~The Art of Photography~
Volunteers' Guide

Club Volunteers' Guide

Welcome to the wonderful world of photography! This book and the member's guide give a comprehensive look into how cameras work and how to take the best photographs depending on the subject and conditions. The goal of this project is to increase awareness of photography and to learn by doing the activities and assignments that demonstrate certain concepts. In each meeting there are suggested time allotments for the activities and topics - these are just optional guidelines - the timing will depend on the size of the group and the age of the members. Encourage the members to continually keep taking pictures and record the information in their log book (photograph record book at the back of their manuals). There are also suggested tours or speakers for certain meetings. A planning chart has been provided for you to organize the club. Extra information is provided at the back of the manual on most topics in case you are interested in learning about the topic more thoroughly or in case members have more in depth questions - it also gives you a better grasp of the topic! Make sure to look at the 'meeting at a glance' first and then organize your meeting around that based on time and financial restrictions. Take time each meeting to take several photographs and experiment with the new techniques learned and also take time to analyse the pictures taken at previous meetings.
The topics covered in this project are:

- where the camera came from and how it works
- types of film and how they work
- types of photography - black & white
- what the camera and the viewer see
- composition and focussing
- digital cameras - how they work, history, resolution, storing, printing
- types of lighting, flash, exposure controls
- taking the best landscape, animal and human pictures
- cleaning your camera, scrapbooking and preserving photos

As a club volunteer your responsibilities are to:

- ✓ have a membership list made with fees collected (if applicable) by the end of the second meeting
- ✓ review project material in both members' and volunteers' guide, familiarize yourself with material and adjust the information to the age group
- ✓ arrange your own schedule using 'meeting planning chart' and participate in each club meeting, achievement program and activities
- ✓ attend a volunteer training session

Materials Needed for Club

Meeting 1
- pictures of cameras from magazines or flyers
- examples of different films
- magazines/colouring books
- safety pins

Meeting 2
- paper and pencil
- empty picture frame
- overhead transparency with four corners drawn on it
- digital camera (if possible)
- elastic bands
- small compact mirror
- camera
- darkened room
- flashlight
- picture from a magazine divided and cut into thirds
- coat hanger/fence wire

Meeting 3
- object (film canister, camera bag, film negatives)
- paper bag
- computer (if possible)
- old film negative strips to cut up into single negatives

Meeting 4
- pencil
- paper
- object (stuffed toy)
- flashlight
- light metre (if possible)
- light coloured fabric/Bristol board
- old cameras that use various kinds of flash bulbs (or ask members to bring)

Meeting 5
- dictionary
- empty film canister
- camera

Meeting 6
- empty film canister (3-4)
- old jar rings
- 4 photos to judge

Cost of Developing Photos: local supermarket - 24 colour exposures /$5.99 + tax, black and white film - 24 exposures /$5.49 +tax, 400 film speed $4.99 + tax
Wal-Mart - 24 colour exposures /$5.97 + tax, black and white film - 24 exposures /$5.43

Meeting Planning Chart

Meeting and Date	Supplies to be Purchased	Guest Speakers or Tours	Location	Activities that Will be Done

Below is some information on how to properly run meetings

Information on Parliamentary Procedure

- set of rules used to conduct a well organized meeting
- may be used in meetings to make decisions or simply to run the meeting
- saves time and eliminates confusion if done correctly

Motions

- procedure to have a topic discussed and recorded
- any member may make a motion for their idea or plan
- the member raises their hand then addresses the chairperson/president/person in charge
- the member is then called upon to speak, whereupon they state “Mr./Ms President, I move that...”
- another member must now state “ I second the motion”
- the president will now state the motion, debate or discussion will take place, the motion is put to vote and the results are announced

Nominations

- members help choose the officers for their club by formally presenting the name of a candidate to the club for a position to be filled
- candidate is referred to as the nominee
- chairperson must call for nominations by saying “Nominations are now open for the position of..”
- before closing nominations the chairperson must call for any additional nominations three times

Two types of nominations that could be used:

1. From the floor: chairperson asks for nominations, after the member has been addressed they will state the name and position to be filled, the name is written down
2. By Written Ballot: each member writes down the name of a member they would like to nominate and the results are read by the chairperson

- chairperson must ask if the nominee is willing to have their name stand for the position
- chairperson must call for any additional nominations, if there are none then they will declare that the nominations are closed

Elections

- nominations are closed and now the club can vote on the names by ballot or by show of hands (if this is done have nominees leave the room)
- vote for each position separately
- if there is only one person nominated for a position then the chairperson asks for a show of hands in agreement that the candidate be declared a unanimous decision

Executive Duties

President

- oversees all actions from organizing and running meetings to payment of bills
- acts as the chairperson of the meetings
- needs to remain impartial to all discussions held

Vice-President

- learns duties of the president so they may act as chairperson
- helps with preparation of each meeting agenda and assists other members
- attends to special guests
- conducts meetings in absence of president

