



U.S. Forest Service
U.S. Department of Agriculture

National Park Service
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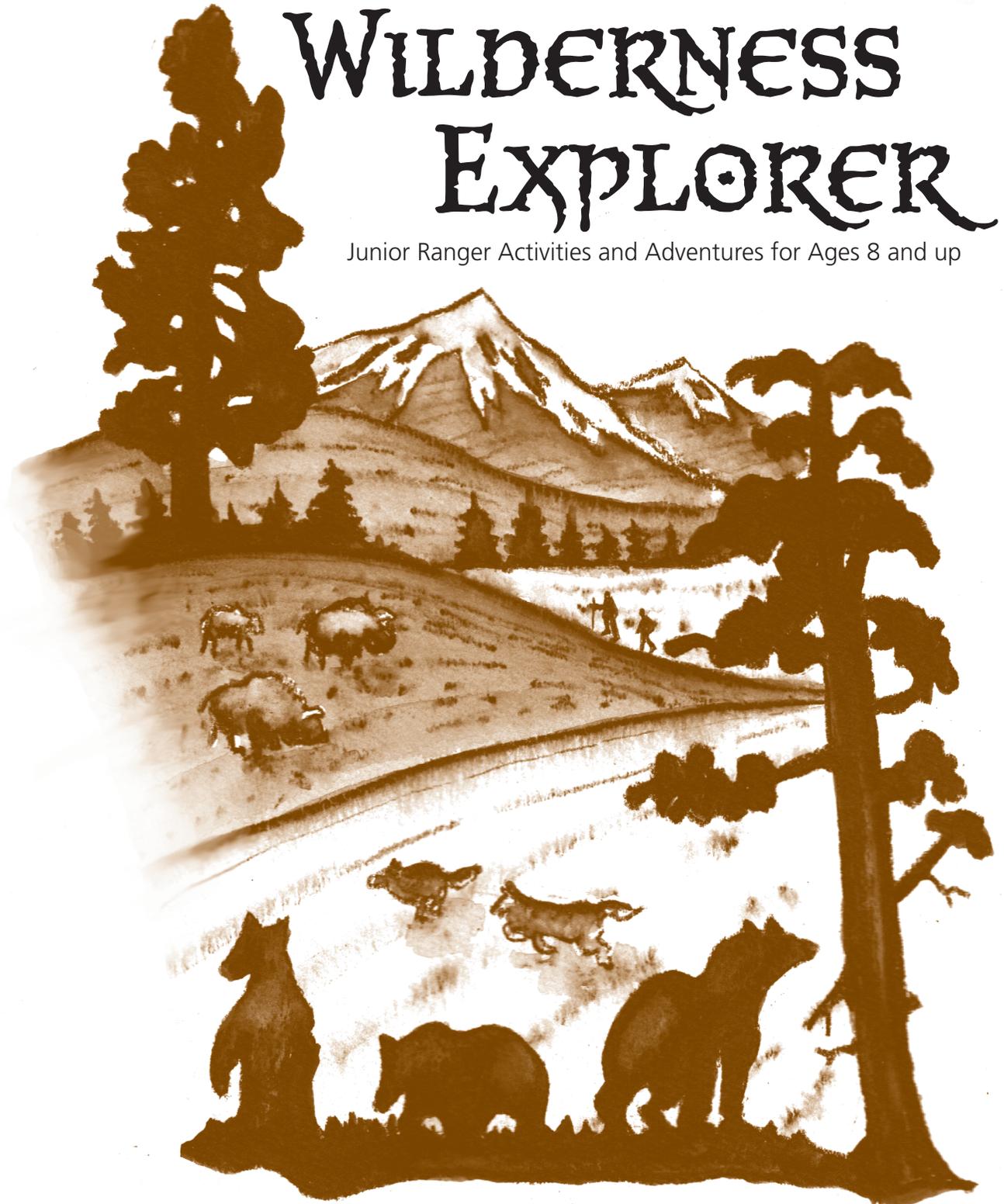
Bureau of Land Management
U.S. Department of the Interior

U.S. Fish and Wildlife Service
U.S. Department of the Interior



WILDERNESS EXPLORER

Junior Ranger Activities and Adventures for Ages 8 and up



WELCOME TO WILDERNESS

This activity booklet is designed for exploring wilderness, either at a federally-designated Wilderness Area you are visiting, a Wilderness Area you would like to visit, or a wild place near your home. Activities are geared for ages 8 and up, so look for the bear paw and choose the activities that are right for you.



