



## 2011 4-H PHOTOGRAPHY JUDGING LEADER'S GUIDE

The photography judging contest is an opportunity for 4-H photography project members to demonstrate the skills and knowledge they have learned in the photography project area. The guide has been developed to assist 4-H volunteers in providing training for 4-H youth prior to the County and State 4-H Photography Judging contest. This event is conducted annually to support learning in all photography projects. The top ten senior participants from each county are eligible to participate in the state contest. Should ten seniors not be available, juniors may be named to the County Team.

References for this event are the 4-H Photography project manuals, accompanying leader guide, Kodak.com and wikipedia.org.

The 2011 County 4-H Photography Contest will include the following:

### **BEGINNER:**

**Part I** - Identification of parts of a camera. (See page 8, Adventures With Your Camera - A)

**Part II** - Two quality-judging classes (color or black and white) will be selected from the following list:

1. Animals
2. Individual
3. Group of People
4. Marine
5. Flowers
6. Still life

There are quality judging points given on pages 27-37 in the Adventures With Your Camera - A that should help you prepare the 4-H project members for this section of the contest.

**Part III** - From the word list of photography terms below, participants will match five (5) definitions provided to the correct photography term. (See terms and definitions in Appendix B, Glossary, Page 41, Adventures With Your Camera - A)

### **Beginner Contest Word List:**

- |                |               |                      |
|----------------|---------------|----------------------|
| 1. Lens        | 5. Background | 9. Simple Camera     |
| 2. Focus       | 6. Shutter    | 10. Automatic Camera |
| 3. Composition | 7. Foreground | 11. Overexposure     |
| 4. Negative    | 8. Exposure   | 12. Underexposure    |

**SENIOR:**

1. **Parts of a Digital Camera**- 4-Hers will identify parts of a digital camera and explain their function. They will need to know the parts of a digital camera in order to successfully operate the camera. Review the enclosed sheet that provides a picture of a digital camera with the respective parts labeled.

*Training Idea-* Encourage members to bring in a digital camera at a project meeting to review parts and their functions. Explain that not all digital cameras are alike and review differences. Set-up tours at local camera shops to enhance the 4-Hers understanding of parts and to view other digital cameras.