Secretary

- assists the chairperson in preparing meeting agendas
- prepares minutes for each meeting
- deals with all correspondence and records
- notifies members of special meetings
- calls meeting to order
- keeps list of members
- has all papers and information available to everyone in the club
- prepares reports for the club

Press Reporter

- publicizes any upcoming events in the local newspaper or in the 4-H Association Newsletter
- takes notes at general meetings and sends these highlights on to 4-H Ontario
- organizes committees to help publicize any 4-H events
- keeps a scrapbook of photo clippings of the club and its members

Treasurer

- collects dues for any special events
- keeps a record of any financial matters of the club including receipts, bank statements and invoices
- deposits funds in the bank
- acts as one of the signing officers on all cheques

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
5. New business
6. Announcements
7. Adjournment of business meeting
8. Club program
9. Games and/or refreshments

If you have any more questions take a look at the 4-H Ontario Parliamentary Procedure Guide for more information (check your local association for this manual) or contact 4-H Ontario at:

4-H Ontario
5653, Hwy. 6 North
RR 5, Guelph, ON `N1H 6J2
Phone 1-877-410-6748

Meeting 1 "The Beginning of the Camera"

Meeting at a Glance -'TimeWise' Sample

7:00pm: Introduction
7:20pm: *Initials introduction* activity
7:35pm: *Who's your other half* activity
7:45pm: History of photography
7:50pm: What makes up a camera
8:05pm: *Pin the tail on the camera* activity
8:20pm: Types of film
8:30pm: *What's your sign* optional activity or *categorize your camera* activity
8:45pm: *Brainstorming warning in effect for all parts of this meeting* activity

Introduction to Club

Time: 20 minutes

1. At the beginning of the meeting have introductions of club volunteers and members
2. Have the members recite/read the 4-H Pledge from the manual or an enlarged copy
3. Give a brief summary of what the club covers, requirements, length of club etc.

Club requirements that **must** be met by each member are: attending 2/3 of meetings, attending achievement program. Some additional requirements may include filling in any blanks in the manual, completing the photo log book, completing all activities and one special project

4. Discuss planned tours, fill in meeting schedule
5. Talk about 4-H Opportunities and upcoming events
6. Explain the positions of the executive club members
7. Elect an executive
8. Discuss achievement program ideas you may have and have the members come up with some

Safety Issues to Discuss:

- ✓ think and plan before you take a picture
- ✓ avoid startling animals or large groups of people
- ✓ wear clothing that won't catch on anything and tie your hair back

Tips on How to Have a Great Meeting

- ✓ make 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

Meeting 1 Activities

Introduction (20 minutes) see previous page for example

Initials Introduction Activity (15 minutes)

Each player writes their initials at the top of a sheet of paper. Papers are collected and redistributed so that no one gets their own. Using the initials, each person answers the following questions that are read aloud. For example if the initials were H.H. the answers would be like this:

1. What does this person remind you of? (Happy Humbug)
2. How old do they look? (Half a Hundred)
3. What is their chief charm? (Happy Humming)
4. What is their chief wickedness? (Hooking Hats)
5. What is their chief hobby? (Highjumping Hugh)
6. What is their main hope in life? (Happiness & Health)

Share the answers with the group

***"Who's Your Other Half" Introductory* Activity** (10 minutes)

Need: magazine or catalogue pictures of cameras

Cut pictures of cameras in half and give a half to each member. Have the members find their match and have them sit together and begin chatting about where they are from, their favourite food and if they have any hobbies.

History of Photography (5 minutes)

Refer to Members' Manual for information

Refer to extra information in back of manual

What Makes up a Camera (15 minutes)

Refer to Members' Manual for information

Refer to extra information in back of manual

Who's Your Other Half Activity: cut these pictures in half for the group activity

'Pin the tail on the Camera' **Activity** (15 minutes): cut out the following titles and have members pick them from a hat and then point to that item on their camera.

Battery

Viewfinder

Film Frame Counter

Flash

Film speed Dial

Shutter

Lens

Aperture

Types of Film (10 minutes)

Refer to Members' Manual for information

Refer to extra information in back of manual

Need: examples of different films from film supplier

Explain that film is like an empty bucket being filled up slowly as more pictures are being taken and light is exposed to the film. The 'size' of the bucket depends on the type of film speed. Slow film is like a big bucket because it needs lots of light to fill it for a picture. Fast film is like a small bucket because it only needs a small amount of light to fill it.

Demonstrate what various films look like and their uses

"What's your sign?" **Optional** **Activity** (15 minutes)

Need: magazines or colouring books, safety pins

Each member is given a magazine/colouring book and asked to tear out some symbol of their camera model. For example someone with a Fuji camera would cut out a Fuji apple or someone with a Canon could cut out a soldier. These are pinned on the front of each person and all members try and guess the model of the camera.

'Categorize your Camera' **Activity** (15 minutes)

Have the members sort their cameras into categories such as:

same manufacturer

same resolution

same size

"Brainstorming warning in effect for all parts of this meeting" **Activity** (15 minutes)

Have members brainstorm all different types of photography and discuss what they are. May also discuss different occupations in photography.