Ask a Wilderness Ranger! As you explore, you may find it helpful to ask for help. You and an adult can also look for information on the internet. Here are five great websites to learn more about wilderness:

- Wilderness Connect www.wilderness.net
- Bureau of Land Management www.blm.gov/programs/national-conservation-lands/wilderness
- Forest Service www.fs.fed.us/managing-land/wilderness
- National Park Service www.nps.gov/wilderness
- U.S. Fish and Wildlife Service www.fws.gov/refuges/whm/wilderness.html

Answers to many of the activities and questions can be found on page 21.

SPECIAL PLACES

Draw or describe a place that is SPECIAL to you in this space.



What does the word WILD make you think of? Draw or describe it here.



PEOPLE AND WILDERNESS IDEAS

Ask 3 people what they think “wilderness” is. Record their responses here.

1. Person interviewed: _____

Wilderness is...

Example: A. a home for wild animals

B. a quiet place to think

C. a place to be free

D. your idea

2. Person interviewed: _____

Wilderness is...

3. Person interviewed (could be a wilderness volunteer or ranger):

Wilderness is...



TWO KINDS OF WILDERNESS



WILDERNESS is an area that is ... wild.



There are two kinds of wilderness. One kind of wilderness can be any natural area near you - wild places like a grassy hill, pond, river, or beach. The second kind of wilderness is described in the 1964 Wilderness Act and these places are called "Wilderness Areas" - lands and waters on federal public land that are protected.

Complete the following description to learn more about the federally-designated Wilderness Areas referenced above, by using these words to fill in the blanks:

will controlled free nature cut changed

In Wilderness Areas, nature follows its own _____. The animals aren't _____. The trees are not _____. The rivers run _____, without dams. Visitors enjoy being in _____ as it was before modern humans _____ it.

Native American cultures believe that all land ought to be respected, and may not view wilderness as a separate idea.

What does wilderness mean to you? Use the space below to capture your ideas with words and/or pictures.

WHERE IS WILDERNESS?



There are 765 federally-designated Wilderness Areas protecting more than 110 million acres of public land, managed by the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service.

Draw or name something you would find in a Wilderness Area in Alaska.



Using the map at the right, find the answers:

1. Which Wilderness Area is furthest from you?
2. Which state has the greatest number of Wilderness Areas?
3. Six states have no Wilderness Areas. Name them here:

Draw or name something you would find in a Wilderness Area in Hawaii.

Ask a Wilderness Ranger (or visit wilderness.net):

How big is the Wilderness Area nearest you?



ARE WE THERE YET?



Put an X on the Black Rock Desert Wilderness and the Gulf Islands Wilderness.

5. Using the ruler below (cut it out if needed), estimate the distance between the two Wilderness Areas: _____ miles.

6. Suppose that you and your family could drive from one to the other at 60 miles per hour (mph). How long would it take to get there?

Hint: distance ____ (miles) ÷ speed _____ (mph) = time _____ (hours).

7. What might you find that is different between the two Wilderness Areas?

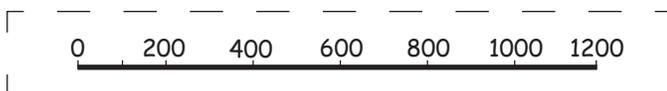
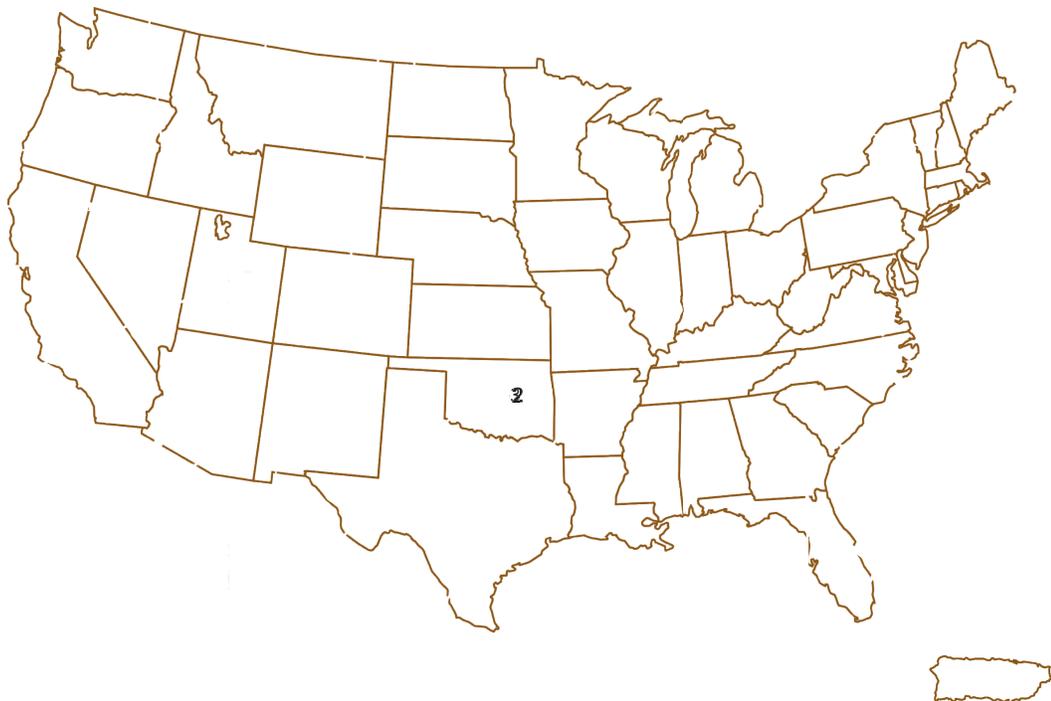
8. Which Wilderness Area named below is closest to:

