What ground will we cover?

- Technique
- Lighting
- Composition
- Basic editing
- Documenting/Illustrating/Telling a Story
- Using Smartphones as Cameras
- OnLine Resources
While written for 4-H youth, this is a great guide to understanding the basics of photography.
Keep It Steady, Keep It Level

What can you do to get sharp pictures? Practice some ways to keep the camera steady and level.

Hold your arms against your sides and the camera against your face. When your camera is steady, your pictures will be sharper.

Use your elbows as braces. This will hold your camera steady.

Photo Shoot

Take photos of objects that do not move. Find a bicycle, a flower, or a stuffed animal.

1. Hold the camera with both hands. Keep your elbows close to your body. Stand with your legs slightly apart. Hold your breath. Gently squeeze the shutter.
2. Get down on your stomach and make a body-tripod with your elbows.
3. Find other braces (fence, tree, parked car, side of building, or garage). Brace your camera and shoot.

Effective photographs generally start with a level camera.
Here, the camera wasn’t level, and the Wisconsin River looks like a high gradient river. Rotating the image a few degrees counter clockwise and cropping it could solve that problem, but its less work if you get it right the first time.
That’s better.
Photography is all about light. The quality of light changes by the season, the weather, and the time of day. Most effective images illustrating your work should be well lit.
Despite being shot on a cloud, snowy day, this image is well lit. The overcast actually helped to show detail in white snow, which can “blow out” in direct sunlight.
This image makes effective use of the morning sunlight to highlight the Tom’s head and breast.
Sometimes, silhouettes can be effective. Here are flights of Sandhill cranes at sunset.
Shoot from the right distance. For people, closer is usually better. For landscapes, position yourself to get the key elements in the frame. Walk forward or back as needed.
This image illustrates a restored prairie near Baraboo. It could be a set-up shot for a close-up of the flowers.
Here is a medium close-up of the lupines. This image also illustrates effective use of a camera’s f-stops to produce shallow depth of field, drawing our attention to the subject.
Effective composition often begins with the Rule of Thirds. This helps you place one or more key elements in the “power positions” where the imaginary lines intersect.
This image was cropped to position the flower heads at the two upper power points.
This image of native honeysuckle in Iowa has a medium depth of field. This distracts from us from the subject – the ice encapsulated berries.
Same position but with a shallow depth of field. This is achieved using a manual camera and selecting a “low” f-stop like f4. For landscapes with great depth of field, use an f22 or f32 setting.
Another tool we can use is shutter speed. Here, a slow shutter speed combined with panning the camera imparts a feeling of motion to the geese coming in to land.
Same subject but without panning with the landing geese. Here the sharp focus of the geese on the water contrasts with the speed-blurred images of the landing geese. To capture crisp focus of all the geese, you would use a “fast” shutter speed, generally 1/250th of a second or faster.
The next five slides illustrate effective use of photography to document a conservation problem – wildfires – and an effective preventative approach, controlling invasive cheatgrass
Effective choice of viewpoints to illustrate the aftermath of a wildfire.
Fuels

• Phase I 3/3/11 – 4/12/11
  • 23 respond, treated ~150 ac

• Phase II 11/14/11 – 1/10/12
  • 22 properties, treated ~125 ac
  • 33 properties cheatgrass suppression

• Phase III 2/2012 – 4/2012
  • 14 properties, treating ~100 ac

Top image is before treatment, bottom is after. Before and after images of project sites often are some of the most effective images to illustrate success or failure.
Farmland Restoration

- Desert Terminal Lakes Program
- NFWF purchases retired farmland and associated water
  - 180 ac Smith Valley
  - ~1200 ac Mason Valley
- No documentation available for large scale restoration of farmland in this environment

Images of cute animals, and/or happy children, can make a good impression on the public.
Farmland Restoration

• What do we need?
  – Large scale monitoring
  – Crew to plant live cuttings
  – Source of native and drought tolerant seeds and live materials

• How do we accomplish these goals on over 1000 acres with a small staff?

• Walker River Basin Workdays!!!