Answers:

- aerial
- art photography
- advertising/studio
- documentary/journalism
- macro (close-up)
- micro and scientific
- outdoor and travel
- people/portraiture
- sports

Meeting 2 - What's in a Picture

Meeting at a Glance-'TimeWise' Sample

7:00pm: *I'm Dreaming of...* activity
7:10pm: Black and white photographs
7:20pm: What the camera sees
7:30pm: *Framed* activity
7:35pm: Parallax error
7:40pm: *Fix that parallax* activity
7:45pm: Focussing
8:00pm: *Steady camera* activity
8:10pm: Tripods
8:15pm: What the viewer sees
8:35pm: Depth of field
8:40pm: *The art of seeing* activity

Introductory Business

President will begin meeting by having everyone stand and recite the 4-H Pledge

Secretary will read the minutes of the last meeting and will take attendance (Roll Call)

President will approve the minutes

Press Reporter may also read the report they sent to the newspaper

President will introduce speakers or will hand the meeting over to leader(s)

Suggestion Corner

Suggested Tour: Visit your local photo lab and ask them to explain developing film in black and white and in colour-often if members take a film they will allow the members to develop their own film

Suggested Tour: Visit a local high school that does photo developing and try and to arrange for the members to develop their pictures in a dark room

Suggested Tour: Contact the local camera club and see if someone could speak on film development or if you could tour their dark room

Suggested Tour: Contact a local college regarding film development

Meeting 2 Activities

***I'm Dreaming of...*Activity** (10 minutes)

Need: 1 paper and 1 pencil

This is an imaginary picture that the members are describing. One member writes down on a piece of paper (8.5" x 11") an adjective which could describe a picture. The paper is then folded about 1" and passed along with the pencil to the next player on the right. The next player will write a time of day, the next player will write a comment about the picture, folds the paper again until the following items are written down in order:

-adjective describing a picture

-a time of day

-where they met, who is in the picture

-what they did, what happened

-what they said

-the consequences

-what the world said

At the end read the list aloud for the members. Words may be inserted to give the story continuity. At the end you should have a full description of an imaginary picture. You could also have a member try and draw the picture (optional).

Black and White Photographs (10 minutes)

Have the members show the black and white pictures they took as well as the colour photos and compare and comment on the pictures.

Refer to Members' Manual for information

Refer to extra information in back of manual

What the Camera Sees (10 minutes)

Bring in some pictures to show examples of cluttered backgrounds and cut off heads etc. so the members can see examples

Framed Activity (5 minutes)*:* Hold an empty picture frame up to demonstrate that what is seen through the frame would be what is seen in a photograph.

The Parallax Error (5 minutes)

Fix that Parallax **Activity** (5 minutes): Take an overhead transparency, draw four corners on it and have the members practice getting everything in the frame. Also if someone has a digital camera have members practice with it. Have them turn on the screen afterwards and view their picture to see if they have all objects in the frame. Show members that when they look through a viewfinder that is on the left of the camera resulting in the shutter being in the middle, they need to adjust where they are taking the picture from.

Focussing (15 minutes)

Steady Camera **Activity**
Camera Steadiness Test (10 minutes)

Need: elastic bands, small compact mirror, camera, dark room, flashlight

Using elastic bands, secure a mirror to the front of a camera lens with the mirrored surface facing out. Have a member hold the camera up to his or her eye as if about to take a picture. In a darkened room, have another member shine the flashlight into the mirror so that the mirror reflects the beam onto an adjacent wall. If the member is holding the camera steady, the spot on the wall should not move. Then have the member press the shutter release as if taking a picture. (The camera should not be loaded with film). Again the spot on the wall should not move.

Tripod (5 minutes)

Refer to Members' Manual for information
Refer to extra information in back of manual

What the Viewer will see (20 minutes)

Refer to Members' Manual for information

Activity*:* take a magazine picture and ruler it into a tic-tac-toe box (ie. 9 blocks) cut it apart. Put the pieces in a bag, have the members pick out pieces and reassemble the picture. As a group identify where the major interest points are.

Depth of Field (5 minutes)

Refer to Members' Manual for information

Refer to extra information in back of manual

The Art of Seeing **Activity** (20 minutes)

Need: coat hanger or fence wire to make a hoop

Sometimes we need help to see new possibilities for pictures. Sometimes we need to break the rules. Either one of these exercises should help refresh your eye.

1. Straighten a wire coat hanger or use a length of fence wire and make a hoop. Go outside and toss the hoop on the ground. You must take twelve pictures of whatever is inside the hoop. Don't be afraid to jump up and down as you release the shutter, lie on your stomach, stand on your tiptoes, and focus right down to the smallest depth of field possible. Explore the possibilities.

2. Go out the door of your meeting room. Take twenty six steps in any direction. Snap at least twelve pictures from that spot. You may stand up, sit down, lie down, turn around or whatever you like - don't be afraid to stretch the rules.

Photo Activities for Meetings: Have members demonstrate their new knowledge by taking digital photos with the focal point in each of the four strategic points. These may be printed from a computer or they may be developed.

