Adventures with your Camera
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Awards Available in 4-H Photography

County:
Four gold medals of honor in photography.

State:
An expense-paid trip to National 4-H Congress.

National:
Six educational scholarships of $1000 each. In addition, a scholar incentive grant of $500 is given to those national winners whose grades rank in the upper half of their class during the semester they use the $1000 scholarship.

Back in the 1800's, taking pictures was different. Chemicals were taken along with the camera to process the pictures in a tent.
The 4-H Photography Program

The 4-H photography program centers around the manuals listed below. You will want to start with Unit 1, and progress to Unit 2. The others are optional and may be used at anytime depending on the equipment and resources available to you. For your special interests, there are several advanced skill guides. They examine topics like news photography and careers in photography.

**UNIT 1: ADVENTURES WITH YOUR CAMERA**
(for the beginning photographer)

**UNIT 2: EXPLORING PHOTOGRAPHY**
(for the intermediate photographer)

**ADJUSTABLE CAMERAS**
(for photographers who use cameras with manual controls and removable lenses)

**DARKROOM TECHNIQUES**
(for the people who want to process and print their own film)

**ACTION! MAKING VIDEOS AND MOVIES**
(for people who want to make video tapes or movies)

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Today, taking pictures is easy. Cameras are smaller. You send your film away to have it processed, so you can use your tent for camping!
Picturing Your Life

These pictures were taken by 4-H'ers. Soon, you'll be taking pictures too. Pictures of your projects, friends, pets, and activities. You'll be looking at the world through your own special viewer—your camera! The pictures you take will show your favorite things in the world from your personal point of view.

Adventures—projects you can try—are listed on pages 38, 39, 40 and 41.

Let's get started!
Practice Seeing Pictures

You can make this cut-out viewer and practice without a camera.

To make the viewer, you'll need supplies:
- a piece of cardboard or stiff paper
- a picture taken with your camera
- a pencil or pen
- scissors.

Trace the shape of the picture. Pictures are almost always the same shape as the viewfinder in the camera.

Cut out the shape, and you have a viewer to help you see pictures. Can you improve the picture by moving the viewer? What could be added or removed to make the picture look better?

Try turning it sideways. Most cameras take rectangular pictures, so you can change the picture framing by holding the camera sideways.
How Photography Works

To make a photograph, you need 5 things.

1. Film

Film seems magical. It catches light and makes pictures! There is a coating like a layer of paint on film. The coating holds millions of tiny particles called silver halide crystals. These crystals darken in the light.

2. Light

When fair skin is exposed to sunlight, it changes and becomes tanned. Film must be exposed to light to change and make pictures. A good picture, like a good tan, takes just the right amount of light—not too much and not too little.

3. Camera

The camera keeps film in the dark. When you push the button called the "shutter release," the camera allows light inside. Most cameras have automatic controls for "exposure"—the amount of light that reaches the film.

4. Subject

In school, a subject is what you study. In photography, a subject is what you photograph. What makes photography fun is that you pick the subjects!

5. Processing

Pictures on film are invisible until they are washed in special chemicals (called "processing"). These chemicals make the picture appear on the film. Prints are made from the processed film. Most people send their film to companies that do the processing and make prints or slides.
**Greek**

**Photo-Graphy**
means
**Light-Drawing**

The word "photography" means "drawing with light." Most important is the person who does the drawing, and that's YOU—the PHOTOGRAPHER.

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Light

Film

Subject

Film changes when light strikes it. You need a camera to keep film in the dark.

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Camera

Light is focused on the film by the camera lens to make a picture. This invisible picture must stay in the dark, because too much light will ruin it.

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Processing

The film changes again during processing, so the picture is visible. A print, made from the film, is what most people call "a picture."
Holding the Camera

Before you put film in the camera, practice holding the camera, looking through the viewfinder, and pressing the shutter release. Learn to hold the camera steady. Holding the camera steady is the golden rule for clear, sharp pictures. The picture may be blurred if you move the camera even a little bit while pressing the shutter release. Always press the button slowly and gently, as if you were petting a hamster on the head.