This image gives the impression of vast space to illustrate the size of the river basin. It also illustrates effective use of wide depth of field to place the foreground and background in focus.
Illustrations of other work done by the Conservation District – not as effective as they could be. The guy with the backpack sprayer is obscured by vegetation, and the guy on the 4-wheeler appears to be driving away. Image selection is easier with properly composed photographs.
Documenting a Runoff Incident
A Real-Life Example of Image Selection
A day after tons of sediment washed off a recently tilled field, covering the road and flowing into an intermittent stream, I was asked to document the incident. My first attempt was this perspective. Too much shade and lack of a point of attention led me to “work” the site.
Well, that didn’t help much. Time to change my point of view.
Hmm. This is a bit better, but still doesn’t really illustrate what happened. Best keep moving.
OK – maybe there isn’t a single vantage point that will tell the whole story. I decide to show aftermath. Clearly some heavy equipment was used to clear the road and “clean out” the ditch.
I “liked” that shot, but found the shade too distracting and the yellow & black signs not prominent enough. Using local controls during digital editing, I made some subtle changes that solved those two problems.
Now to illustrate the sheet, rill and gulley erosion caused by a single rain event. First attempt...
OK – that’s better. Get closer or zoom in some and capture the length and slope of the field, along with some rills and obvious sediment now visible. Increasing the contrast via the digital darkroom also improves the visibility of the runoff.
Now a look at the areas of concentrated flow. That’s a start, but it can be better.
Get closer, zoom in, or crop and enlarge in the digital darkroom, then increase the contrast. Now the extent of the problem is clearly visible. Three images can document this particular incident.
Effective Images
plus
Basic Digital Editing

The Wisconsin Buffer Initiative
I was asked to document examples of both riparian and upland buffers. My first impulse upon arriving on a scene is get a shot. This was a bust – no sign of buffers here.
Even with digital editing this pic just can’t be fixed.
Moving with your feet can really help – even I can see this is a good illustration of riparian buffers. The farmstead in the scene really creates an attractive image, while your eye is drawn from the lower left to center right, then to the silos.
Another good example of a buffer on the landscape, providing nice context for this conservation practice.
A flume and remote data collection at Pioneer Farm. Pretty good image, especially of the equipment.
Moving down the road provides a more effective illustration of the use of flumes and remote data collection to monitor runoff on a long slope.
If this is an illustration of a riparian buffer, the strip cropping in the upper half is a distraction.
This is a far better illustration of a variable width buffer designed with equipment needs in mind.
Here’s a good example of a cover shot – its shallow depth of field effectively illustrates the vegetation while still conveying the setting in the background.
Using a tripod, I was able to easily change the f-stop to f/22 and get good detail across the field. Just as important is the context of the terrain in and beyond the field. However, the image is a bit “muddy” and the colors are weak.
Now we have an attractive and effective illustration of the use of in-field buffers in combination with strip cropping to reduce runoff from long and relatively steep slopes.
It often helps to have an idea of how the images will be used before you start. In film, this is called storyboarding. Here I was north of Dodgeville looking for a scene that could be used as a banner across the top of a web-page. Notice again the farmstead, the terrain and the depth of field.
Same image, adjusted for color and contrast and cropped. This image could be cropped to create a narrower banner without losing the essential message: in-field buffer strips add another tool to further reduce runoff from steeply sloping cropland.
Effective images add interest to handouts and booklets. The image in the center clearly depicts a local resident consulting with county staff. The photo on the right illustrates a common urban runoff practice. It’s often helpful to show that runoff is both an urban and agricultural issue.
Using an I-Phone to Capture and Upload Images

www.idownloadblog.com/iphone-photography/

By Justin Balog
Using Smartphones as Cameras: Opportunities and Limitations

- Always with you
- Good image quality
- Easy to share with social media
- Limited exposure gamut
- Little to no choice of lens
- Little control over Depth of Field
- Problematic if the scene isn’t evenly lit
Expand Your Options with Apps

- Editing and Sharing with Apps Include
  - Camera+
  - Camera Awesome
  - Snapseed
- Excellent online documentation/tutorials
- Still more limited than dSLR
- Free dSLR editing suites available: Picasa
- More powerful editing tool: PhotoShop Elements
Unpinch to separate the exposure and focus controls.
Move to set your focus.

Move to set your exposure.
Clarity

One of 16 handy scene modes to bring out the best in your photos.

before

after

“The Clarity filter is iPhone photography’s secret sauce.”

THE WALL STREET JOURNAL
Shoot like a pro

- continuous flash
- touch exposure
- 6x zoom
- touch focus
- advanced shooting modes

"The Camera+ app is like a high-quality SLR lens."
Settings

CAMERA

Use Location  ON

BACKUP

Export to Camera Roll  ON

Cloud Archive  ON

Archive Over Wi-Fi Only  OFF

Gallery  Awesomized Archives

SERVICES

SmugMug
Summary

• Keep your camera level, steady, and properly focused
• Document projects with before and after images
• Include people for both scale and interest
• When possible, plan your shoot ahead of time
• Use digital editing to improve color and contrast
• Crop your images to improve composition, retain what is essential
• Move with your feet to find the best perspective
• Photograph people in action on project sites
• Smart phone cameras are handy, but remember their limitations
• Use online tutorials to improve your skills for better results