

APRIL 2009

Nature Friend

Study Guide

Introducing a Study Guide

Hello, Reader Friends,

Included with this April issue of *Nature Friend* is a supplemental publication, a *Study Guide* to the *Nature Friend* magazine. In the *Study Guide*, you will find exercises that reinforce what can be learned from the pages of *Nature Friend*. Exercises may be photocopied for classroom use.

We are also planning for several bonus features that you will find only in the *Study Guide*. Take a look at this new feature: “A Study in Nature; A Lesson in Writing.” You are encouraged to learn to absorb the world of nature as you take a hike. Besides learning to see, hear, and smell in a fresh way, you will be challenged to write about your hike for the inspiration and knowledge it can bring to others.

Maybe photography is your interest. We are planning for photo tips to be another bonus feature.

And, we want to hear from you. Whether a story you wrote about your nature hike, a question about photography, or a photograph you took, we welcome your submissions.

The *Study Guide* is available for \$2.00 per month for active *Nature Friend* subscription accounts. Since this will be shipped along with your *Nature Friend* magazine, there is no extra shipping fee for

foreign accounts. Whether you live in the USA, Canada, or China, \$2.00 (U.S. funds) per month is your price.

Introductory special—Offer expires April 30.

Here is how it works:

Extend your *Nature Friend* subscription by April 30, and order the supplemental *Study Guide* for the same term.

With your one-year renewal, we will add, free of charge, up to six *Study Guides* for the remaining issues on your current *Nature Friend* subscription. With a two-year renewal, we will add up to twelve *Study Guides*.

Examples: If you have six issues remaining on your current subscription and you renew for one year with the *Study Guide*, you will receive eighteen *Study Guides* for the price of twelve (\$24).

If you currently have nineteen issues remaining on a two-year subscription and you add a two-year renewal with study guide, we will give you twelve free study guides on the existing subscription. The remaining seven may be purchased at \$2 each.

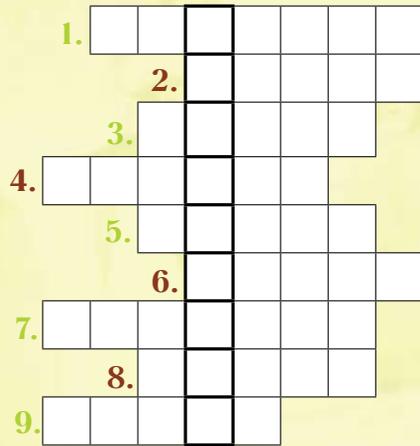
This introductory offer expires April 30, 2009. ◀

Complete these exercises to reinforce what you learned from the April 2009 Nature Friend magazine. Study Guide exercises may be photocopied for classroom use.

by Marvin Eicher



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Acrostic

1. Kind of penguin that may never touch land.
2. Bird that is a traditional sign of spring.
3. What bats do during the day.
4. Panda's favorite food.
5. Australian animal that looks like a teddy bear, is sometimes called a bear, but is not a bear.
6. Clump of frog eggs.
7. Substance that keeps frogs from freezing.
8. Besides China, pandas live in eastern _____.
9. Device that splits white light into the color spectrum.

If all your answers are correct, the letters in the box will spell the name of the butterfly's feeding tube.

True or False

1. Emperor penguins learn to remember each other by singing. _____
2. Pandas eat nothing but bamboo. _____
3. Koalas eat nothing but eucalyptus. _____
4. In the 1850's, people of the Western world had never heard of pandas. _____
5. All frogs spend the winter burrowed deep in mud. _____