1. Put the camera strap around your wrist or neck. Don't drop the camera.

2. Keep your arms near your sides.

3. Hold the camera against your nose or cheek as you look through the viewfinder.

4. Keep your fingers away from the lens and any other openings on the front of your camera.

5. Hold the camera steady and level.

6. Gently press the shutter release. Don't move the camera now or you'll end up with a blurry picture.
First, put the camera strap around your wrist or neck. If you stand, slightly spread your feet in a stance that's comfortable.

You don't have to stand to take a picture. You can kneel or lie down. Lying down is especially good for photographing things near the ground, such as babies and dogs.

You can hold your camera on a wall or fence for extra steadiness. If your camera sets exposures automatically (and most cameras do), you might need extra steadiness on a cloudy day or inside.
Learning About Your Camera

Read the booklet that came with your camera. It will explain loading and unloading film, and how to use your camera. If you don’t have a booklet, or find it confusing, ask someone to show you.

Your camera may look different from the ones you see in this book. Be sure to learn how YOUR camera works.

Before you start taking pictures, check the camera. Is there film in it? Look at the picture (frame) counter to see.

Be sure you know where the shutter release is located. It’s the button you push to take a picture.

Most cameras need batteries. Check to be sure that the batteries are put in properly and are working.

Where is the lens? Where is the flash? Practice holding the camera so you don’t cover up either of them.
Taking pictures is the best way to learn photography!

Taking Sharp Pictures

Find a subject that doesn’t move, like this flower box or the view from a window. Place the camera on a solid surface and take the picture.

Remember what you saw in the viewfinder, and take the same picture while jumping in the air!

Take a third picture holding the camera in your hands. Will this picture be sharp or blurred? That depends on how steady you hold the camera.

A Steady Camera Takes Sharp Pictures!
What Happened?

A camera that's too close to the subject takes blurred pictures!

Ask a friend to help with this exercise. Have your friend stand very still, and take a picture from about 8 feet away.

Now walk closer to your friend and take another picture at about 5 feet away. (Hold the camera steady and have your friend stand still.)

Step very close—two or three feet away. Most cameras take blurry pictures this close.
Check your test pictures—and your camera manual—to see how close you can be and still take sharp pictures.

No closer than this

Spread your arms wide. To make sure the picture is in focus, stand at least an arm-span away from the subject when you take a picture with a simple camera.
Cameras

Some cameras are big and some are small. Some have lots of controls and some have only a few. Although not all cameras look alike, they all work in the same basic way.

You may have a simple camera with only a few controls or you may have an adjustable camera with many controls. Don’t worry that your camera is too old or inexpensive to take good pictures. As long as it is working, you’ll be able to take good pictures. If you have an adjustable 35 mm camera and aren’t sure how to work the controls, you can make it work like a simple camera according to the directions on the inside back cover of this manual.

A flash is built into many cameras. It can help you take pictures indoors or outdoors in dim light.

There’s a hole in the camera in front of the film called a lens opening. The lens opening allows a certain amount of light from your subject onto the film when you take a picture.

A cover called a shutter is placed over the lens opening. Like a blind over your eyes, the shutter keeps the film in total darkness. The shutter opens only when you take a picture.

Press the shutter release, and the shutter opens. It lets in light reflected from the subject, and closes.

The shutter opens and closes faster than you blink an eye (1/40 second).
The viewfinder helps you aim the camera. The same things you see in your viewfinder will be in your picture.

The lens focuses the light onto the film when you take a picture. Like eyeglasses, the camera lens helps the camera see better. Without a lens, your picture would be blurred.

From beginning to end, here's what happens when you take a picture.

1. You look through the viewfinder until you see how your picture should look.

2. You press the shutter release button. The shutter uncovers the lens opening, lets light in, and closes.

3. Light passes through the lens and shines on the film, forming an image on the film.

4. You turn or advance the film advance lever until the next film frame is behind the lens opening.
Some cameras advance the film automatically.
Kinds of Cameras

To show *all* kinds of cameras would take many pages. These are the most common types. If you don’t see your kind of camera here, don’t worry. You can take good pictures with any camera.

Automatic 35 mm cameras are very popular. They are extremely easy to use, even by beginners. They often include a built-in flash.

