~The Art of Photography~

The 4-H Motto

“Learn to do by Doing”

The 4-H Pledge

I pledge
My HEAD to clearer thinking,
My HEART to greater loyalty,
My HANDS to larger service,
My HEALTH to better living,
For my club, my community, and my country.

The 4-H Grace

(tune of Auld Lang Syne)
We thank thee Lord, for blessings great
on this our own fair land.
Teach us to serve thee joyfully,
with head, heart, health and hand.

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Welcome to the 4-H Photography Club!

This club will open your eyes up to the many angles of photography and will be informative-so enjoy the many opportunities that 4-H and this club have to offer you!

Sample Meeting Agenda

1. Welcome and Call to Order - 4-H Pledge
2. Roll Call
3. Minutes of last meeting
4. Any correspondence, collection of money and treasurer's report (if applicable)
5. New business
6. Announcements
7. Adjournment of business meeting
8. Club program
9. Games and/or refreshments

How to Have a Great Meeting

- ✓ create an agenda with time limits for each activity
- ✓ have everyone be there on time so you can start the meeting on time and end on time
- ✓ go on adventurous tours and invite guest speakers to your meetings
- ✓ elect a club executive

Who is the Club Executive?

President
- ✓ may help plan meetings
- ✓ gains public speaking experience when introducing guest speakers
- ✓ often a role model for other members and inspires them
- ✓ plans part of the meeting

Vice-President
- ✓ fills in for the president when they are absent
- ✓ observes the president to gain tips on how to run a meeting and thank speakers
- ✓ has the opportunity to step into president's shoes and take responsibility
- ✓ often thanks guest speakers and presents them with a token of appreciation
- ✓ cares for visitors and guests at the meetings

Secretary
- ✓ keeps track of all events and writes down what happens at each meeting
- ✓ keeps attendance and handles club mail
- ✓ has the opportunity to gain observation skills and the ability to keep accurate and precise records of meetings
- ✓ assists leaders and president in preparing meeting agendas

Press-Reporter
- ✓ **key role** in informing the community of events, fundraisers or information about 4-H
- ✓ gains experience in keeping accurate records of each meeting and upcoming dates so the public is aware of what is going on
- ✓ reports to the newspaper office after each meeting to hand in a typed copy of the meeting
- ✓ learns to concisely report on events

Treasurer
- ✓ keeps detailed records of money spent and donations received
- ✓ has the opportunity to gain accounting experience and skills in mathematical preciseness

The election may be carried out in any form as long as the procedure is fair. You may do this by secret ballot or by show of hands with the nominee in another room.

Club Membership
Club Executive:

	Name	Phone #	Email Address
President			
Vice-President			
Secretary			
Treasurer			
Press Reporter			

Club Members:

Name and Phone #	Email Address
Leaders:	

Meeting 1

The Beginning of the Camera

Roll Call: What type of camera do you own, where did you purchase it and how long have you been using it?

Answer:

The History of Photography

Who: Louis Daguerre and then modified by William Henry Fox Talbot

What: these pictures took so long to take that at first only landscapes were taken

When: August 19, 1839

Where: Paris France

Why: soon the process began to become more time efficient and it became fashionable to have your family portrait done

How: Daguerre was able to capture the picture on a silver-coated sheet of copper, using his 'positive image'. This was a fragile process and many had a hard time reproducing the same results that he got. Then Talbot came in and improved the process with his 'negative image'.

How Cameras Work

1. Light comes from many sources: the sun, streetlights and lamps. It can also be reflected off glass, water or anything shiny.

2. Taking a picture captures the light rays that bounce off all objects. It's important to let just the right amount of light into the camera so the picture isn't under or overexposed (too much or too little light).

3. Camera lenses are shaped to point light rays towards the film in the camera.

4. A door, called a shutter, which is behind the lens, lets the rays through. You can control the amount of light by deciding how long to have the shutter open.

5. The light rays also pass through a hole behind the shutter called the aperture.

6. You can control the amount of light by: shutter speed, aperture width, and film speed.

7. Although not seen, the light rays cross over before they reach the film and turn the image of the object upside-down.

Parts of a Camera

Viewfinder: window to look through to see the subject

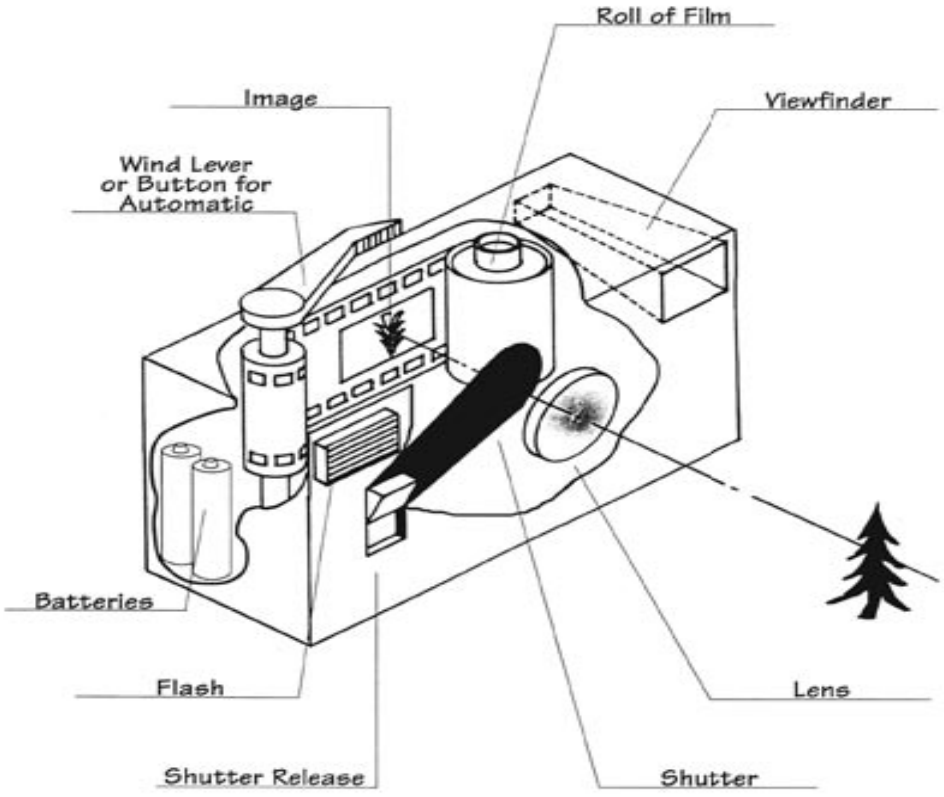
Lens: Remember*: do not touch the lens*, it focuses light from the subject onto the film inside the camera. Make sure to cover the lens when not in use to protect from dust, rain and fingerprints

Aperture(opening): lets light through, can be adjusted to let more or less light in

Shutter: in between the lens and the film, opens and closes quickly when the shutter button is pushed. This lets a controlled amount of light in to focus onto the lens and onto the film. It also protects the film from any unwanted light that would ruin a picture.