Note: black and white photographs are usually about the same price to develop at your local photolab. For example 24 exposures 1 hour service at Zehrs = $5.99

Meeting 3 - The World of Digital

Meeting at a Glance-'TimeWise' Sample

7:00pm: Introductory business
7:10pm: *What is it* activity
7:20pm: Beginning of digital cameras
7:25pm: Digital camera technology
7:40pm: *Lights, camera, action* activity
7:55pm: Resolution
8:10pm: Printing pictures from your computer
8:15pm: Storage on your computer
8:20pm: When you shop- look out
8:35pm: *Spin a tale* activity
8:55pm: *Word association* activity

Introductory 4-H Business

Reminder

1. President will begin meeting by having everyone stand to recite the 4-H Pledge
2. Secretary will read the minutes of the last meeting and will take attendance (Roll Call)
3. President will approve the minutes
4. Press Reporter may read the report sent to the newspaper (optional)
5. President will introduce speakers or will hand the meeting over to leaders

What is it? **Activity** (10 minutes)
Place a hidden object in a paper bag in the centre of the room. Members take turns asking questions about what is in the bag. Questions may only be answered by a "yes" or a "no" and they try and obtain the answer in twenty questions. Examples of items could be: film canister, camera bag, digital camera, film negatives.

The Beginning of Digital Cameras (5 minutes)
Refer to Members' Manual for information
Refer to extra information in back of manual

Digital Camera Technology (10 minutes)
Refer to Members' Manual for information
Refer to extra information in back of manual

Lights, Camera, Action **Activity** (10 minutes)

All members sit in a circle and one person stands in the centre without a chair. Each person is labelled either lights or camera and when they hear their title called they have to get up and move to a different chair. The person in the middle calls lights, camera or action. When "Action" is called everyone has to get up and find a different seat. The object of the game is for the person in the middle to find a different seat and someone new be put in the centre.

Resolution (15 minutes)

Refer to Members' Manual for information
Refer to extra information in back of manual

Printing Pictures from your Computer (5 minutes)

Refer to information found in Members' Manual

Storage on Your Computer (5 minutes)
Try to have the meeting at a location where there is a computer so you can show members how to do this activity.

When You Shop Look Out (15 minutes)

Refer to information found in Members' Manual

If someone has a digital camera have them go through the diagram on how to use a digital camera.

Spin a Tale Activity (20 minutes)

Need: many old film negative strips cut into single negatives

Using old film negatives have the members create a story about the event that is pictured in the negatives.

Word Association Activity (5 minutes)

Seat participants in circle formation, and direct game in clockwise or counter clockwise direction.
First person names an object. Second person names a word which comes to mind about that word etc. etc.

example: 1st person said 'camera'
2nd person said 'aperture'
3rd person said 'events'

Meeting 4 - Lights, Camera, Action

Meeting at a Glance-'TimeWise' Sample

7:00pm: Introductory business
7:05pm: *Artist in the dark* activity
7:20pm: Lighting
7:45pm: Light meters
7:50pm: Flash
8:10pm: Exposure controls, shutter, more on composition
8:25pm: Perspectives
8:40pm: Shape
8:45pm: *Noisy barnyard* activity

Introductory 4-H Business Reminder

1. President will begin meeting by having everyone stand and recite the 4-H Pledge
2. Secretary will read the minutes of the last meeting and will take attendance
3. President will approve the minutes
4. Press Reporter may also read the report that was sent to the newspaper
5. President will introduce speakers or will hand the meeting over to leaders

Suggestion Corner

Suggested Places to Tour***:*** try going to a professional photography studio to see the different types of lighting they use and what they find works best for them.

Artist in the Dark Activity (approx. 15 minutes)

Need: pencil and paper for each member

Turn out the lights and give directions for the picture the members have to draw, a bit at a time, for example: 'draw a swimming pool with a tree in the background' then when they say they have finished that 'Now draw a man diving from the diving board' 'Now a girl watching him' 'A bird sitting in the tree and so on. Then turn the lights back on to see what everyone has drawn.

Lighting (25 minutes)

Go through the material in the Members' Manual, discuss the pros and cons of each lighting technique and ask members if they've used any of these techniques and if they like/dislike it.

Activity: Place an object on the floor or on a stool***.*** Then take a flashlight and place it in different locations and note the effect of shadows. Practice front lighting, back lighting, side lighting, top lighting. Also try a fill flash.

Light Meters (5 minutes)

Refer to Members' Manual for information
Refer to extra information in back of manual

Try to show members a camera light meter and then go over the material in the manual

Flash *(*20 minutes)

Refer to information found in Members' Manual

Find old cameras that use various kinds of flash bulbs to bring to show the members.

Activity (if applicable)**:** For practice try having a person close to you and using a flash, then have them ten steps away from you and use the flash again to determine the range of your flash.
Have a light coloured piece of fabric or a Bristol board reflecting light towards your subject. This demonstrates the situation where you need more light but no flash is available.
Practice with your flash by having people wear hats or standing in front of a window.