A disc camera is very small and convenient. It uses flat "disks" of film that help make the camera very thin. It’s a good camera for beginners.
This is a 110 camera and a cartridge of 110 film. The camera is slightly larger than a disc camera. It is simple to use.

This is a 126 camera and film cartridge. The negative from 126 film is square.

The 35 mm single-lens-reflex (SLR) camera is an advanced camera. You may be able to remove the normal lens and put on a telephoto lens to magnify distant subjects. Or you can put on a wide-angle lens that fits a wider scene onto the film than a normal lens.

REMEMBER
Cameras may look different, but all cameras use the same four steps you learned on page 13 to make pictures. Adjustable cameras include extra steps.
Film Types

You've learned that there are many kinds and sizes of cameras. There are also many kinds and sizes of film. Different sizes fit different cameras. You can also choose different types of film

Most people use film for color prints. Prints are easy to show to friends and family members. Prints are made from negatives, which are returned from processing with the prints.

Some people use film for color slides. They use a slide projector and screen to show their slides.

A few people use film for black-and-white prints.

Remember, light changes the film. Light can be bright, normal or dim. Films are made with different sensitivity (called "film speed") to work best with bright, normal or dim light.

Some film is made for bright light.

Some film is made for medium light.

Some film is made for dim light.
Film for Color Prints

COLOR NEGATIVE

COLOR PRINT

Film for Black and White Prints

BLACK-AND-WHITE NEGATIVE

BLACK-AND-WHITE PRINT

Film for Color Slides

COLOR SLIDE
Get Close

Ask yourself, "What is my subject?" Is it the park? Is it the bench? Here, the subject is the boy.

Try standing only 4 to 10 feet away when you take pictures of people, so they are the center of attention.
For a single person, vertical pictures are often more pleasing than horizontal pictures.

Your camera's viewfinder may show more of the subject than you will see in your picture. It may have special marks to show what will appear in your picture.

What is the subject? Can you tell?

Here, the subject is close and clear.
Keep it Simple!

*Simple pictures are strong. Keep your pictures uncluttered.*

Moving close is one way.

Find simple subjects!

Use a simple background!
Move Around! A girl and a dog. Even with a simple subject, you can find lots of different views.

Move around to find the best picture.

Most pictures are taken standing up. Try lying down!

Try climbing to a higher position. Be sure to hold the camera steady.
Lighting

Your pictures will look different when the lighting changes. You can often control lighting by moving yourself or your subject.

**FRONTLIGHTING**
Most pictures use frontlighting, where the light falls directly onto the subject. This light generally provides good, bright, well-exposed pictures. (People may squint in bright frontlight. Try to avoid this.)

**SIDELIGHTING**
When the subject is lighted from the side, the light casts shadows on half of the subject. This produces what photographers and artists call "modeling," where the surface of the subject reveals any ripples, bumps, or hollows. (Notice how the nose and dimple show up.)
BACKLIGHTING
In this case, the light is in back of the subject. You probably won’t get much detail in the subject, but backlighting will provide a strong silhouette and sometimes a sort of halo effect. Backlight can be very dramatic, especially in early morning or late in the day when the sun is low. Indoors, silhouettes in front of a window can be interesting.

DIFFUSE LIGHTING
Cloudy days produce lighting called “diffuse” or “flat.” Shadows are very fuzzy or there are practically no shadows at all. There is no direction to the light, it is coming from all over the cloudy sky. This is a perfect time to take close-up pictures of faces. On a bright, sunny day, you can find diffuse lighting in the open shade—under a tree, for example.
Flash

Flash is a portable lightmaker. Its light makes good pictures of people.

Your camera probably has a flash built into it. If a flash is not built in, you can add a flash attachment.

You need flash for pictures of people:
- indoors, day or night
- outdoors at night

You may wish to use flash:
- outdoors in the shade
- outdoors on dark days

**DISTANCE** of the subject from the camera is important. Most flash devices will take good pictures from about 4 feet to 15 feet. This is called the "flash range."

**TOO CLOSE.** At 3 feet, the subject is "over-exposed." (It gets too much light from your flash.)

**TOO FAR.** At 20 feet, the subject is "under-exposed." (The light from your flash is not bright enough at that distance.)
Tips for Flash Pictures

Flash can give you good pictures of people, but remember that distant subjects are beyond the flash range. A flash won't light up these subjects:

- a mountain
- your house
- a football field.