Batteries: lithium, alkaline and AA are all used in cameras as a power source. Make sure to take spare batteries if you are going on a trip. If you are not using your camera for awhile you should take the batteries out and store them in a bag so they don't damage your camera if they leak.

Flash: some cameras have flashes built in which work automatically while other cameras require that you turn the flash on



Quick Question: When would you use a flash indoors?
Answer: To remove dark shadows caused by hats, brows or to remove dark circles under eyes

A Few Types of Cameras

Point and Shoot Cameras (disposable): inexpensive, some can be used underwater, come loaded with film and batteries, can turn flash on, check expiry dates

35 mm Point and Shoot Camera: uses 35 mm film, therefore you have to load the film yourself, ranges in price and level of complication

Digital Point-and-Shoot Camera: uses a light sensing chip to capture and store images. The sharpness of the images depends on the pixel density. Can download pictures from the camera onto the computer for editing, printing and e-mailing.

Types of Film

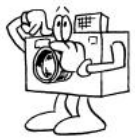
- different film speed=different reaction to light
- comes in slow, medium or fast speed-you choose your film based on the light conditions you have and also how fast your subject is moving
- slow films (25-200): react slowly therefore you need very good lighting
- fast films (250-1600): good for moving objects or if you have poor lighting
- most common speed is ASA 200 to 400
- ISO or ASA will be on the film box meaning International Standards Organization or American Standards Association

Picture Conditions	Colour Pictures (film speed)	Black and White (film speed)
General Purpose	100 - 200	400
Spot and Action Shots	400 - 1000	400 - 1000
Night Scenes	400 - 1000	400 - 1000
Close-Ups	200 - 400	125 - 400
Indoor Shots Under Electric Light	400 - 1600	400 - 1000

How Film Works

- A film inside its canister or in a closed camera is protected from light until the shutter is opened. At this point it's unexposed.
- When light hits the film surface, hopefully through the lens, it changes the coating on the film to record the picture. This is exposing the film to light.
- When the film is processed the excess coating is washed away making a negative. On black and white negatives you will notice things that are really white look black and black things look white. On colour negatives all the colours will look strange.
- When the lab prints your photographs they shine light through the negatives to create your photographs on photo paper. This is when the colours will appear as they did in real life.

Cam the Cameraman comments: Try going to your local film supplier and find out what they suggest as a good film and what films they find usually don't produce good pictures.

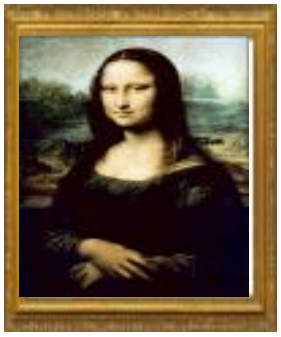


Before the Next Meeting:

Take several pictures of your family members and then develop the film for the next meeting. Try getting the film developed in both colour and black and white to compare the difference between the two finishes. Also try your best to learn the parts of your camera by name and function.

Meeting 2

What's in A Picture?



Roll Call: Describe your camera, point out the different features and what type of film you use?

Answer:

Black and White Photographs

Did you know that when you take a picture the pixels on an image sensor can only capture brightness and not colour?

- The image sensor records only the gray scale-which is a series of 256 increasingly darker tones ranging from pure white to pure black.
- In 1860 James Clerk Maxwell discovered colour photographs could be created using black and white film and red, blue and green filters!
- Today images are based on the three primary colours of blue, green and red, called the *additive colour system*, meaning that when added together they form white.
- Did you know that the human eye is more sensitive to the colour green?
- Some people today prefer black and white photographs because they can portray highlights and shadows, contrasts between lightness and darkness, and certain shapes and textures better than colour photographs.

Shutterbug says:
Try framing your pictures by using a tree branch, an archway or a pair of arms!

What the Camera Sees

Taking a good picture is hard work. It's not only the camera that has to be focussed but the photographer has to be focussed on taking the best picture possible. Read your camera instruction manual so you know all the features that it has. Once you have decided what you want the focus of interest to be, either in the foreground (front of the picture) or the background, make sure the picture isn't too cluttered.

- Check for background items that may clutter the picture like lots of people, cars or furniture and then move yourself accordingly.
- Avoid cutting off the tops of heads or arms and legs. Look at the whole scene in the viewfinder not just your main subject
- Don't always take a picture standing up, a new viewpoint will make a big difference. Try bending down so the sky is the background or walk around your subject to get another viewpoint. Ordinary objects can become very dramatic looking when a picture is taken from above and from below.
- If you want a side (profile), have more room in front of the person's head.

The Parallax Error

The parallax error is when you are seeing a slightly different angle of the picture than the lens does when you look through the viewfinder. This will only be a problem if you are doing close up pictures. If there are lines around the inside of your viewfinder make sure everything you want to be in your picture is within those border lines.

Tripods

Tripods can be purchased in a variety of sizes and often contain clamps that will allow them to attach to branches, posts or railings. When looking for a tripod look for:

- sturdiness - the heavier it is the less risk of camera shake
- type of head: ball & socket vs. pan & tilt head - think about the usage and the weight of your camera
- adjustability: look for one that can adjust to different heights

Focussing

When people take pictures they want them to be in focus not blurry or fuzzy. It takes a lot of **practice** (see activity below) to learn to focus a camera properly.