Exposure Control, Shutter, More on Composition (15 minutes)

Refer to information found in Members' Manual

Activity (if applicable): If someone has a camera with manual shutter control or manual aperture size control, try playing sports and taking pictures by changing the shutter and aperture speed.
Perspectives (15 minutes)

Refer to information found in Members' Manual

Have the members fill in the diagrams

Club volunteer should make examples for aerial, diminishing, and shape perspectives as well as balance and contrast this can be done with magazine photos or actual photos(if available).

Suggestion or activity: have members prepare a Bristol board display showing the above perspectives. This could be shown at the achievement program or displayed at the local fair

Shape (5 minutes)

Refer to information in Members' Manual

The Noisy Barnyard **Activity** (15 minutes)

The farmer in the barnyard must be a good storyteller. The other members are assigned animals. The members must act and sound like an animal when their name is read out in the story. Each member gets an opportunity to photograph one other member being a barn animal during the story. This is an opportunity for the member to get experience taking action shots.

Meeting 5 –

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

Meeting at a Glance-'TimeWise' Sample

7:00pm: Introductory business
7:05pm: *Dictionary time* activity
7:20pm: Landscape and snow pictures
7:35pm: Planning landscape shots
8:00pm: Photo animals and wildlife shots
8:10pm: Night, human photos, keep it natural, small groups, candid and panning
8:40pm: *Who has it* activity
8:55pm: *Find it* activity

Introductory 4-H Business Reminder

1. President will begin meeting by having everyone stand and recite the 4-H Pledge
2. Secretary will read the minutes of the last meeting and will take attendance
3. President will approve the minutes
4. Press Reporter can also read the report that was sent to the newspaper
5. President will introduce speakers or will hand the meeting over to leaders

Suggestion Corner

Tour suggestions: try having an outdoor excursion to take landscape pictures, go to the local zoo or an animal farm

Speaker suggestions: person who takes animal/landscape pictures for a business like a magazine photographer, an animal calendar photographer or a professional photographer

***Dictionary Game* Activity** (15 minutes)

Need: dictionary

One team looks up a very unusual photography term in the dictionary. Each member of the team then gives a definition of this word. One of the meanings is the correct one. The other team has to decide whose answer is correct. The points are scored when the team guesses the correct answer. Several examples are: icon, gesture, albumen print, ambrotype, cyanotype, tintype, stereograph

Landscape and Snow (15 minutes)

Refer to Members' Manual for information

Planning Landscape Shots (25 minutes)

This next activity may be suggested to the members as something to do at home or it may be used as a theme for the meeting.

Home 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)
- ✓ pick a theme and take photos depicting that theme (i.e. barns, stores, flowers etc.)

Photographing Animals and Wildlife Shots (10 minutes)

Refer to information found in the Members' Manual
Complete the activities suggested in the Members' Manual or just photograph different animals in the area

Night Photography, Human Photos, Keep it Natural, Small Groups, Candid, Panning (30 minutes)

Refer to information found in Members' Manual

Activity

TRY these photo ideas with your members or have them brainstorm some of their own

- ✓ a day in the life of a pet - what's included in a normal day for the pet?
- ✓ animals at work
- ✓ animals at play
- ✓ animal babies
- ✓ animals in the wild
- ✓ personalities of animals - silliness, strength, energy

Who has it **Activity** (15 minutes)

Need: empty film canister

The empty film canister is passed around the circle. 'It', who stands in the centre of the circle, is given five chances to select the player who has the object as it is being passed around the circle. If he/she is not successful in discovering the object in five guesses someone else is selected to take their place. The canister is passed in the following manner: All players start with their own hands together, cupped with the left hand over the right. On the signal 'apart' they stretch both arms sideways (hands clenched, the left hand still having the knuckles up and right knuckles down) to the players on left and right. On the next signal 'together' each player brings their own hands together. Before starting the game it's best to practice the rhythm 'apart-together'

Find it **Activity** (5 minutes)

Need: camera or other object to hide

An object like a camera or film canister is placed in full sight in an unusual location in the room, while 'It' tries to find the hidden object. He/she is guided by the group who sing/clap loudly when "hot" or near the object, and softly when "cold" or some distance from it. After the object is located someone else is selected to be "It".

Club volunteer may want to:

Try: to get a panoramic film and film different horizon pictures

Try: panning by having someone run in front of the camera or an animal (for example a dog) running after a toy ball

Try: taking a candid picture and then a formal picture and then have the members comment on them at the next meeting

Meeting 6 - Tender Love and Care for your Camera

Meeting at a Glance-'TimeWise' Sample

7:00pm: Introductory business
7:05pm: *Ring it* activity
7:10pm: Cleaning your camera
7:25pm: Protect your camera, care of pictures, developing your own photos
7:40pm: *Judge it* activity
7:55pm: *Digital versus film camera* debate activity
8:05pm: Scrapbooking-the newest craze
8:20pm: Planning the achievement program

Introductory 4-H Business Reminder

1. President will begin meeting by having everyone stand and recite the 4-H Pledge
2. Secretary will read the minutes of the last meeting and will take attendance
3. President will approve the minutes
4. Press Reporter may also read the report that was sent to the newspaper
5. President will introduce speakers or will hand the meeting over to leaders

Suggestion Corner

Tour Suggestions***:*** visit your local camera shop to see a demonstration on cleaning a camera or have a professional photographer demonstrate how they clean their equipment

Guest Speaker Suggestions: have a professional scrapbooker come and speak/demonstrate to the club about preserving photographs or try getting an archivist from a local museum to show what techniques they use. Have the members bring six pictures of an event and then during the meeting have them design a page to be entered into their local fair or as part of the county scrapbooking competition. They may also be used at your achievement program.