They're all too far away.

When photographing several friends in a group, keep them close together—at about the same distance from the flash for even exposure.

No farther than this

Imagine the length of a car, and take your flash pictures anywhere within that distance (but no farther) for proper exposure.
More Tips for Flash Pictures

Even on sunny days, flash can lighten dark shadows.

Without Flash

With Flash

Don’t point the flash directly at a mirror or a window. They will reflect a harsh, bright spot on your picture.

Stand at a slight angle to shiny surfaces instead of straight-on.
Composition

"Composition" is the way you arrange the subject and other elements in the picture. You control composition by the way you frame the subject.

You can often improve composition by moving yourself or the subject to a better position. Including steps in the foreground will make this picture more interesting.

Tips for Good Composition

• Keep your pictures level.
• Get close so all you see is the subject
• Use simple, uncluttered backgrounds.
• Place your subject off-center.
• Frame your subject with a foreground object.
Photo Story

This is a photo story about making a photo story of a 4-H project.

Plan the important steps to photograph. Be sure to include a beginning, middle and end.

Take pictures of each step.

Select 5 to 10 pictures for a simple story.

Mount your pictures, adding words if they are important. (Read page 31 to learn more.)

A Simple Test
Ask yourself, "Can I understand the story without captions?" If the answer is "Yes," you have a good photo story.
A PUMPKIN FOR HALLOWEEN
Pick four of the above photographs to show the photo story "A Pumpkin for Halloween." Arrange the photographs in order from choosing a pumpkin to the finished carved pumpkin. Think carefully. Make sure your choices show something going on. See the answer below.

1. Shows the finished product
2. Shows a person cutting the pumpkin
3. Shows a person drawing a face on
4. Shows a person choosing a pumpkin

Answer
Showing Your Pictures

Record Books
Photos are a perfect way to tell the story of your 4-H projects. You can help your friends by taking pictures of them working on their projects, and they can do the same for you.

Exhibits
Photo displays make great exhibits. They are interesting and easy to understand.

You can tell a detailed story that shows each step of a project or activity.

You can show a complicated subject quickly by including lots of different pictures. This is a picture series—but it does not really tell a story.

Ask Yourself
• What is the story I want to tell?
• What pictures will tell the story?
• What will the audience need to know?
• How can I make it interesting and fun?
Mounting a Photo Story

1. Arrange your pictures on the board so they look nice. For stories with a nice design, try to set the photos left to right in sequence. Leave room for any captions. Once the photos are arranged, lightly pencil around their corners. Remove the photos.

2. With a ruler and pencil lightly line off the position of the title and the bottom line of the captions.

3. Write or fasten the title and captions onto the board. Be sure the title is large enough to be easily read from 10 feet away and the captions are large enough to be read from 2-3 feet away.

4. With double-faced tape or photographic cement, carefully fasten each picture in its correct position on the mounting board. Remove any stray pencil marks or cement.

Albums

*Albums keep your pictures safe and organized.*

You can buy a photo album or make your own. Decide which pictures to include and how to arrange them.

Pictures can be fastened to construction paper using double-faced adhesive tape or a photographic cement.

Cutting pictures into different shapes adds a creative touch. Written captions can be funny, or they can describe the picture.

Notes for Making Albums

- Be sure that photos on different pages don’t face each other. They might stick together.
- Don’t cut instant prints. They may release a fluid that can cause burns.
- If you fasten pictures with glue or cement, check the package. Is it safe to use on photographs? If not, your pictures may become discolored after a few years.
Caring for Film and Cameras

Danger!

Fingers carry moisture and dirt. Never touch the surface of your camera lens or film negatives with your fingers.

Film

Keep film away from very hot or damp areas. When traveling in a car, don't put film or a loaded camera in the glove compartment, the trunk, or on the dashboard. They can get very hot.

Negatives

After they are processed, your negatives will be returned in an envelope with your prints. You can keep them in the envelope and store them in a file box. Be careful not to scratch them.