- Most cameras need to be focussed manually; don't forget that most cameras can't focus on objects that are closer than 1-2 m. If you are unsure how far this is just stand an arms length away from the object.
- If your camera allows it you can also move the lens to get the subject in more focus.
- Preventing blurriness in photographs caused by shakiness can be done by:
  - Holding your camera firmly – (but not too tightly) with both hands.
  - Be sure that no fingers are touching any part of the lens.
  - Make yourself stable: spread your legs apart, one a little ahead of the other, brace yourself or your camera against something (wall, post, tree). You could also squat which would be a stable position.
  - If your camera has a strap, use it. Put it around your wrist or neck to keep it away from the lens - and so you don't drop the camera.
  - Squeeze the shutter button firmly- not by jerking, steadying your elbow or resting it against a firm surface, using a tripod.
- Movement by the subject can also cause blurred pictures. You can prevent this by:
  - following the subject with your camera (panning)
  - using a faster film
  - using a flash
  - making a sound or movement that will catch the subject's attention
  - using a shutter speed of at least 1/125

Activity: Practice steadying yourself for several shots including: lying on the ground, leaning against a doorway, leaning on a table or leaning against a fence.

What the Viewer Will See

Composition

Before you take a picture:
1. Decide what you want to photograph
2. Decide how to compose it
3. Choose an exposure

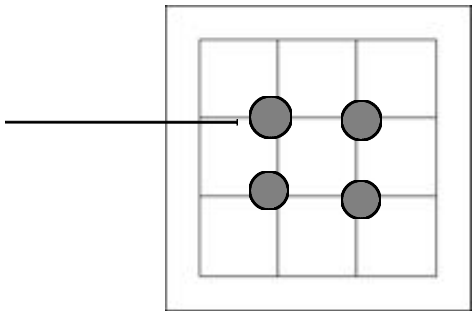
Try to see like a camera does - it doesn't see like the human eye. You need to consider that the photo is framed, the camera sees in 2-D not 3-D like we do, and photos usually show much more contrast than the human eye does (it is exaggerated). Another way to think about it is that we see subjectively and the camera sees objectively. The camera takes the picture, the photographer makes the picture. Composition is the key.

What is the author's message or meaning behind the picture?

Framing can be done using a door frame, a window, a tree, or even a gap in the fence.

The rule of thirds works by dividing the frame into thirds both horizontally and vertically. The points of major interest should fall where the lines intersect. For example a picture is more interesting if the horizon sits either 1/3 from the bottom or 1/3 from the top

Most interesting spots for the subject to be placed here



Do you find the background of this picture distracts you from the focus of the picture?

Good composition is 90% of the art of photography.

Depth of Field

One of the important concepts in photography is depth of field. Depth of field appears very different to a camera lens than it does to the human eye. When you focus on a subject the depth of field, which is the zone where everything is in sharp focus in front or behind the subject, varies a lot depending on the size of aperture. If you have a limited depth of field you will have a blurry background and foreground, whereas if you have a larger depth of field you will get an overall sharper image. In general, the closer your subject the shallower the depth of field.

Before the Next Meeting:

Start filling in the logbook, of all the photographs you have taken and record how you feel about the photograph.

Cam the Cameraman comments:
Always take time to plan out your shot so that the picture will display good composition

Meeting 3

The New World of Digital

Roll Call: Have you ever used a digital camera and did you find your pictures had similar composition and perspective as when you used your regular camera? Or did you have to adjust your picture taking technique?

Answer:

The Beginning of Digital Cameras

In 1991 the first professional digital camera was released to the world by the Kodak company. This camera was mainly aimed at photojournalists. The first digital cameras for the consumer-level market (Apple Quick Take 100 in 1994 and Kodak DC40 in1995) worked with a home computer via a serial cable. The Kodak company had an aggressive and innovative campaign to promote the DC40 camera and to introduce the new technology of digital photos. Microsoft and another company, Kinko, collaborated with Kodak to create digital image-making software workstations and small booths which allowed customers to produce Photo CD Discs and photographs. Hewlett-Packard was the first company to make colour inkjet printers that complemented the new digital camera images.

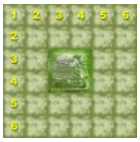
Digital Camera Technology

- Digital cameras are similar to traditional film-based cameras.
- They do not use film. They use a light sensing chip and store images.
- Digital photography uses a combination of advanced image sensor technology and memory storage which allows images to be captured in a digital format that is available instantly.
- A Charge Coupled Device (CCD) is used to build light-sensitive electronics like cameras. A CCD can detect either colour or black-and-white because it is sensitised by an electric charge.
- A Complementary Metal-Oxide Semiconductor (CMOS): enables a camera to be battery powered as well as record date, time and other memory.
- These two devices work to convert light into electric charges.
- The CCD is made up of photosites that are sensitive to light and the brighter the light that hits a single photosite, the greater the electrical charge that will accumulate at that site.

Shutterbug says: ***Try using a digital camera to experiment with night photography***

Resolution

The amount of detail the camera can capture is called the **resolution** and it is measured in pixels (smallest component of an image-usually a coloured dot). The more pixels your camera has the more detail it can capture. The more detail you have the more you can enlarge a picture before it becomes "grainy" and starts to look out-of-focus.



256x256 pixels - You find this resolution on very inexpensive cameras. This resolution is so low that the picture quality is almost always unacceptable. This is 65,000 total pixels.

640x480 pixels - This is the low end on most "real" cameras. This resolution is great if you plan to e-mail most of your pictures to friends or post them on a web site. This is 307,000 total pixels.

1216x912 pixels - If you are planning to print your images, this is a good resolution. This is a "megapixel" image size -- 1,109,000 total pixels.

1600x1200 pixels - This is "high resolution." Images taken with this resolution can be printed in larger sizes, such as 8x10 inches, with good results. This is almost 2 million total pixels. You can find cameras today with up to 10.2 million pixels.

You may or may not need lots of resolution,depending on what you want to do with your pictures. If you are planning to do nothing more than display images on a web page or send them in e-mail then using 640x480 resolution has several advantages:

- ✓ Your camera's memory will hold more images at this low resolution than at higher resolutions.
- ✓ It will take less time to move the images from the camera to your computer.
- ✓ The images will take up less space on your computer.