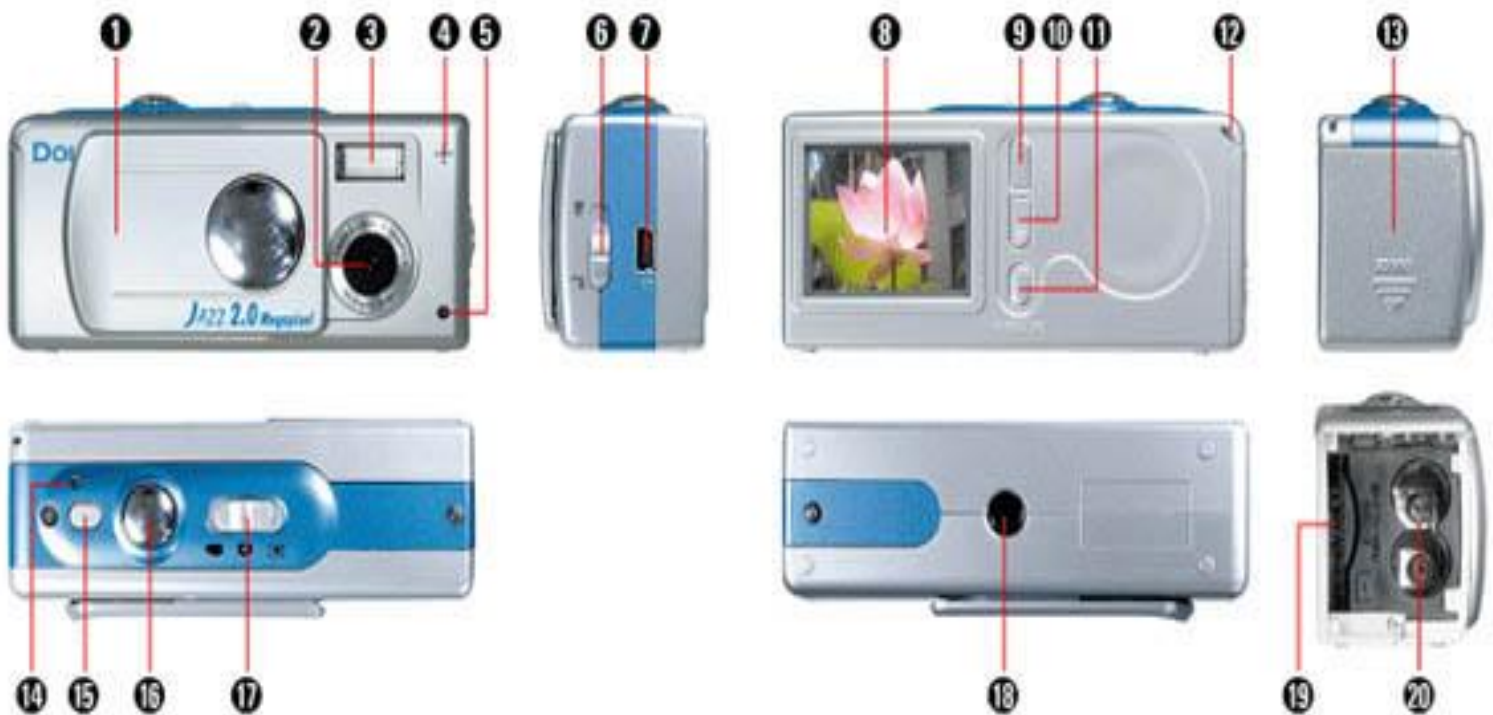
2. **Digital Camera Terms**- 4-Hers will match the term with the definition provided in the study guide. 4-Hers wanting to learn about digital cameras must understand the definitions in order to familiarize themselves with digital photography.
3. **Advantages / Disadvantages of a Digital Camera**- 4-Hers will be asked to identify advantages and disadvantages of using a digital camera. Review the enclosed sheets that review advantages and disadvantages of digital photography.
4. **Operation of a Digital Camera** – 4-H’ers will be asked to perform simple operations on a digital camera. These operations could include any operation procedure for the camera including, but not limited to, opening the lens cover, using the zoom button, turning on the menu, removing or inserting the compact flash disk, hooking up to a USB port, retrieving pictures on the disk, deleting pictures, changing picture quality settings, changing picture-taking modes, selecting color modes, activating red-eye reduction, transferring images to a printing dock, etc.
5. **Lighting** - 4-H’ers will review information on camera lighting to respond to questions related to light types and quality, light direction, additional lighting, and proper exposure. Review the enclosed sheets that discuss camera lighting information and techniques when taking photographs.
6. **Composition** - 4-Hers will identify and evaluate photographs based upon the pictures composition. Review the enclosed sheets pertaining to composition.

*Training Idea-* Encourage members to bring in digital photographs at a project meeting and review composition in terms of rule of thirds, lines, lighting, simplicity, balance, framing, pattern, and texture. Have members analyze the pictures and evaluate what was good, bad, and what principles of good composition could be applied in a different way to make the picture better. Encourage members to practice looking all around in the viewfinder to consider the way each element will be recorded and how it relates to the composition.

7. **Rule of Thirds** – 4-H’ers will be asked to visual show and explain the concept of “rule of thirds” to show how this is used in taking better photographs.

8. **Basic Photography Techniques** – 4-H'ers will be asked to explain basic photography techniques including angle, pan, distance, level, focus and framing. 4-H members will review photographs and indicate what photography technique was used in taking the picture. In addition, 4-H'ers will review photographs presented and offer suggestions on which techniques could have been used in an effort to improve the photograph.
  
9. **Two to Four Quality Judging Classes (color or black and white) selected from the following list:**
  1. Animals
  2. Individual People
  3. Groups of People
  4. Marine
  5. Flowers
  6. Still Life

## Parts of a Digital Camera



- |                               |                               |
|-------------------------------|-------------------------------|
| ① Lens cover                  | ⑪ MENU/OK button              |
| ② Lens                        | ⑫ Strap holder                |
| ③ Flash strobe                | ⑬ Battery & SD/MMC card cover |
| ④ Microphone                  | ⑭ LED indicator               |
| ⑤ Self-Timer LED indicator    | ⑮ Power button                |
| ⑥ Focus switch                | ⑯ Shutter/Quick Exit button   |
| ⑦ USB port                    | ⑰ Mode switch                 |
| ⑧ LCD display                 | ⑱ Tripod port                 |
| ⑨ Control button ▲ (Zoom in)  | ⑲ SD/MMC card slot            |
| ⑩ Control button ▼ (Zoom out) | ⑳ Battery section             |
|                               | ㉑ Mini Tripod (Removable)     |