The most common problem is losing a set of negatives! Label the envelopes to describe the negatives and organize the envelopes carefully.

Camera Care

A clean camera and lens will give you clear, sharp pictures. All you need is a camel's-hair brush and photo lens-cleaning paper (not the kind for eyeglasses) or a soft cloth.
Camera

Lightly brush or blow dirt off the lens.

After brushing the lens, breathe on it. Gently wipe off the moisture with lens-cleaning paper or a soft cloth.

Open the back of your empty camera. Hold it upside down and brush or blow away any dust or tiny bits of broken film.

Use a cloth to rub the battery contacts (the metal ends of the battery) and the camera contacts (the metal parts inside the camera that touch the battery ends).

If you're storing the camera for several months, remove the batteries and keep them in a plastic bag in case they leak.

Sand or moisture can harm your camera. If you're taking your camera to the beach, put it in a plastic bag.
Trick Pictures

Did you ever feel like putting your brother in a jelly jar? You can do this and more with trick pictures. The drawings below the pictures show how they were done. Try them. See if you can come up with some new tricks!
Your World in Pictures

There are hundreds of ways to use pictures.

You can use a camera to make a record of your 4-H projects, family trips, and other activities.

Make a "family tree" to show your family and relatives (Pets are included!)

Enlargements can be made from any clear, sharp picture. Use them to decorate your room.

Send pictures to pen pals—especially if you have a pen pal in a foreign country!
Other Worlds in Pictures

Photography helps us learn. It shows us things that are too small, too huge, or too faraway to see with our own eyes.

X-ray of a skull.

Saturnian System from Voyager I.

Parrots in the Amazon Jungle.

Head of a fly magnified 20 times.
You try it!

Here is a step-by-step approach to good pictures. Before you start off on each adventure, understand your mission. For each adventure, you will need:

- a camera (any kind will work), and
- film for color prints.

Any special supplies are listed below. Read the pages noted as a guide for each mission. Read pages 8, 32 and 33 as a general guide before you begin.

Adventure #1

**Mission:** Show that a steady camera makes sharp pictures.

**Subject:** House or other solid object.

**Guide:** Pages 6, 7, and 9.

Follow the steps described on page 9.

Adventure #2

**Mission:** Learn what is too close for sharp pictures.

**Subject:** A person.

**Guide:** Pages 10-11.

Follow the steps described on pages 10 and 11.

Adventure #3

**Mission:** Hold the camera level.

**Subject:** A person in any setting that includes a horizon line (where the ground or water meet the sky).

**Guide:** Page 27. Review pages 6 and 7.

1. Take a picture with the camera tilted slightly.
2. Take a picture holding the camera level, and place the horizon line centered in the frame.
3. Take a picture like #2, but place the horizon line off-center (toward the top or bottom of the frame—whichever looks best to you).
4. Compare your pictures. Does the person seem to be falling in picture #1? Do you prefer #2 or #3? Most people prefer #3.
Adventure #9

Mission: Use flash and avoid reflections.
Subject: A window or mirror.
Supplies: A flash attachment (or built-in flash).

1. Stand facing a window or mirror so you can see your reflection. Take a picture using flash.
2. Stand at an angle to the window or mirror. Take another picture using flash.
3. Compare the pictures. Does one picture show a bright, unwanted spot of light from the flash? Do you know how to avoid this?

Adventure #10

Mission: Use a foreground object to frame a subject.
Subject: Your house or some other building.
Guide: Page 27.

1. Take a picture of the subject without a "frame."
2. Take another picture using an object in the foreground (closer to you than the subject) as a "frame" for your picture. Tree limbs often work well.
3. Compare the pictures. Which do you like best?

Adventure #11

Mission: Tell a photo story.
Subject: Your choice.

Follow the steps on pages 28 and 29 to make your own photo story. Mount the story as shown on page 31.
Glossary of Commonly Used Photographic Terms

Adjustable camera  A camera on which you change settings for lens openings, and shutter speeds by hand. (SEE Automatic camera, Simple camera)

Aperture (lens opening)  The opening in a lens system through which light passes. Simple cameras have preset lens openings. Adjustable lens openings are usually calibrated in f-numbers marked on the lens.