On the other hand, if your goal is to print large images, you definitely want to take high-resolution shots and need a camera with lots of pixels.

Printing Pictures from your Computer

There are many different technologies used in printers. Here we will talk about inkjet printers. In general, printer manufacturers will list the printer resolution in dots per inch (dpi). However, all dots are not created equal. One printer may place more drops of ink (black, cyan, magenta or yellow) per dot than another.

For instance printers made by Hewlett Packard that use PhotoREt III technology can layer a combination of up to 29 drops of ink per dot, yielding about 3,500 possible colours per dot. This may sound like a lot but most cameras can capture **16.8 million** colours per pixel. So these printers cannot replicate the exact colour of a pixel with a single dot. Instead, they must create a grouping of dots that when viewed from a distance blend together to form the colour of a single pixel.

The rule of thumb is that you divide your printer's colour resolution by four to get the actual maximum picture quality of your printer. So for a 1200 dpi printer, a resolution of 300 pixels per inch would be just about the best quality that printer is capable of. This means that with a 1200x900 pixel image you could print a 4-inch by 3-inch picture. In practice though, lower resolutions than this usually provide adequate quality. To make a reasonable print that comes close to the quality of a traditionally developed photograph you need about 150 to 200 pixels per inch of print size.

Storage Space on Your Camera

You may store your pictures in many different formats. For example:

- Built in memory
- SmartMedia Card
- Compact Flash
- Memory Stick
- Floppy disk
- Hard disk
- Writeable CD and DVD

Did You know…

In the United States there is roughly one camera for every adult

With a 3-megapixel camera you can take a higher-resolution picture than most computer monitors can display

You can use your Web browser to view digital pictures taken using the JPEG format

You can use various software programs to "stitch" together a series of digital pictures to create a large panorama

When You Shop: Look Out!

When purchasing a digital camera there are several things you should keep in mind to avoid buying a camera that won't meet your needs. Here are some of the most common things to think about:

Make sure the camera has the right resolution for your needs.

If you are going to take snapshots and e-mail them to friends then you don't need anything more than 640x480 pixel resolutions. Buying the resolution that you need lets you save money (and hard disk space). On the other hand if you want to print enlarged versions of your photos you will need a 2-megapixel or 3-megapixel camera.

Make sure the lens will handle the pictures you plan to take.

If you don't have the right lens it can be difficult to take the best pictures possible. For example, if your camera does not have a macro setting, you won't be able to take close-ups. If very crisp detail is important in your pictures you'll probably want a high optical zoom number. Be sure to try out the lens system on a camera before you purchase it. Digital cameras come with a huge variety of lenses so be sure to shop around.

Do not confuse digital zoom with optical zoom.

Many cameras advertise things like "100X zoom," but that is often misleading because only part of it is in the lens. The only part of a zoom lens that really matters is the "optical" part -- the part made out of glass lenses. This is the "zoom" that will increase the quality of the image. Any form of "digital zoom" is something you can do yourself outside of the camera. If you use your camera's software to crop out a small inner portion of a picture and blow it up you are doing the same thing a digital zoom is doing. In most cases the digital zoom simply makes the image fuzzy.

Do not confuse actual resolution with interpolated resolution.

Many cameras advertise that they have, for example, 1000x600 pixel resolution and 1200x800 *interpolated resolution*. Like digital zoom interpolated resolution is an illusion. You can do the same thing yourself with the camera's software, and all it really does is make the image larger and slightly fuzzy.

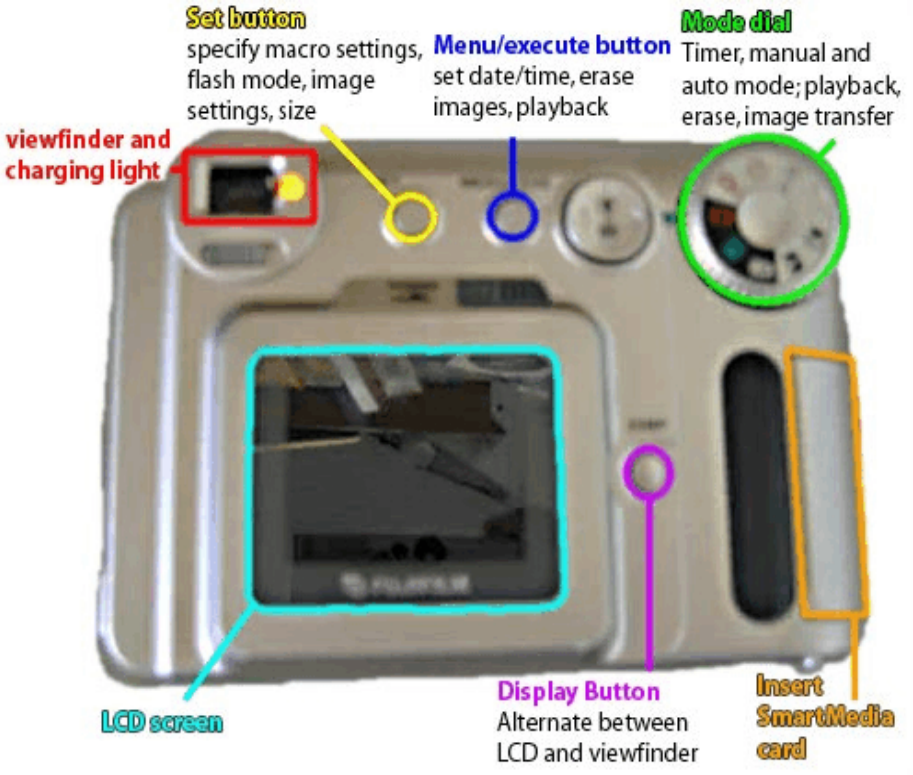
See how long the batteries will last.