## Digital Camera Terminology

1. **Optical Zoom**- physical lens inside the camera that extends to magnify the subject; the higher the optical number, the better.
2. **Digital Zoom**- electronically enlarges the pixels in the center area of a photo; allows you to get closer to subject, but sacrifices quality of photo.
3. **Focal Length**- how much the lens of a camera can magnify a shot.
4. **Shutter Lag**- time between pressing the button to take a picture and the time when the picture actually gets taken.
5. **Ambient Light**- natural light in a scene.
6. **Charge Coupled Device (CCD)** - image sensor used in digital cameras.
7. **DPI (Dots per inch)** - measurement of the resolution of a digital photo or device.
8. **Image Resolution**- number of pixels in a digital photo.
9. **Megapixel**- Equal to 1 million pixels.
10. **NiMH**- Nickel Metal-Hydride rechargeable battery.
11. **Pixels**- Picture element: digital photographs are comprised of thousands or millions of them; building blocks of a digital photo.
12. **Shutter Speed**- measurement of how long its shutter remains open as the picture is taken.
13. **USB Device Port** - Port that an external PC may be connected to using a USB cable to allow sending and receiving data to and from the PC.
14. **Memory Card**- A removable module used for storing images in digital cameras.
15. **Aperture**- The size of the lens opening, which regulates how much light passes through the lens to hit the CCD.
16. **LCD Screen (Liquid Crystal Display)** - a low-power monitor often used on the top/rear of a digital camera to display settings or the photo itself.
17. **LED (Light Emitting Diode)** - indicator lights used on cameras, power supplies and most electronic devices.

18. **Shutter** - The physical device that opens and closes to let light from the scene strike the image sensor.
19. **Digital Camera**- A camera that captures the photo not on film, but in an electronic imaging sensor that takes the place of film.
20. **External Flash**- a supplementary flash unit that connects to the camera with a cable.
21. **Image Editor**- a computer program that enables you to adjust a photo to improve its appearance.

### **Advantages/ Disadvantages of Digital Photography**

#### *Advantages of Digital Consumer Cameras*

The advantages of digital photography versus traditional film include:

- Instant review of pictures, with no wait for the film to be developed: if there's a problem with a picture, the photographer can immediately correct the problem and take another picture.
- Only successful pictures need to be printed. This means you can take many shots of the same scene but with slightly different settings, and then choose the best one. Doing this with film could be too expensive.
- Minimal ongoing costs for those wishing to capture hundreds of photographs for digital uses, such as computer storage and e-mailing, but not printing.
- If one already owns a newer computer, permanent storage on digital media is considerably cheaper than film.
- Images may be copied from one medium to another without any degradation.
- Pictures do not need to be scanned before viewing them on a computer.
- Ability to print your own pictures using a computer and consumer-grade printer.
- Ability to print your own pictures using printers that can communicate directly with the camera, or its memory card, for computer-less printing.
- Digital cameras can be much smaller than film cameras of equivalent quality.
- Ability to embed metadata within the image file, such as the time and date of the photograph, model of the camera, shutter speed, flash use, film speed, and other similar items, to aid in the reviewing and sorting of photographs. Film cameras have limited ability to handle metadata, though many film cameras can "imprint" a date over a picture by exposing the film to an internal LED array (or other device) which displays the date.
- Ability to capture and store hundreds of photographs on the same media device within the digital camera; by contrast, a film camera would require regular changing of film (typically after every 24 or 36 shots).

- Many digital cameras now include an AV-out function (and cable) to allow the reviewing of photographs to an audience using a television.
- Digital photography enables you to experiment with the camera settings, different styles of images can be tried out, and techniques improved, all without the expense of film processing. Digital anti-shake tools allow taking sharp hand-held pictures where previously a tripod was required

### *Disadvantages of Digital Consumer Cameras*

The disadvantages of digital photography versus traditional film include:

- Some consider the picture quality of pictures taken on film cameras to exceed that of digital pictures.
- Some film cameras operate without batteries, as the image is stored on film rather in memory using CCD/CMOS sensors and associated electronics which require power to operate.
- There are special types of film, such as for infrared light, that have no equivalent in digital (CCDs are sensitive to near infrared).
- Film remains more admissible as evidence in court, as it is much harder to manipulate than digital
- Film has a better dynamic range
- Film is available in different sizes (i.e. 35mm, half-format, full-format, etc.)
- Battery life is quite short if you use the LCD screen; use the optical viewfinder whenever possible and have an extra battery or two.
- Making computer prints uses expensive ink and takes time. (Note: Many people now take their memory card to a photofinisher who uses it to make digital prints for about 19 - 29¢ each).
- Speed- Digital cameras take anywhere from two to 30 seconds to store each image. This makes them unsuitable for action photography or any situation in which you need to shoot quickly.
- Cost -Digital cameras designed for home and business use run from \$400 to \$1,000. Professional models run as high as \$20,000. This may be more than you're willing to invest for occasional shooting.

## **Lighting**

You need light to take a photo and the lighting available can definitely change how your photos turn out. Many types of light can be used to take photos including **natural light** (i.e. sun) or **artificial light** (i.e. lamps and flashes). Most pictures taken outdoors are it by natural light. However, depending on the time of the day that you take your picture can also determine how the light source affects your final photo. In the morning and evening, the sun is softer and more

yellow than at noon or midday. The midday sun is harsh and forms short shadows. In addition, clouds also affect light quality.

In addition to light quality, **light direction** will determine how a photo looks. Light can come from any direction: from the front, behind, the side, below and above the subject. Use can use natural light as follows:

1. **Front Lighting** – sun is shining in your subject’s face.
2. **Back Lighting** – sun is behind your subject.
3. **Side Lighting** – sun is shining on only one side of your subject.
4. **Top Lighting** – sun is directly overhead of your subject.

When there is not enough existing light to take a photo, additional light must be added. Using a flash can supply the additional light needed. You can use a flash in two different ways. You can use a flash instead of existing light or use can use a flash as **“fill flash”** for additional lighting.

Letting light into a camera is called making an exposure. IF too much light strikes the photosensitive surface in your camera, the resulting photo is too light (**overexposed**) and if not enough light results in a photo that is too dark (**underexposed**). Three factors determine proper exposure: film speed, shutter speed, and aperture setting.

- **Film Speed** relates to how sensitive the surface is. It is indicated by an ISO number. The higher its number (i.e. ISO 400), the faster the surface is. The faster your film or camera is the less light it needs to make a good photo.
- **Shutter Speed** refers to the length of time that the shutter is open, allowing light into the camera. The shutter opens and closes at speeds measured in fractions of a second: 1/30, 1/60, 1/125, 1/250, and 1/500. The higher the bottom number, the faster the shutter speed.
- **Aperture** refers to the size of the lens opening that allows light into the camera. This is also referred to as an f-stop. A larger lens opening lets in more light.

Photographers work with both natural and artificial light. They also work with the way that light falls on their subjects in either a direct, reflected, or diffused manner.

- **Direct Light** is very strong and results in clean details. It usually does produce harsh shadows.
- **Reflected Light** normally washes a scene with light, but the light is not as hard. It creates crisp details, but it has softer shadows.
- **Diffused Light** is the type of light found outdoors on an overcast day or in deep shade. It showers the scene with the softest light of al, painting soft details and shadows.

## Composition

1. Rule of Thirds - image can be divided into nine equal parts by two equally-spaced horizontal lines and two equally-spaced vertical lines. (Imagine a grid drawn over your photograph that divides it into thirds, like a tic-tac-toe grid. Now, picture that middle square in the grid. The four corners of that square mark the locations of your areas of interest). The four points formed by the intersections of these lines can be used to align features in the photograph. Proponents of this technique claim that aligning a photograph with these points creates more tension, energy and interest in the photo than simply centering the feature would.

### Tips for Using Rule of Thirds:

- Tip 1: Don't put the areas of interest in the middle of the photograph
  - Tip 2: In landscape photography use the horizontal grid lines for things like horizons and where water meets land (lake shore, sea shore . . . )
  - Tip 3: In portrait photography use the horizontal grid lines for placing peoples' eyes, or in group shots, peoples' heads.
  - Tip 4: Use the vertical grid lines for things like trees, waterfalls, specific aspects of architecture, or just a person with a background behind them.
  - Tip 5: Try to get specific focal points onto the corners of the middle square
  - Tip 6: Don't be a perfectionist! The rule is a guide. But don't feel the focal points *must* be on *exactly* the grid lines or corner points.
2. **Lines** - The lines that can be found in images are very powerful elements that with a little practice can add dynamic impact to a photograph in terms of mood as well as how they lead an image's viewer into a photo. Learning how to use lines in photography doesn't just happen. It takes time and practice to become good at it.  
  