New York City? _____

Phoenix? _____

New Orleans? _____

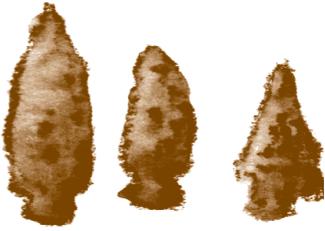
The names on the map below are just a few of the Wilderness Areas in the United States. (The number is the total number of Wilderness Areas in that state)



WHO WAS HERE BEFORE?



Look around a Wilderness Area or other natural area you think of as wild and consider these questions (ask a Wilderness Ranger (or check the internet) for help):



1. What people lived here before the Europeans came?



2. Did these people live in villages or did they move their homes to follow and hunt animals? Draw a picture of where they might have lived below:

3. What things might these people have eaten (such as roots, berries, buffalo)? List or draw a picture below:



4. Do these people or their descendants still live here or near here?

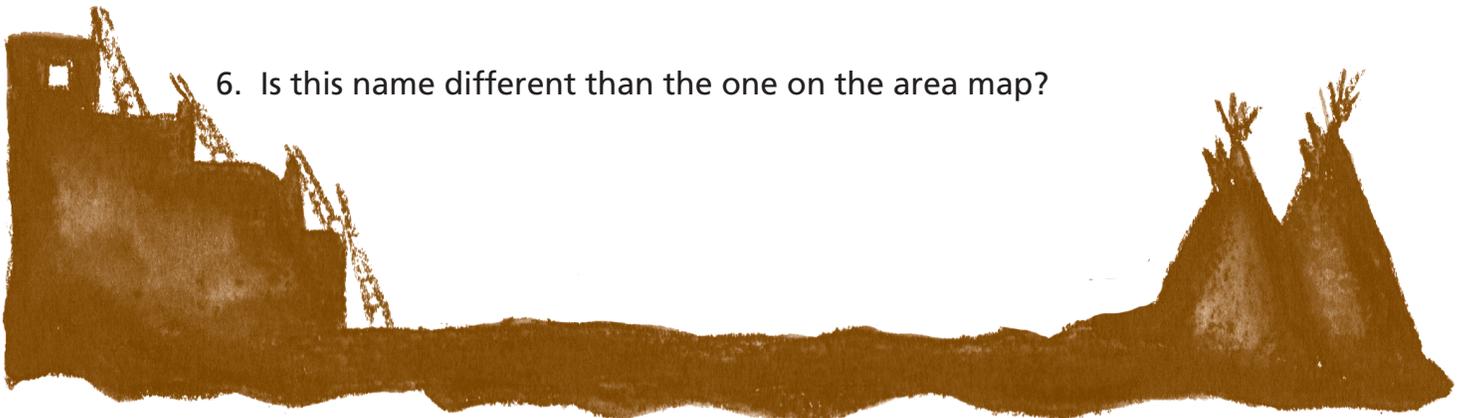
Important: If you find any arrowheads, pieces of pottery, or other old objects be sure to leave them where you found them so that archaeologists can reconstruct history!