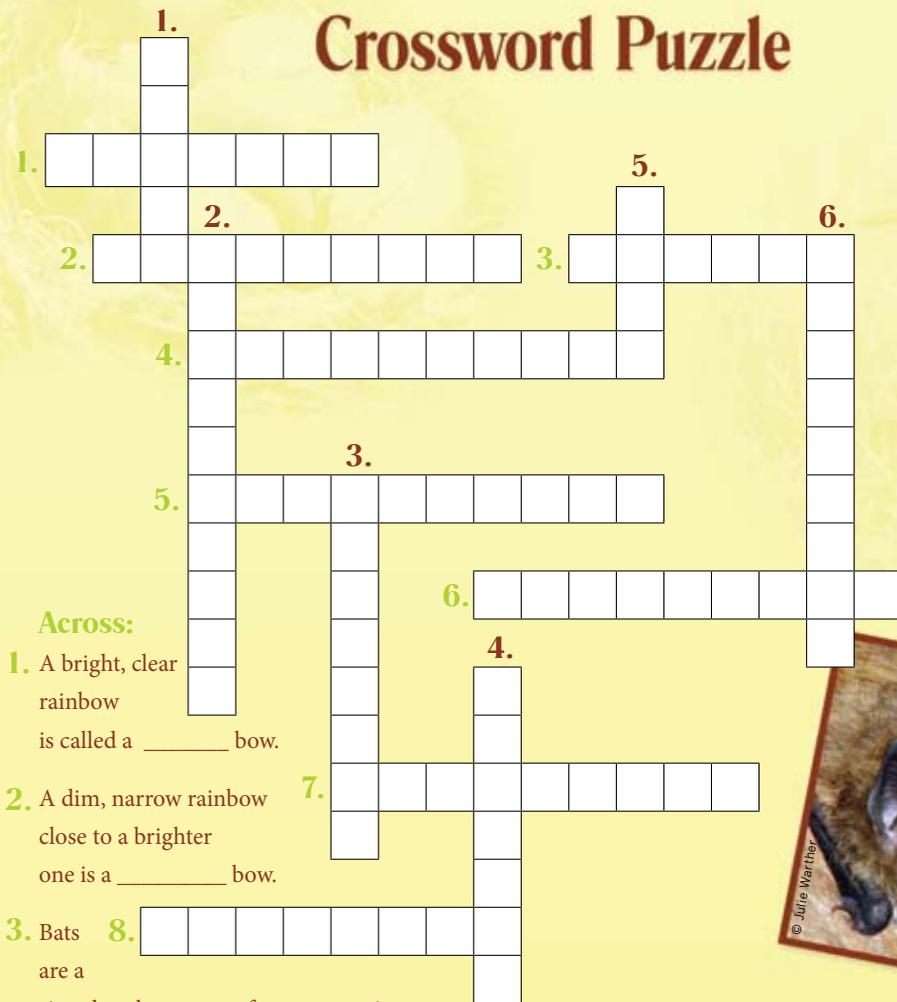


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Crossword Puzzle



Across:

1. A bright, clear rainbow is called a _____ bow.
2. A dim, narrow rainbow close to a brighter one is a _____ bow.
3. Bats _____ are a sign that the season of _____ is near/here.
4. Bats eat thousands of _____ and other insects.
5. Immature robins are called _____ when they have left the nest.
6. A rainbow is produced when light is both r_____ and r_____. (Put one word in 6 across and the other in 6 down.)
7. Immature robins are first called _____.
8. A male northern flicker can be identified by his _____.

Down:

1. The color _____ is made by mixing all the colors of the rainbow.
2. The panda's color pattern serves as a good _____.
3. A male ruffed grouse makes a sound called _____ by beating his wings.
4. Bats migrate south by late _____.
5. Young bats are called _____.
6. A rainbow is produced when light is both r_____ and r_____. (Put one word in 6 across and the other in 6 down.)

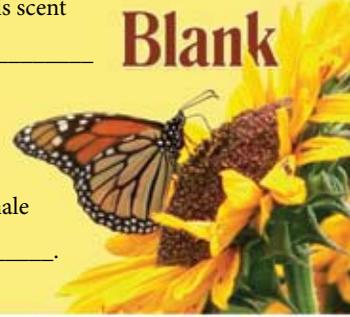


For You to Research

1. Who was the American president that visited China in 1972?
2. Cougars have numerous other names. What are three?
3. Why is a rainbow a bow instead of a straight line?
4. For what high purpose did God create the rainbow?

1. What are two kinds of plants that butterflies need? _____ and _____.
2. What two kinds of butterflies have the same names as punctuation marks? _____ and _____.
3. Why does a male panda want to put his scent high off the ground? _____
_____.
4. How does this affect other (smaller) male pandas? _____.

Fill
in
the
Blank



THE Photo CRITIQUE

by Kevin Shank

These pink lady's slippers are growing under pine trees about fifty yards from where I am typing this. We were excited to discover about fifty plants the first spring we lived here. Perhaps you will soon be taking a nature walk and finding wildflowers you would like to photograph. Here are some tips that I consider when photographing flowers.

A solid camera support. I always use a tripod whenever possible, as I want the photos to be very sharp. A rock, log, or backpack can be improvised to support a camera down low.

Eye-level is often the most pleasing. Many times the things we photograph look best when the camera is at the subject's "eye" level or lower. For these flowers, I chose to position the camera low on their level. My tripod legs extend almost flat, and that is valuable



when photographing close to the ground. If purchasing a tripod, this is one feature to consider.

“Rule of thirds” composition.

Next consider the composition. Very closely related to this is whether the photo should be vertical or horizontal. Visualize the photograph as split in thirds with two vertical lines, and two

horizontal lines. Placing the main subject of the photograph on these lines or at the intersection of lines makes a powerful composition. This is called “The Rule of Thirds.”

Consider lens choice. I used a telephoto lens to photograph these lady’s slippers. That softened the focus of the background, nicely separating the flowers from it. A small flower may require a macro lens or some form of extension, but that will be another study.

We invite you to send your best photos to The Photo Critique, 4253 Woodcock Lane, Dayton, VA 22821, or e-mail to photocritique@naturefriendmagazine.com. While we can't publish all submissions, we can only consider those that you submit. We also invite your photo tips.