Many digital cameras use batteries up very quickly because they have to power an image sensor, an LCD (liquid crystal display) panel and a microprocessor all at the same time and sometimes there's a flash as well! See how long the batteries will really last in your camera. See if the camera will accept normal alkaline batteries in a pinch. If you plan on using your camera for long periods of time think about purchasing an extra battery for it -- and be sure to check prices ahead of time. Some manufacturers charge excessively for their batteries and if this is the case you may want to consider a different manufacturer.

Tips on How to Get A Great Digital Picture

- try and take more outdoor pictures than indoor
- avoid badly lit scenes-if there isn't enough light the picture won't turn out
- make sure all subject is in the viewfinder
- keep the camera very steady

How to Work a Digital Camera



Cam the Cameraman comments: Compare prices for printing your digital photographs before you decide to get them developed

Before the Next Meeting:

Fill in the digital camera cost comparison sheet on the next page by going to your local camera shop and looking at three different brands of digital cameras

Cost Comparison Chart

Brand Name and Model			
Price			
Resolution			
Battery Type			
Amount of Memory			
Best Digital Camera			

Meeting 4

Lights, Camera, Action !

Roll Call: Have you ever had a picture turn out almost black or been unable to see the peoples' faces in the picture? Why do you think the picture didn't turn out?

Answer:

Lighting

When taking a picture it's important to have good lighting so that the subject looks their best. Did you know that photography actually means 'writing with light'. There are five different types of lighting: front, side, back, top and low lighting.

Front Lighting- the light falls in front of the subject

Pros	**Cons**
safe and easy to work with	causes red eye
usually used by beginners	not very exciting
	doesn't show texture of object-subject may appear to be flat

Side Lighting- the light falls on the side

Pros	**Cons**
emphasizes texture and shape	rarely enhances skin texture
produces good shadows	needs to be done in early morning or late in the day

Backlighting- illuminates subject from behind, produces a bright edge around the subject and casts shadow on the subject

Pros	**Cons**
can make translucent things appear to glow	challenging technique
	may confuse the light meter on your camera
	subject may appear under exposed

To get the right exposure when using backlighting try: using fill flash mode, reflect more light onto the subject, and move in closer to the subject

Top Lighting- light coming from above the subject

Pros	**Cons**
makes some pictures look natural	light from directly above subject makes unattractive shadows on the face
	light directly above scenery does not produce interesting shadows

Low Lighting- light coming from below the subject, like a campfire, may rekindle memories of the event or imagination.

Light Meters

Many cameras will have a built in light meter that measures the available light and then changes the camera settings. Built in meters average the light in the scene but may not give the precise reading you need for your subject. A hand held meter allows you to measure precisely the light being reflected off your intended subject.

Using a Flash

A flash will add additional light to a situation. It can freeze action and extend an opportunity. Most cameras are set for exposure control with a flash. A flash can throw harsh shadows, create red eye and make pictures look flat!

Automatic Flash- goes off when you push the shutter button; your subject must be within the range of the flash. Most automatic systems average their readings and adjust the settings for the average conditions.

Range of the Flash- the range is usually between one and four metres with an ISO 100 film. If you have a top quality camera and a ISO 100, the range can be from one to eight metres.
How far can your flash reach? Not down to the ice surface at hockey games - although many fans keep trying. You can figure out how far your flash will reach by having your subject hold a sign with the distance and exposure written on it.
How quickly can you take the next flash shot? This will depend on the freshness of your batteries and it will also depend on the size and make of your flash. It's important to read the manual about your flash and always carry spare batteries.

Fill Flash- adds to existing light, usually bounced off the ceiling or other surface, and is not directed at the subject. This will 'fill' the environment with more light. It can add light to reduce shadows such as those caused by wrinkles, nose, hair, hats and eye sockets. It can also reduce the problems of backlighting. It is much less harsh than direct flash and looks more natural. Automatic cameras calculate the exposure for fill flash automatically.

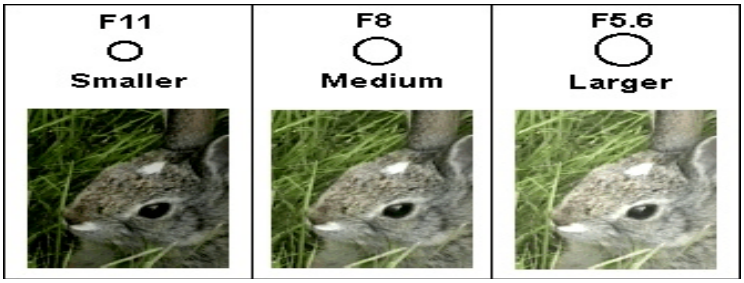
Need more light, but no flash available?
Try reflecting light towards your subject with a light coloured piece of fabric, paper or cardboard

Exposure Controls

When you take a picture you expose the film to light. The two parts that work together to control your exposure are the aperture and shutter.

Aperture

An opening that changes in size to admit more or less light in. The numbers on the aperture control are called F-stops and referred to as F16, F11, F8, etc. The aperture control may look something like below:



The **larger** the F-stop number, the **smaller** the opening.
Each number higher will let in half as much light as one number lower. For example F5.6 admits twice as much light as F8 meanwhile F11 lets in only half as much.

Shutter

The shutter is a device that opens and closes at varying speeds to determine the amount of time the light entering the aperture is allowed to reach the film. Shutter speed is measured in fractions of a second. 125 means 1/125 of a second, 60 means 1/60. Typical shutter speeds range from 1 second to 1/1000. A shutter speed setting for a bright sunny day-using an aperture of F11-might be 1/125 second. The shutter and aperture settings work together. The shutter halves or doubles the light reaching the film with each change in setting. A number of different combinations of settings can result in the same exposure.

Aperture	F22	F16	F11	F8	F5.6
Shutter	1/30	1/60	1/125	1/ 250	1/500

Any of the above combinations would result in approximately the same exposure.

A Little More on Composition

Remember to compose pictures that get attention and deliver your message! Identify a primary point of interest before taking the picture and once you've found that point you can emphasize it.

Contrast can be shown if you have a light subject placed on a dark background or if contrasting colours are used -but be careful that the colours don't become too distracting.

Balance can be interesting in a photograph if there is asymmetric or informal balance rather than symmetrical balance. By putting the subject off-center and balancing the weight with other subjects the photograph will be much more interesting.
Linears, like roads, waterways and fences when placed on a diagonal, are more dynamic than horizontals.