Automatic camera  A camera with a built-in exposure meter that automatically adjusts the lens opening, shutter speed, or both, for proper exposure. Focus adjustments are also automatic on some cameras.

Background  The part of the scene that appears behind the principal subject of the picture.

Close-up  A picture taken with the camera close to the subject.

Composition  The arrangement of all elements in a picture: main subject, foreground, background, and supporting subjects.

Darkroom  A lighttight area used for processing films and for printing and processing photographic papers.

Double exposure  Two pictures taken on one frame of film, or two images printed on one piece of photographic paper.

Emulsion  A thin coating of light-sensitive material, usually silver halide in gelatin, in which the image is formed on film and photographic papers.

Existing light (available light)  In photography, the term refers to pictures taken by dim light rather than flash. Existing light pictures are normally taken with adjustable cameras and exposed by room lights, street lamps, spotlights, daylight through windows, or the twilight sky outdoors.

Exposure  The amount of light which reaches the film inside the camera. Two controls that change the exposure with adjustable cameras are the lens opening (size) and the shutter speed (time).

Exposure meter (light meter)  An instrument used to determine the exposure setting. It contains a light-sensitive cell that measures the light reflected from or falling on a subject.

Exposure setting  The lens opening and shutter speed selected to expose the film.
**Fill-in light** Additional light from a lamp or reflector used to soften the shadows caused by the main light source.

**Film** A photographic emulsion coated on a flexible transparent plastic base. Basic differences among the many color films available include the following:
- Film type (film for prints or slides)
- Film size (35 mm, 110, disk film, and others)
- Exposures per roll, (normally 12, 24, or 36)
- Film speed (ISO 100, 200, 400, 1000 and others)

**Film speed** The sensitivity of a given film to light, indicated by a number such as ISO 200. The higher the number, the more sensitive, (or “faster”) the film. Higher-speed films produce best results in dim lighting, while lower-speed films produce best results in bright lighting.

**Filter** A colored piece of glass or other transparent material used over the lens to emphasize, eliminate, or change the color or density of the entire scene or certain elements in the scene.

**Fixed-focus lens** A lens that has been focused in a fixed position by the manufacturer. The user does not have to adjust the focus of the lens.

**Flash** A brief, intense burst of light produced by a flashbulb or electronic flash unit, usually used where the lighting on the scene is too dim for picture-taking.

**Flat lighting** Lighting that illuminates the subject evenly, with few shadows and little difference between bright and dark areas.

**f-number** A number used to indicate the size of the lens opening. They are marked on lenses used with adjustable cameras. Common f-numbers are f/2.8, f/4, f/5.6, f/8, f/11, f/16, and f/22. The larger the f-number, the smaller the lens opening. In this series, f/2.8 is the largest lens opening and f/22 is the smallest. (SEE Exposure)

**Focus** Adjustment of the distance setting on a lens to sharply define the subject.

**Foreground** The area between the camera and the principal subject.

**Highlights** The brightest areas of a subject or picture.

**Lens** One or more pieces of optical glass or similar material designed to collect and focus rays of light to form a sharp image on the film, paper, or projection screen.

**Lighting** The illumination falling on a subject, particularly the direction or control of the illumination.
Negative The developed film that contains a reversed-tone image of the original scene. Negatives are used to create prints.

Overexposure A condition in which too much light reaches the film, producing a dense negative or a washed-out print or slide.

Print A positive picture, usually on paper, and usually produced from a negative.

Processing A procedure during which exposed photographic film or paper is developed, fixed, and washed to produce either a negative or positive image.

Reflector Any device used to reflect light onto a subject.

Shutter Blades, a curtain, a plate, or some other movable cover inside a camera which controls the time during which light reaches the film.

Simple camera A camera that has few or no adjustments to be made by the picture-taker. Usually, simple cameras have only one size of lens opening and one or two shutter speeds and do not require focusing by the picture-taker.

Slide A photographic transparency mounted for projection. The processed slide film is the final (positive) "picture," unlike negative film which requires printing to create a (positive) "picture."

Soft lighting Lighting that is low or moderate in contrast (the difference between light and dark areas in the scene).