◀ *This mountain chickadee is on a fir branch with hoarfrost.*

Larissa Kuiper, 16, Kamloops, BC

What a beautiful photo opportunity! I like the angle of the bird, and the fir needles provide a nice texture. Capturing this when hoarfrost clung to the tree sets a mood that would be missing without it.



One observation, the Canon A640 limited you to the features of a point-and-shoot camera. While you were likely zoomed in as close as you could, birds are small and photograph easiest with a long zoom on an SLR camera. I have cropped this picture to simulate a long lens. Notice how this enhances the beauty of the bird on this perch. The background is soft and the overhanging twigs nicely frame the top edge.



◀ *Crocus Blossoms*

Kate Barry, 17, Sugar Grove, NC

Crocuses are a cheery sign of spring. Each of these three blossoms is on a “rule of thirds” line. You chose a higher-than-eye-level vantage point to photograph from, but this demonstrates a good time to deviate from that general rule. We are able to see into the flowers, and all three are in sharp focus, both are good reasons to choose this angle. The colorful insect in the left blossom adds a nice touch too. This is very well done.



A Morning Walk with God

by Judy Kauffman

My early morning walk took me alongside the shrubbery and tree line that borders our neighbor's field. A glorious sun shone bright and yellow over the field. The grass was drenched, looking silvery in the wet, wetness of a heavy dew. Using my binoculars, I admired a grass blade with huge dewdrops hanging onto it.

And then I looked up. Perhaps a hundred feet away, broadside to me, stood a large deer with its head turned and looking at me, almost like a statue. Not a muscle twitched. I carefully reached down into my little red pail, lifted out my binoculars for a close-up, and just gazed at the magnificent doe. There we stood, close to a full minute, both of us staring at each other, neither of us moving. In an inaudible prayer of praise, I breathed, "Oh, thank You, loving Father. Oh thank You...thank You!"

Finally she turned her head a bit, and I could see bits of brown hay in her mouth, leftovers from haymaking. She took a few steps, turned around, and looking toward the woods, she did the classical thing. Bounding in great leaps, up and down, she headed for the woods, accompanied by loud snorting. I'm not sure what the snorting was about, unless she was frustrated that I had interrupted her delicious breakfast.

Coming home, again along the tree border, I found several bushes dressed up with delicate, light pink bells. I cut several sprigs for a bouquet to take home. The stems emitted a white sap, so

I supposed the plant was in the milkweed family. But in checking a nature guide, I found it to be spreading dogbane. Such a baneful name for those lovely bells with a sweet fragrance.

God blessed my morning with tokens of love. "Thank You, Lord!"

Take a nature walk of your own. Carry with you a notebook and pencil so you can jot down the things you wish to remember for your article. Binoculars will help you study birds and animals you see, and a camera can record the sights.

Absorb the hike to the fullest:

- ▶ Smell the fragrant flowers, the damp earth.
- ▶ Look for not only the big animals, but also the small, colorful insects.



- ▶ Listen to the sounds: trickling water, whispering breeze, singing of a bird, the drumming of a grouse, the gobble of a turkey, the alarmed chatter of an agitated squirrel, or the snorting of a nervous deer.
- ▶ Feel the cool grass, the soft moss, and prickly pine needles.

Illustrations add beauty to your writing. You can take photographs or sketch drawings of the things you see. Your illustrations will usually have the most impact if you are on the level of what you are illustrating. For a mushroom or flower, this may mean getting down on the ground.

Use a field guide to identify an unfamiliar plant, bird, or insect. Learning about what you saw will not only increase your knowledge, but also add

interest to your writing.

To write of your experiences, just use words to tell the story as you would when talking to a friend. As you write, use colorful adjectives as Mrs. Kauffman did in her story. She writes, “A glorious sun shone bright and yellow...,” and look how she described the dew! Not just a heavy dew, but “The grass was drenched, looking silvery in the wet, wetness of a heavy dew.”

Use your writings to bless others. You might send a letter to a distant friend, or a scrapbook to a grandparent. We also invite you to share your stories with us. We especially like stories from our readers to consider for use in the “Nature Trails” feature of *Nature Friend*.

A secondary rainbow is higher in the sky than the primary rainbow.

White sunlight striking water droplets on back edge of storm.

Sun

In a droplet, light is refracted at different angles and reflected twice before leaving the drop. This diagram shows only the violet (top color of rainbow) and red (bottom color of rainbow) in the droplets. Note the secondary rainbow is more pale than the primary rainbow.

Only one color angle from each droplet is visible to the viewer. Because the light is reflected two times, the secondary rainbow color order is reversed from the primary order. Violet is on the top, then indigo, blue, green, yellow, orange, and red at the bottom.

See the “Learning By Doing” feature on page 27 (April 2009 NEM) for a diagram of a primary rainbow.



A Secondary Rainbow