Perspectives

Did you know that you can give flat 2-D pictures the perspective of depth by using visual tricks?
Linear Perspective -when parallel lines extend into the distance they appear to join or converge. **Draw a diagram of what this would look like.**

Diminishing Scale -when you get farther away, the objects appear smaller. If you move in closer you get an exaggerated perspective. **Draw a picture of what this might look like.**

Aerial Perspective - taking a picture from above the subject as if you were in an airplane looking down

Try:

- ✓ Taking pictures of a straight path or road with a subject at a fixed distance away.
- ✓ Take another picture from the same place but moving the camera around 90 degrees so you are looking across the path or road. Compare the effects.
- ✓ Finding a line of trees all the same size. Take 1 picture with the nearest tree small in the frame and another with it appearing large in the frame. Compare the differences.

Shape

- A viewer's eye can be led by shapes in a photo. When taking a photo look for features in the background-like paths, roads, stairways or trees, that are interesting shapes created by the different subject elements, or repeated colours or tones that could lead one's eyes.
- Shape is the key factor in recognition of people and objects-shape is more apparent when you remove the surface details.
- By moving nearer a subject the extra clutter of background is removed.
- Silhouetting a shape by using light or distance does not interfere with recognition.
- Use the weather-mist, heavily diffused daylight before a storm and dusk light as good opportunities to emphasize subject shape.

Special Effects Assignment

- ✓ Have someone lie on the sidewalk and pretend to 'climb' the side of the building
- ✓ Have someone 'crush' a building with their foot
- ✓ Have someone balance a telephone pole on their head
- ✓ Have someone put a friend into a jelly jar

All of these effects are possible as long as you consider perspective and how people standing in the distance appear much smaller than they actually are.

Before the Next Meeting:

Prepare your camera to bring to the next meeting to take pictures and try out the new special effects.

Cam the Cameraman comments: You can use your flash outdoors when photographing people because it eliminates unattractive under eye shadows

Meeting 5

The Grass is Always Greener on the Other Side of the Fence

Roll Call: What special effect tricks did you try with your camera and did you like the results?

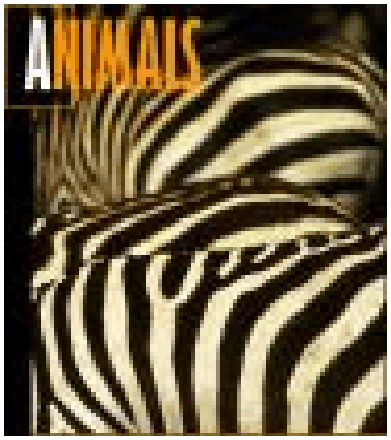
Answer:

Landscape Pictures

A landscape picture is made of three parts: the foreground, the focal point and the background. Make sure you have the best lighting before you take your picture. If it is a sunny day you should take the picture early or late in the day. The shadows produced at those times are strong and dramatic and show off landscape features well. Overcast days are the best days for landscape photography because you can shoot all day. Some shots are better at certain times of the year because they are more interesting and certain features show up better.
When taking pictures of landscapes look at both the vertical and horizontal view. Vertical shots will emphasize the height of the subject and relative size. Horizontal shots can suggest vastness. Don't forget to take both views of a landscape to get the full effect!

IDEAS

- You don't have to include everything in a picture-just choose one part to tell the story
- Try including an object in the foreground to give depth and to give the impression that we are looking into the scene
- If you want to emphasize the sky in a shot put the horizon line of the photo low in the photo
- If you wanted to emphasize the land put the horizon level high in the photo
- Avoid putting the horizon line in the centre of the photo
- Occasionally put a human or a recognizable object like an animal into the picture to add interest
- A wide angle lens allows you to include wider areas vs. a telephoto lens that can save you leg work and allows you to zoom in on features you find attractive
- If you can't get the entire scene in the picture take several shots and have a little bit of the landscape overlap but keep your camera at the same height



Snow Photos

Snow can be very interesting to a photo but it can confuse your light meter and underexpose your shots and may even turn the snow gray. You can deal with this by:

1. Using a fast film like ISO 400
2. Using your camera's backlight mode
3. Pointing your camera at a dark object at the centre of the picture and taking a light reading -then lock your focus at those settings by holding the shutter button down half way - now turn your camera back to your subject and fully push the shutter button down

Planning Landscape Shots

What is the purpose of your picture?

Where do you want the viewer's eye to be drawn-where's the focal point?

What lines or patterns exist that you can emphasize?

How can you simplify the scene?

Horizontal or vertical format?

Will using black and white film enhance the photo?

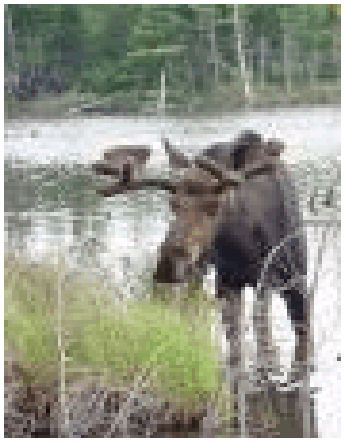
Activity

- ✓ Take some landscape photos of your area that you consider to be typical
- ✓ Take some urban landscape shots
- ✓ Take pictures of the same location at different times of the year or day
- ✓ Take shots of the same landscape from three different heights (hedgehog, human and hawk)

Photographing Animals

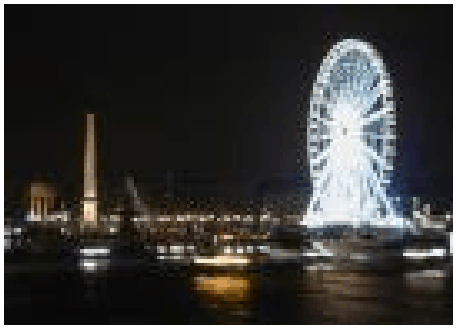
Animals are tricky to take pictures of because they rarely stand long enough in the position you want. When taking an animal shot you need to be aware of safety precautions and you need to plan ahead and have your equipment ready to shoot. Bring along lots of patience.