Telephoto lens A lens that makes a subject appear larger on film than does a normal lens at the same camera-to-subject distance. It has a narrower field of view (includes less subject area) than a normal lens.

Transparency A positive image on film, viewed or projected by transmitted light (light shining through the film) unlike prints, which are viewed by reflected light (light bounced back from the surface of the print).

Tripod A three-legged supporting stand used to hold the camera steady.

Tungsten light Light from regular room lamps and ceiling fixtures, not fluorescent.

Underexposure A condition in which too little light reaches the film, producing a thin negative, a dark slide, or a muddy-looking print.

Wide-angle lens A lens that has a wider field of view (includes more subject area) than a normal lens.
How To Turn Your Adjustable Camera Into a Simple Camera

Do you have an adjustable camera with a lot of confusing controls? Instead of fiddling with the controls before each picture, you can fix your camera so all you have to do is press a button to take your picture (outside in bright light). Here's how:

1. Set the shutter knob at 125 (30 for flash).
2. Set the lens opening to f/11.
3. Set the focus ring to 15 feet.
4. Use only print film with a speed of 100-400.
5. Never change these settings (when you use flash turn the shutter knob to 30; remember to turn it back to 125 after you're done taking flash pictures).

*If you use slide film, you must change your camera controls according to your camera manual.
Coming Up!

Unit 2 - Exploring Photography

Now that you're a photographer, you will be searching for new things to photograph and new ways of photographing the same old things. Exploring Photography is just the unit for you. It will show you some special ideas for taking pictures with any camera.

- How to compose your pictures, deciding where the subject looks best and how to focus attention on the subject.
- How to take action pictures of sports, animals, and just about anything that moves.
- How to use lighting for better pictures, indoors and outdoors, daytime and nighttime.
- How to create special effects, including panoramas.

Other manuals listed on page 1 can help you learn to use an adjustable camera, process and print your own pictures, or make videos and movies.
Adventure #4

Mission: Show the difference between vertical and horizontal framing.

Subjects: A variety (you choose them) that includes buildings and close-ups of people. You can take more than one picture of each.

1. Take 5 pictures holding the camera normally (horizontally), choosing subjects that fill most of the frame.
2. Take 5 pictures holding the camera on end (vertically), choosing subjects that fill most of the frame.
3. Compare your pictures. Did you choose horizontal framing for low buildings and vertical framing for people? The best framing is usually the choice that fills most of the frame with the subject.

Adventure #5

Mission: Get close to the subject for better pictures.

Subject: A building and a person (or animal).

Guide: Pages 18 and 19.

1. Move far away from a building and take its picture.
2. Move closer until the building fills the viewfinder and take another picture.
3. Repeat steps 1 and 2 with a person for your subject.
4. Compare your pictures. Does the closer view show the subject better? Can you see details that you can't see in the wider view?

Adventure #6

Mission: Use simple backgrounds and different points of view.

Subject: A person.


1. Take a picture of a person standing in front of a cluttered background.
2. Without moving the person, move yourself to a new position that changes the background. Find a different point of view that shows a less cluttered background. (Get higher to show the grass, or get lower to show the sky.)
3. Now make a third picture. This time, move the subject to a simpler background in the same general area.
**Adventure #7**

**Mission:** Show the difference between frontlighting, sidelighting, backlighting, and diffuse lighting.

**Subject:** A person.

**Guide:** Pages 22 and 23.

You'll need a bright, sunny day. Take these pictures a few hours after sunrise or before sunset (when the sun is at an angle—not straight overhead).

Use the drawings on pages 22 and 23 as a guide. Move your subjects and yourself to show the four types of lighting.

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**Adventure #8**

**Mission:** Use flash and show the importance of distance.

**Subjects:** 3 people.

**Supplies:** A flash attachment (or built-in flash).

**Guide:** Pages 24, 25, and 26.

1. Take 3 people outdoors in the dark.
2. Have them stand in a line in front of the camera. Place them at different distances from the camera—at 3 feet, 7 feet, and 20 feet.
3. Take a picture (show all 3 people).
4. Take another picture with all 3 people standing next to each other about 7 feet from the camera.
5. Compare the pictures. Is the light uneven in the first picture? Does the second picture look better? Do you know why?