A good way to practice is to go back through older images that you've taken and look for lines that worked well and those that didn't. **Tip:** Before you frame your shot consciously ask yourself what lines are in front of you and how you might use them to add something to your next shot by working with them rather than against them. Also ask yourself whether the lines form any interesting patterns that you might be able to accentuate to add a further layer of interest to the shot. Types of lines include Horizontal, Vertical, Diagonal, and S-curves.
  3. **Lighting** - Lighting is also an important creative element of composition. By controlling the light and directing it where you want it, you can subdue objects or distracting elements in the scene to give more emphasis to the main point of interest. For good picture composition, you must develop an awareness of how changes in lighting can affect the appearance of things around you. Light and shadows can be used in composition to create mood, to draw attention to an area, to modify or distort shape, or to bring out form and texture in the subject. Shadows are a key to apparent form in photographs. Without shadows, the subject records without form, curvature, or texture, appearing flat and lifeless. From a compositional standpoint, black shadows can be very useful in balancing a scene and directing attention to

the point of interest. Harsh shadows can also be excellent for emphasizing texture and form, for creating interesting patterns, and for directing attention to the main point of interest; however, the same elements can also obscure detail and reduce form. When the lighting is harsh, such as on a clear, sunny day, shadows have sharply defined edges and are probably very dark, sometimes to the point that they appear stronger than the primary subject and attract attention to themselves.

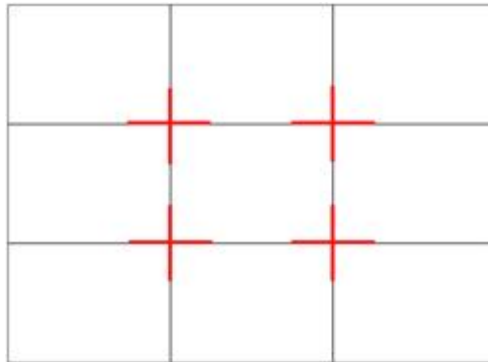
4. **Simplicity** - Simplicity is the key to most good pictures. The simpler and more direct a picture is, the clearer and stronger is the resulting statement. There are several things to be considered when we discuss simplicity. First, select a subject that lends itself to a simple arrangement; for example, instead of photographing an entire area that would confuse the viewer, frame in on some important element within the area. Second, select different viewpoints or camera angles. Move around the scene or object being photographed. View the scene through the camera viewfinder. Look at the foreground and background. Try high and low angles as well as normal eye-level viewpoints. Evaluate each view and angle. Only after considering all possibilities should you take the picture. See beyond and in front of your subject. Be sure there is nothing in the background to distract the viewer's attention from the main point of the picture. Likewise, check to see there is nothing objectional in the foreground to block the entrance of the human eye into the picture. A last point of simplicity- *tell only one story*. Ensure there is only enough material in the picture to convey one single idea.
5. **Balance** - Balance in photographic composition is a matter of making pictures look harmonious. Each element in a picture has a certain amount of value in respect to all the other elements. Every tone, mass, shape, tree, rock figure, building, line, or shadow contributes a certain amount of weight that must be arranged correctly in the composition to give the impression of balance. The subject placement within the picture area is the factor that must be carefully considered
  - **Symmetrical or Formal Balance** – This is achieved when elements on both sides of the picture are of equal weight. The idea of formal balance can be related to a seesaw. Pictures with formal balance may look static and unexciting; however, they do present an air of dignity. Formal balance does not always mean a picture has to be the seesaw in perspective.
  - **Asymmetrical or Informal Balance** – This type of balance is usually much more interesting than symmetrical balance. In asymmetrical balance the imaginary central pivot point is still presumed to be present; however, instead of mirror images on each side of the picture area, the subject elements are notably different in size, shape, weight, tone, and placement. Balance is established by equalizing the element forces in spite of their differences
  - **Aspects of Balance** - There are many other factors to consider in order to make **pictures appear balanced. Some of these are as follows:**
    - An object far from the center of the picture seems to have more weight than one near the center.
    - Objects in the upper part of a picture seem heavier than objects of the same size in the lower part of a picture.