- Try taking pictures of parts of animals rather than the whole creature (eg. stripes on a zebra)
- If you want to show animal relationships go for a closer shot
- Arouse the interest of your subject by making a small sound
- Avoid the use of flash - instead use a fast film
- Try shots from different angles and heights
- If photographing small animals try having a human present to show the size of the animal



Wildlife Shots

Since most wildlife are both timid and fast, taking a picture of them requires quick reflexes, planning and perseverance. As a general rule, most animals come out early in the morning or late in the afternoon to feed, not at midday. Maybe take along food or seeds to attract them to the spot you want. Before you start looking for wildlife in any one spot, take a light reading so that you are prepared for the unexpected and will only have to quickly focus if something interesting comes across your path. Don't be afraid to get down on your stomach either. Not many animals are more than five feet tall. A telephoto (long) lens is useful if you are taking pictures of wild animals. It's important to keep your movements down to a minimum. Look for a location where you can set up your camera on a tripod in a spot that gives you clear visibility, natural cover to prevent your subjects from sensing your presence and keeps you a safe distance from any real danger. It's sometimes a good idea to wrap the camera in a dark blanket to prevent or muffle any sounds the camera makes. Wear earth tone clothing and cover bright metal objects to reduce reflections which may startle animals. Start photographing wildlife common to your area - mice, rabbits, raccoons or deer. This will give you experience in anticipating how other animals may behave.



Night Photography

For successful night photography you need a digital camera that allows you to keep the shutter open for a long time, anywhere from three to thirty seconds. Secondly, your digital camera (or other camera) needs to have a full manual mode and access to the full range of slow shutter speeds in that mode. This means that you need to be able to use the Auto, Program Auto, Shutter-Priority and Full Mode on your camera. Thirdly you will want your camera to have a self timer or a remote control. This will allow you to depress the shutter release button without introducing camera shake. A tripod is also necessary because when you have the shutter open for a long time you need to be able to keep the camera steady.

Human Photos

- When taking a picture of a person you can change the pose, lighting and the background to get many different effects. You need to stand at least 1m away from your subject. If you come too close the picture will look distorted.
- Always focus on the eyes of the subject. A person's face appears different depending on the angle you are looking at it from.
- Take the time to look at your subject from different viewpoints or move around your subject and choose the angle you think is most flattering.
- Get down to the same level as a baby or small child, if you take pictures from above they will appear shorter than normal.
- If you're taking a picture of someone sitting down try to avoid including his/her knees-they will be closer to the camera than the rest of their body
- If a background is much lighter or darker than your subject an automatic camera may set the right exposure for the background but under/over expose the subject
- Look what's behind your subject-you don't want a cluttered background

Keep it Natural

People should look relaxed and natural in portrait photos. You can do this by:

- ✓ photographing people in places that they know-like their home or garden
- ✓ sitting your subject in a comfortable chair and let them choose a natural sitting position so they look more relaxed
- ✓ talking to your subject, this will make them feel less awkward and they will smile naturally
- ✓ asking your subject to do something such as reading a book or working on a hobby-that way they'll forget about the camera
- ✓ taking two shots one right after the other - sometimes people relax as soon as the camera click is heard - you could get a more natural photo on the second shot

Small Groups

If you are photographing a small group, family or friends, it's not necessary to have to have them sit in a formal group. Try to arrange people so that their heads are at different levels - this makes the picture more interesting. You might want to use a tripod or rest your camera on something like a pile of books - you can then move people around to get the picture to look like you want it to without moving the camera. Get everyone's attention on the camera by calling or talking to them or use a signal such as whistling. While you have everyone together take more than one shot so you can choose the one you like the best

Candid

Good candid photos are rare. But everyone loves to catch that perfect moment- like when your friend opens their birthday present and is surprised. It takes patience, knowledge of your subject, quick reflexes and focussing skills-and lots of film. You can practice taking candid shots by just walking around with your camera for a period of time and snapping whatever interests you. The first thing to do is set your camera for existing light conditions so that when you are ready to take a shot you won't have to adjust your camera too much. Quickly check your composition before you snap but don't be afraid to take several pictures of the same scene.

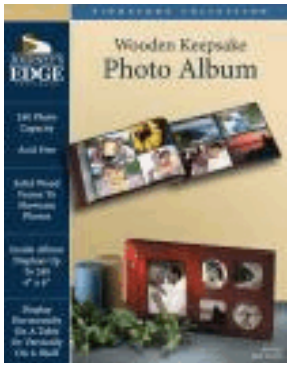
Panning

Panning (taking an action shot) takes practice before actually taking a picture. Smooth movement is very important. Choose a subject that is a repetitive motion, like a person passing by on a bike. Stand securely with your feet braced and slightly apart. Be prepared to pivot smoothly at the waist. Be prepared for the subject to move along. Focus as best as you can on the distance that the subject will be from you. Follow the subject with your camera as it moves along. Take the picture at the point that seems best to you. Remember to squeeze the shutter button, not jerk it. Continue to follow the subject even after you have pushed the shutter button so that the movement is smooth.

Shutterbug says: ***Know your flash range because pictures taken beyond the flash range will be too dark.***

Meeting 6

Tender Love & Care for Your Camera



Roll Call: Have you ever tried to clean your camera and what materials did you use?

Answer:

Cleaning Your Camera

Take good care of your camera. If sand or dirt get into it or you leave your fingerprints on the lens, the camera won't work properly and you won't be happy with the pictures you take. To keep your camera clean you need:

-a soft, clean cloth or camera lens-cleaning paper and

-a new, soft paintbrush or camelhair brush made especially for cameras

1. Using one of the brushes lightly brush the dirt off the lens or use an air blower
2. When all the dust is off the lens, gently wipe it with camera lens cleaning paper or a soft clean cloth
3. Open the camera back and use the brush to remove any dust or lint. Never touch the shutter.
4. Remove the batteries and with a clean cloth rub the battery contacts (metal ends of the battery) and the camera contacts (metal parts inside the camera that touch the battery ends). If there are any marks on the contact points use a pencil eraser to rub them off. Be sure to brush off the eraser dust.