***Ring it* Activity** (5 minutes)

Need: empty film canister, old jar rings (to toss over canister)

Have empty canisters laid out and have the members try and throw jar rings over them by standing a fair distance away from the canisters.

Cleaning Your Camera (15 minutes)

Refer to information found in Members' Manual - if you feel confident about cleaning your camera try demonstrating to members

Protecting Your Camera, Care of Pictures, Developing Your Own Photos
(15 minutes)

Refer to information found in Members' Manual

***Judge it* Activity** (15 minutes)
Have a selection of four photos that the members can have an opportunity to judge. Refer to Judging Toolkit for rules and other information. Have one member give reasons**. If you would like judging cards look in the back of the extra information section.**

***Digital versus Film Camera* Activity**: Have a fun debate! Debate the quality of digital camera versus a traditional film camera.

***Scrapbooking-the Newest Craze* (**15 minutes)

Refer to Members' Manual for information

Planning Achievement Program (45 minutes)

Achievement programs are very important to show the public and parents what your members have gained through this project and to display their accomplishments. As well it may increase awareness of 4-H and provide an opportunity to recruit new 4-H members and volunteers! It can create self-confidence within the members as they have to practice their public speaking in front of a group or in their demonstrations.

Achievement Program Ideas

- Have your club enter a photography competition to showcase what they have learned and accomplished
- Enter photos in a local fair
- Visit a photo club/show
- Have a professional photographer comment on the members' photos and offer suggestions for improvements
- Compile pictures which show: texture, perspective, repetition, line diminution, panning, symmetrical and asymmetrical photos
- Memory competition: take photos, design and create a photo page. It could be a weekly, monthly or one time competition. It could be the member's choice of theme, or could be a designated theme for the month
- Scrapbooking workshop
- Compile a photo history of your 4-H group or county
- Have a professional discuss how to preserve or copy heritage photos
- Visit a newspaper re. Use of photos in the paper or magazine. Learn any special tips for press coverage

Topics Covered in more Depth

Below you will find additional information on several of the meeting topics

Meeting One

History of Photography

Additional Information:

Photography became publicly known in the year 1839. Camera obscura as it was called back in the Renaissance era was popular among artists who used it to trace the image projected by light through a tiny hole. The first successful permanent photograph was produced by Louis Daguerre. He was able to capture the picture on a silver-coated sheet of copper using his 'positive image' Daguerreotype process and he called the photo "the Artist's Studio". His process was very difficult and many other people had a hard time reproducing this process. Therefore a new photo developing process had to be invented. William Henry Fox Talbot's Calotype process used light sensitive paper and produced a 'negative image' that could be used to produce positive prints. But with both of these processes it took a long time to take the picture so therefore taking pictures of people was out of the question because no one could sit that long! Many of the first pictures were of landscapes. However by 1840 the process had improved and soon everyone wanted their family photographed.

Meeting 2

Developing Film: Black & White

When you take a roll of film to the photo processor it contains the latent images of the pictures that you took. These latent images must be amplified and stabilized in order to produce a color negative that can then be printed and viewed by reflected light.

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. Before we discuss the development of a colour negative film it might be best to step back and process a black and white negative. If you used black and white film in your camera the same latent-image formation process would have occurred except the silver-halide grains would have been sensitized to all wavelengths of visible light rather than to just red, green or blue light. In black and white film the silver-halide grains are coated in just one or two layers so the development process is easier to understand. Here is what happens:

In the first step of processing the film is placed in a developing agent that is actually a reducing agent. Given the chance, the reducing agent will convert all the silver ions into silver metal. Those grains that have latent-image sites will develop more rapidly. With

the proper control of temperature, time and agitation, grains with latent images will become pure silver. The unexposed grains will remain as silver-halide crystals.

The next step is to complete the developing process by rinsing the film with water or by using a "stop" bath that arrests the development process.

The unexposed silver-halide crystals are removed in what is called the fixing bath. The fixer dissolves only silver-halide crystals leaving the silver metal behind.

In the final step, the film is washed with water to remove all the processing chemicals. The film strip is dried and the individual exposures are cut into negatives.

When you are finished you have a **negative** image of the original scene. It is a negative in the sense that it is darkest (has the highest density of opaque silver atoms) in the area that received the most light exposure. In places that received no light the negative has no silver atoms and is clear. In order to make it a positive image that looks normal to the human eye it must be printed onto another light-sensitive material (usually photographic paper).