- Isolation seems to increase the weight of an object
  - Intensely interesting objects seem to have more compositional weight.
  - Regular shapes seem to have more weight than irregular shapes.
  - Elements on the right side of an asymmetrical picture appear to have more weight than elements of the same size on the left side of the picture.
  - The directions in which figures, lines, and shapes appear to be moving within the picture area are important to balance; for example, a person may be walking in a direction, or his eyes may be looking in a direction, or the shape of some element creates a feeling of movement. When the feeling of direction is present within a scene, it tends to upset the balance if judged on the size of the subject alone.
6. **Framing** - Framing is another technique photographers use to direct the viewer's attention to the primary subject of a picture. Positioned around the subject, a tree, an archway, or even people, for example, can create a frame within the picture area. Subjects enclosed by a frame become separated from the rest of the picture and are emphasized. An element used as a frame should not draw attention to itself. Ideally, the frame should relate to the theme of the picture; for example, a line of aircraft parked on the flight line framed by the wing and prop of another aircraft. Not only is framing an effective means of directing the viewer's attention, it can also be used to obscure undesirable foregrounds and backgrounds. The illusion of depth can be created in a picture by the effective use of framing.
7. **Pattern** - Creating your pictures around repeating elements or patterns provides picture unity and structure. Pattern repetition creates rhythm that the eyes enjoy following. When lines, shapes, and colors within a picture occur in an orderly way, they create patterns that often enhance the attractiveness of photographs. When pattern is used as a supporting element, it must be used carefully so it does not confuse or overwhelm the viewer. Pictures that are purely pattern are seldom used, because they tend to be monotonous. Patterns should be used to strengthen and add interest to your subject.
8. **Texture** - This process helps to emphasize the features and details in a photograph. By capturing "texture" of objects being photographed, you can create form. When people observe a soft, furry object or a smooth, shining surface, they have a strong urge to touch it. You can provide much of the pleasure people get from the feel of touching such objects by rendering texture in your pictures. Texture can be used to give realism and character to a picture and may in itself be the subject of a photograph. When texture is used as a subordinate element within the picture, it lends strength to the main idea in the photograph.

### **Rule of Thirds**

The basic principle behind the rule of thirds is to imagine breaking an image down into thirds (both horizontally and vertically) so that you have 9 parts. As you're taking an image you would have done this in your mind through your viewfinder or in the LCD display that you use to frame your shot.

With this grid in mind the 'rule of thirds' now identifies four important parts of the image that you should consider placing points of interest in as you frame your image. Not only this - but it also gives you four 'lines' that are also useful positions for elements in your photo.



The theory is that if you place points of interest in the intersections or along the lines that your photo becomes more balanced and will enable a viewer of the image to interact with it more naturally. Studies have shown that when viewing images that people's eyes usually go to one of the intersection points most naturally rather than the center of the shot - using the rule of thirds works with this natural way of viewing an image rather than working against it.

### **Basic Photography Techniques**

There is obviously much more to photography than just pushing a button and taking a picture. Exploring and using basic photography techniques will help provide all photographers a fundamental understanding of how to think before taking a picture. Taking the time to look and see the big picture while making conscious decisions about your proposed photograph will certainly help you to take better photographs. These conscious decision factors involve using basic photography techniques that include angle, pan, distance, level, focus and framing.

**Angle** - This is the tilt we give the camera when we hold it while shooting the picture. There are three angles: up angle, down angle and straight.

**Panning** - This refers to the side from which a person is taking the picture: forward, left or right.

**Distance** – This technique helps you to decide at what distance to have your main subject of your picture: close, medium, or far.

**Level** – This technique refers to the height (eye-level, high or low) at which the viewer appears to be seeing the subject and is different from "angle" which involves the tilting of the camera. The camera may or may not be at an angle and may still be from a high, eye-level perspective.

**Focus** – This technique relates to how more or less sharp or more or less soft you want your final picture to be. You should be aware that focus changes relative to other factors or techniques that are used in taking a picture.

**Framing** – This technique helps you to best place your subject in your photograph while using the elements of space and composition to take the best picture. Using this technique, you will need to determine how distance effects what is framed in a picture, how your capture action in a frame, and what happens when you leave things out of a frame.