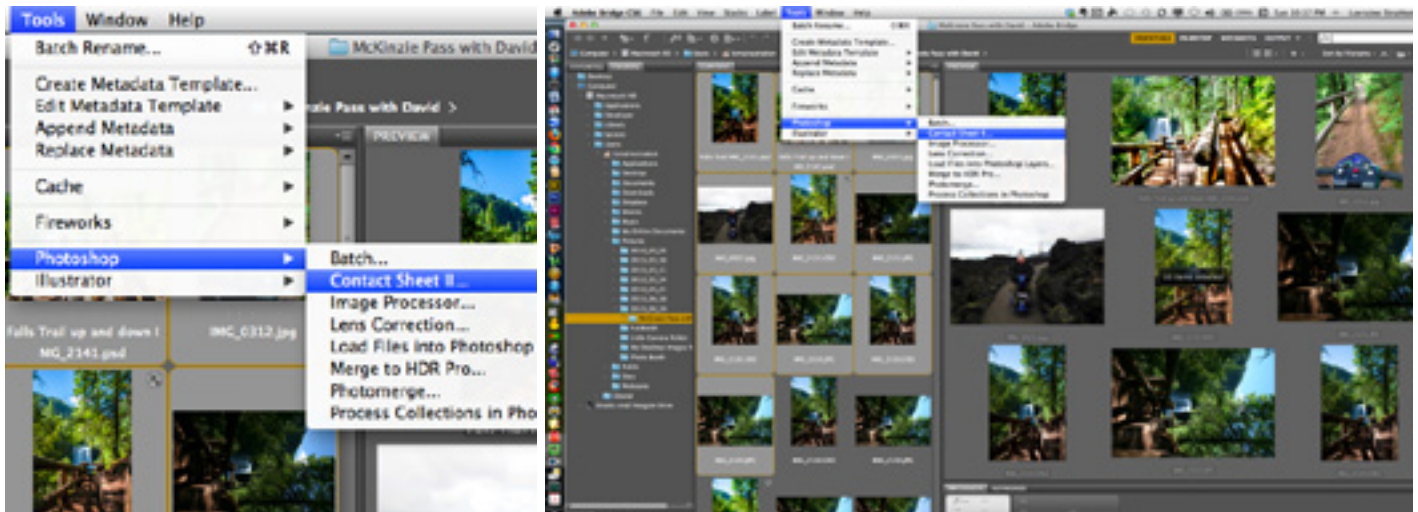
When done taking *all* images, save all files in a folder labeled "Modes Assignment." You should have at least 30 files.

Section 3

Digital Editing: PhotoShop Assignment

You are now to edit your photos using Bridge and PhotoShop (the full version).

1. First open Adobe Bridge to see all of your photos you saved on your flash drive. Using Bridge, confirm the exposure (ISO, shutter speed and f /stop you'll learn more about these later) and make sure you have filled out data correctly in previous tables.
2. Now double click on the image you want to use in Bridge and it should open in PhotoShop automatically. You will be using the JPG files for this assignment. Save RAW (CR2) files for later assignment.
3. In PhotoShop use the T (text box) type in the location (sunny, shade, classroom), mode and data you gathered for each image (ISO, f /stop and shutter speed) used when taking each photo onto the image. Merge your layers on each file (Layer>merge layers). Should look like this:
4. Save altered photo with new name. **Suggestion:** location (sunny, shade, classroom) + mode
5. Once you have completed and saved each file you are going to create three **contact sheets** all 10 photos for each location.
6. Leave PhotoShop open, but return to Bridge and select the 10 photos you typed data on to for one location.
7. Now in Bridge's menu bar, with your 10 photos selected, go to Tools > PhotoShop > Contact Sheet II. It should look like this (with 10 images selected):



8. When you release the mouse after clicking on Contact Sheet II, the program should take you back into PhotoShop. PhotoShop will then do all the work for you, so sit back and relax until it's done.
9. When PhotoShop is finished you should have a contact sheet with 10 photos. Now use text tool (it's the "T") to **clearly label contact sheet with your name and location; sunny, shade, classroom**. Save this contact sheet with your last name, first name and location (sunny, shade, classroom) on to your thumb drive.
10. Print out a copy of each of your three contact sheets and a copy of your favorite photo (print as individual photo). Staple printouts to this assignment sheet, answer reflection questions (next page) and turn in to period folder.

Refer to web page on printing out photos.

Section 4
Reflection

Answer the following questions remembering to use complete sentences:

1. What are the advantages of the Auto Modes?
2. What are the advantages of the Creative Modes?
3. What is the image editing program we use?
4. Explain which program on our computers is best to view multiple images.
5. Photos taken in sunlight looked best using which camera mode? Why do you think that?
6. Photos taken in outside shade looked best using which camera mode? Why do you think that?
7. Photos taken in the classroom under fluorescent lights looked best using which camera mode? Why do you think that?

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8. Looking at your contact sheets how did the sunlight, outside shade and classroom fluorescent lighting **color** (not exposure — how light or dark) look the same/different?

Light Conditions	How light looked same/different
Sunlight	
Outside Shade	
Classroom	

9. Describe is your favorite photo you took for this assignment. Explain how it was taken and what you liked and disliked about it. **Attach a labeled printout of the photo to this packet.**

10. How would you do this assignment different were you to do it again?

11. What is the unexpected thing you learned during this assignment?