In this development process, the magic binder **gelatin** played an important part. It swelled to allow the processing chemicals to get to the silver-halide grains but kept the grains in place. This **swelling** process is vital for the movement of chemicals and reaction products through the layers of a photographic film. So far no one has found a suitable substitute for gelatin in photographic products.

Developing Film: Color

If your film is a color negative type the processing chemistry is different in several major ways:

The development step uses reducing chemicals and the exposed silver-halide grains develop to pure silver. Oxidized developer is produced in this reaction and the oxidized developer reacts with chemicals called **couplers** in each of the image-forming layers. This reaction causes the couplers to form a colour and this colour varies depending on how the silver-halide grains were spectrally sensitized. A different colour-forming coupler is used in the red, green and blue-sensitive layers. The latent image in the different layers forms a different coloured dye when the film is developed.

Red-sensitive layers form a cyan-coloured dye.

Green-sensitive layers form a magenta-coloured dye.

Blue-sensitive layers form a yellow-coloured dye.

The development process is stopped either by washing or with a stop bath. The unexposed silver-halide grains are removed using a fixing solution. The silver that was developed in the first step is removed by bleaching chemicals. The negative image is then washed to remove as much of the chemicals and reaction products as possible. The film strips are then dried.

The resultant colour negatives look very bizarre. First, unlike your black and white negative, it contains no silver. In addition to being a colour opposite (negative) the negatives have a strange **orange-yellow hue**. They are a colour negative in the sense

that the more red exposure the more cyan dye is formed. Cyan is a mix of blue and green (or white minus red). The overall orange hue is the result of **masking dyes** that help to correct imperfections in the overall colour reproduction process. The green-sensitive image layers contain magenta dye, and the blue-sensitive image layers contain yellow dye.

The colours formed in the colour negative film are based on the **subtractive colour formation** system. The subtractive system uses one colour (cyan, magenta or yellow) to control each primary colour. The additive colour system uses a combination of red, green, and blue to produce a colour. Your television is an additive system. It uses small dots of red, green, and blue phosphor to reproduce a colour. In a photograph the colours are layered on top of each other so a subtractive colour reproduction system is required.

Tripods

Tripod Heads

Tripods may have fixed or replaceable heads. Professional tripods usually have **replaceable heads** to allow you to choose the type of head and buy one appropriate in size to support your camera. Less expensive tripods for amateur use and some compact models come with a **fixed head**.

Pan and Tilt heads have two handles, one to move the camera from side to side and one to move it up and down. They are vital for movie work.

Ball and Socket heads are often more convenient for still photography. A large ball is needed to give easy and firm locking, especially with heavier cameras.

Tripods with fixed heads almost always have basic tilt and pan heads. Good quality or specialized tripod heads (such as those made for taking a precise series of exposures for a panorama) can be very expensive.

Always check your camera and lens on the head. Some tilt and pan heads in particular have platforms on them that may not allow some of your lenses to be fitted or prevent movement of zoom or focus rings.

Weight

Large heavy tripods give better stability and allow a greater range of camera heights but you are not likely to carry them far. Most photographers own several tripods, one for use in the studio or on location close to a vehicle and a more lightweight model when they need to carry one any distance.

Tubular or **closed section** legs are generally stronger than **open channel** legs but are also usually heavier.

Lightweight tripods tend to give only limited stability to your camera but you are more likely to take them out with you. The most common tripod material is aluminium. New materials such as **carbon fibre** make tripods lighter but considerably more expensive. They are also better to handle in cold conditions.

Locking mechanism

As well as weight and size, a locking mechanism on the legs that is quick to use and locks firmly makes a tripod much easier to use. It makes sense to go to a store where you can try out tripods to make your choice unless you are familiar with a particular model. Some may prefer a lock that clicks and unclicks easily to allow free movement enabling one to rapidly collapse a tripod by freeing all locks and turning the tripod upside down

Centre column

Centre columns on less expensive tripods are often too long and too flimsy to provide firm support when raised more than a few centimetres. **Geared columns** are seldom an advantage and usually prevent the column from being reversed (useful for working close to the ground). There are some tripods of a more complex design that are more flexible allowing swivelling of the centre column; worth considering if you often need to work at low level.

Feet

Most tripods come with adjustable feet to allow a rubber support on hard surfaces and a spike for soft ground. It should be easy and quick to change between the two.

Quick release fittings

These consist of a plate left permanently screwed into the tripod thread of your camera which fits a quick release holder held permanently by the tripod screw on the tripod head. You push a lever while lowering the camera and plate onto the head and let go to lock it. These are extremely useful where you need to use a camera both on and off the tripod but an unnecessary complication if you are able to leave the camera fixed to the tripod throughout a session.

Meeting 3

Resolution

When you work with bitmap images like digital photographs you work with pixels. A pixel (short for "picture element") is the smallest unit in a computer image or display. Every image on your computer is made up of a colored grid of pixels.

Your digital camera records pixels, your scanner converts physical images into pixels, your photo editing software manipulates pixels, your computer monitor displays pixels and your printer paints pixels onto paper. In the digital world, "inches" or "centimetres" don't exist, only pixels do.