WHEN IN DOUBT GET IT PROFESSIONALLY DONE

Protecting Your Camera

- ✓ Avoid lending your camera
- ✓ Carry it securely in a camera case or bag
- ✓ Protect it from children, pets, bumps and bangs
- ✓ If in a dusty environment keep in a ziplock bag
- ✓ If in rain put in plastic bag, with a whole cut out for the lens
- ✓ Label your camera with phone number and name
- ✓ Keep it from extreme temperatures
- ✓ When passing your camera to someone-use two hands
- ✓ Don't touch the lens
- ✓ If you are not using your camera very often take the batteries out and store them separately in a plastic bag

Care of Pictures

The first step in taking care of your pictures is to use good quality film and film processing. You need to keep all pictures away from pollution and fumes. Keep pictures away from fingerprints, spills and scratches by putting them into albums as soon as possible. Store the pictures out of extremes of temperature and humidity - this means no basements, attics or vehicles. You should also avoid writing on the back of pictures. But if you must, try using an archival quality pen or photo labelling pencil. Organize your pictures once you get them back from the developer so that the job doesn't get too big. When you mail a picture to someone try putting the picture between two pieces of cardboard. When framing a photo use matting so the photo does not touch the glass. Keep these photos away from direct sunlight or else they will fade. If gluing photographs make sure you use photographic glue so the picture won't be ruined.

Developing Your Own Photos

Needs adult supervision

Materials: developing tank
measuring cylinders
thermometer
film clips
film squeegee

There are many other items which are helpful to have but you could get by with the items listed above. You then need some chemicals, developer, stop bath and fixer, which all need to be mixed as per the instructions on the containers. Listed below are the steps required to develop your film.

- ✓ You need to load your film onto the developing tank spool in the dark. *This is the only part of the process that you need to carry out in the dark.*
- ✓ You need to have all your chemicals mixed and at the correct temperature (20 degrees C).
- ✓ You then pour in the developer for the required time, **allow for the time to pour in and out of the tank**, remember to agitate the tank as per the instructions.
- ✓ Pour in the stop bath for the required time, this stops further development of the image. Wash the film in water at 20 degrees C for 2 minutes
- ✓ Pour in the fixer for the required time. The fixer 'stops' the film from being sensitive to the light and *fixes* the image to the film.
- ✓ Wash thoroughly for the recommended time, usually 10 minutes. When washing you may remove the tank lid to see the results on the film.
- ✓ Remove the film from the tank and hang to dry in a dust free room (if possible!).

***Do Not* use a hair dryer to dry the film as this fires dust into the emulsion of the film and will destroy your negatives.**

Scrapbooking - The Newest Craze

Have you ever had a stack of photographs that you're not sure what to do with? Well scrapbooking is your answer. Scrapbooking supplies are available in a variety of stores these days and the possibilities are endless for creativity. Here are seven easy steps for making a scrapbook page.

1. Group photos in themes, select the best photos from events. You will need 3-5 pictures/page. Only choose pictures with great smiles and interesting details.

2. Select several different colours of paper that compliment the colours found in the photos.

3. Choose one photo to be the central highlight of the page with vivid, sharp colours.

4. Crop (cutting away unwanted blank spaces/distractions) your photos with scissors and cutting boards. Keep the shapes simple so they don't distract the viewer.

5. Add writing (journaling) to describe the event or maybe just label who is in the picture. This will help personalize the page. Include keepsake items like ticket stubs or other memorabilia.

6. Arrange the writing and pictures on the paper with backgrounds laid out. Experiment!

7. Add extras like stickers, rubber stamps or cut-outs to the page to make it more appealing! Add your imagination.

Tips and Tricks

- Always use acid-free ink and paper so the pictures will not fade over time
- Try creating an album for a 40th anniversary, birthday or field trip
- Try a ribbon border or writing someone's name as a border
- Try making a cloud border by ripping, folding and crinkling white paper and then gluing them on the outside of the page in the shape of clouds
- If doing a Christmas or birthday page try to save scraps of the wrapping paper so you can either use it as a background or put it behind one of the photos
- Make a page advertising 4-H or highlighting some of the club events

My Scrapbook

This book is like a comforter
A quilt with many parts
A keeper of our memories
A place to warm our hearts
The fabrics are our life's events
Those things we want to keep
The programs, cards and photographs
Placed here, not in a heap!
The scraps are stitches together
Held fast with love and care
They create a family legacy
A gift for all to share
-author unknown

Photography Log Book

Make sure to keep your log book up to date and detailed!

Date/Time	Subject	Comments

Photography Sources Page

Information obtained from:

Alberta 4-H Photography Project, copyright of the Alberta Government 2003 at http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/4h948?opendocument

Pieces of Science at http://www.fi.edu/pieces/myers/principles.html

Kodak Top 10 Tips for great Pictures at http://www.kodak.com/eknec/PageQuerier.jhtml?pq-path=317&pq-locale=en_US&pq-pf

CTLow's Photography Basics Beyond Snapshots at http://www.ctlow.ca/Photo/Photo.html

How Cameras Works at http://science.howstuffworks.com/camera.htm/printable

Camera Basics at http://www.azuswebworks.com/photography/ph_cam.html

How a Digital Camera Works at http://www.shortcourses.com/choosing/how/03.htm

How Photographic Film works at http://science.howstuffworks.com/film.htm/printable

TechGuide Digital Cameras at http://www.pctechguide.com/19digcam.htm

Photography Basics at http://www.andylim.com/photo/

Photoxels Night Photography at http://www.photoxels.com/tutorial-night-photography.html

Scrapbooking at http://scrapbooking.about.com/

Scrapbooking Basics at http://www.creatingkeepsakes.com/scrap/basics/

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Google composition pictures at http://images.google.ca/images?svnum=10&hl=en&lr=&c2coff=1&q=composition+photos

Google cluttered background photos at http://images.google.ca/images?svnum=10&hl=en&lr=&c2coff=1&q=cluttered+background+photos

Google framed pictures at http://images.google.ca/images?svnum=10&hl=en&lr=&c2coff=1&q=+framing+photos

Google old camera images at http://images.google.ca/images?svnum=10&hl=en&lr=&c