The key to successfully editing, scanning, and printing images lies in understanding how pixels transform into inches and vice versa. **Resolution** is the interpreter between the physical world of inches and the digital world of pixels. When you scan an image, the scanner translates inches into pixels using resolution. When you print an image the printer translates pixels into inches using resolution. So what's resolution? Unfortunately the word is used in different ways in different contexts. "Camera resolution" usually means something slightly different from "image resolution" and "printer resolution" is something else yet again.

Resolution allows you to transform pixels into inches and vice versa.

The Two Faces of Resolution: Before we go over specific types of resolution let's cover the two basic ways the term resolution is used. In some contexts resolution refers to the *pixel count* of an image. An image with lots of pixels is often called a "high resolution" image. But in other contexts resolution refers to the *density* of pixels in a given linear area such as an inch. This "density" is expressed as ppi (pixels per inch) or dpi (dots per inch) and this density number is embedded invisibly in a bitmap image as an instruction to output devices such as a printers. For clarity we will refer to the first type of resolution as **pixel count resolution** and the second as **embedded resolution**.

What is the difference between pixel count resolution and embedded resolution?

Embedded resolution tells your printer how far apart to spread the pixels in a printed

image. It determines how "fine grained" the printed image will look. It is completely independent of the pixel count of the image. A high-pixel-count image can have a low embedded resolution or vice versa. Embedded resolution is inversely proportional to the size of the printed image. Given the same pixel count a high embedded resolution will result in a smaller printed image (the pixels are packed together more tightly) and a low embedded resolution will result in a larger image (the pixels are more spread out).

Embedded resolution however does not affect the size (in bytes) of your image or its appearance on a computer screen. Those properties are determined solely by the pixel count. The byte-size of the image file is directly proportional to the pixel count as is its size on your computer screen which simply displays all the pixels in the image in a fixed one-to-one grid.

*What is the difference between **ppi** and **dpi**?* The term **ppi** (pixels per inch) originated in the world of computers and **dpi** (dots per inch) in the world or printing but today they are often used interchangeably.

What is my camera's resolution? A camera's resolution is usually defined as the number of megapixels (or millions of pixels) that it can capture in a single photo. This is obviously a *pixel-count* resolution. Most digital cameras capture images on a CCD (charge coupled device) sensor. The camera's resolution is calculated by multiplying the number of pixels along the length and width of the sensor. Contemporary cameras typically capture between one million and six million pixels per image.

A two-megapixel camera operating at maximum resolution will create an image that has about two million pixels. However, most cameras offer at least three different pixel-count settings for taking pictures with varying degrees of quality. At lower settings the camera reduces the number of pixels to create a smaller image that requires fewer bytes to store in memory.

Which resolution setting should I choose when I take a picture? It depends on what you want to do with the picture. Do you want to e-mail it to friends, post it on a web site, make it your computer's wallpaper, print it as a 4" x 6" photograph or create a poster-sized print? For images that will be viewed on a computer monitor (such as those you send by e-mail or post to the web), a low pixel-count setting is perfectly adequate. Since most people view images on monitors that display only 800 x 600 pixels a low pixel-count image such as a 600 x 400 photograph will fill up most of their screen without running off the edges. A low pixel-count setting will also reduce the file size of the image and reduce time it takes others to download or display your image.

Meeting 4

Light Meters

The Neutral Gray Standard: All light meters, regardless of the type, are designed to measure light in a consistent way. Light meters presume all subjects are of average reflectance or a neutral gray—often called “middle” gray because it falls in the middle of the zones between pure black and pure white. In the Zone system of exposure this middle gray is known as Zone V.
The use of the neutral gray standard allows a reflected light metre to give correct readings for “average” subjects in “average” lighting situations. Light meters however, can’t see subjects and interpret them the way you can — they measure only one thing: the intensity of light. Fine if you’re photographing a medium gray man in a medium gray suit on an average day — but not entirely accurate in other situations.

Using Reflected Measurement: Hand-held reflected light meters (including built-in camera meters) read the intensity of light reflecting off the subject. Because they measure the light after it hits the subjects, however, they are affected by the reflectance of the subject’s surfaces as well as those of the surrounding background. If you’re photographing a person walking on a sandy beach on a bright day, for instance, the light reflecting off of the sand will overwhelm the reading and result in an underexposed image of the person.

A reflected metre will provide different readings for say, a white cat and a black cat—but it will provide an exposure that records both as the same middle gray. Similarly, fresh fallen snow and a black coal field will be recorded as the same colour: medium gray. A reflective meter will also record a red apple and a green apple as the same tone even though in reality they reflect vastly different amounts of light. You can improve the accuracy of your reflected readings by placing an 18-percent neutral gray test card in front of the important subject areas. But that’s not always practical.

4-H Photography Scorecard

Exhibitor's Name:

Judging Criteria	Points Scored
1. Quality-done well	
2. Level of Interest	
3. Composition	
4. Used rule of thirds	
5. Good use of balance	
Total	