Answer the first four questions, plus:

5. Did these people have names for any of the natural features such as mountains, rivers, or valleys? Write down the name of one of the features here:

6. Is this name different than the one on the area map?



WILDERNESS WORD SEARCH



Words may be horizontal, vertical, or diagonal - left to right



Find at least 8 words



Find at least 12 words

BACKPACKING
CONTRAST
FREE
FUTURE
HIKING
HORSEBACK

NATURAL
PHOTOGRAPHING
PRESERVE
PRIMITIVE
QUIET
RECREATION

RESEARCH
SCENERY
SOLITUDE
SPIRITUAL
UNCONFINED
UNDEVELOPED

UNIQUE
UNSPOILED
UNTRAMMELED
VIEWS
WATERSHED
WILD

LEAVE NO TRACE

How can you be a responsible Wilderness Explorer? The Seven Principles of Leave No Trace are a good starting place:

1. Plan ahead and prepare
2. Travel and camp on durable surfaces
3. Dispose of waste properly
4. Leave what you find
5. Minimize campfire impacts
6. Respect wildlife
7. Be considerate of other visitors

Have you ever heard the phrase "Leave only footprints...take only photographs?"

Even a footprint can leave an impact. Please be thoughtful of where you step.

Go through the maze on the next page and apply these principles.

Help Leave No Trace on your public lands!



Pick up three pieces of litter and put them in the trash.



Pick up a bag of litter. Separate and recycle as many items as possible. Put the remainder in the trash.

RECYCLING is better for the Earth than putting things in a landfill, but it still takes a lot of energy to recycle.

REUSE is even better for the Earth. Refill your water bottle and conserve the Earth's resources.



Just for fun, decorate and color the water bottle in this book.



To learn more about Leave No Trace visit www.LNT.org

LEAVE NO TRACE MAZE



These Wilderness Explorers are about to go on a trip through a Wilderness Area. Help them make the best choices about where to go and what to do along the way. Each stop has a numerical rating with it. Add up your score & find your impact level on page 21.

START

A. Map

B. GPS

C. Check weather

D. Camp by the lake

E. Camp in the meadow

F. Camp in an opening in the forest

G. Put your trash in a hole

H. Pack your trash out

I. Pick flowers

J. Take a picture

K. Take an arrowhead

L. No fire-watch the stars

M. Cook on a stove

N. Build a big fire

O. Feed a squirrel

P. Watch wildlife from a distance

Q. Share the trail

R. Respect the Wilderness experience of others

HOME

Points
A. 1
B. 2
C. 1
D. 3
E. 2
F. 1
G. 5
H. 1
I. 5
J. 1
K. 5
L. 1
M. 1
N. 3
O. 5
P. 1
Q. 1
R. 1
My Total

BE A SCIENTIST

Wilderness Areas can be places where scientists can go to understand plants, animals, and landscapes that are in a more natural state, less affected by human activities.

As a scientist, you will ask a question, make a prediction (called a hypothesis), and test your hypothesis by observing the thing you asked a question about.

1. Go outside and find a plant or animal to observe. Describe it here with words and/or pictures:

2. Come up with a question about it. For example, what does this bird eat? Does this plant prefer to live in dry soil or wet?

3. Make a hypothesis. This is an “educated guess” about the answer to your question. For example, I think that the bird eats ...”

4. Think about and describe how you could test your hypothesis. If it is possible to test the hypothesis by making observations, then do so. If not, think about what kinds of observations you can make. For example, “I will observe the bird and see what it eats...”

5. Write down your observations here.



BE A SCIENTIST

6. Do you think the animal or plant you observed was affected by people being nearby?

If so, how?



Complete the six previous questions, plus...

Ask a Wilderness Ranger (or check the internet):

7. What kinds of research are going on in the wilderness you are visiting or studying?

8. Develop a hypothesis that would best be tested both inside and outside of wilderness. Why would it be important to compare observations inside and outside of wilderness?

*Do you participate in your school's science fair?
Consider a wilderness hypothesis for your fair project.*



WHAT CAN YOU DO...

In this picture, put an "X" through the things that you think DON'T belong in Wilderness Areas.

Color the things that you think DO belong in Wilderness Areas.



IN WILDERNESS AREAS?



Draw yourself doing something that YOU would like to do in a Wilderness Areas.

WILDERNESS ADVENTURE

The best way to learn about wilderness is to get out and explore it! Find out where the nearest Wilderness Area is, and go explore with your family. If you are unable to go to a Wilderness Area, find a place that is away from developments (like roads and buildings). Make sure you complete the "Wilderness Safety" activity before you head out.

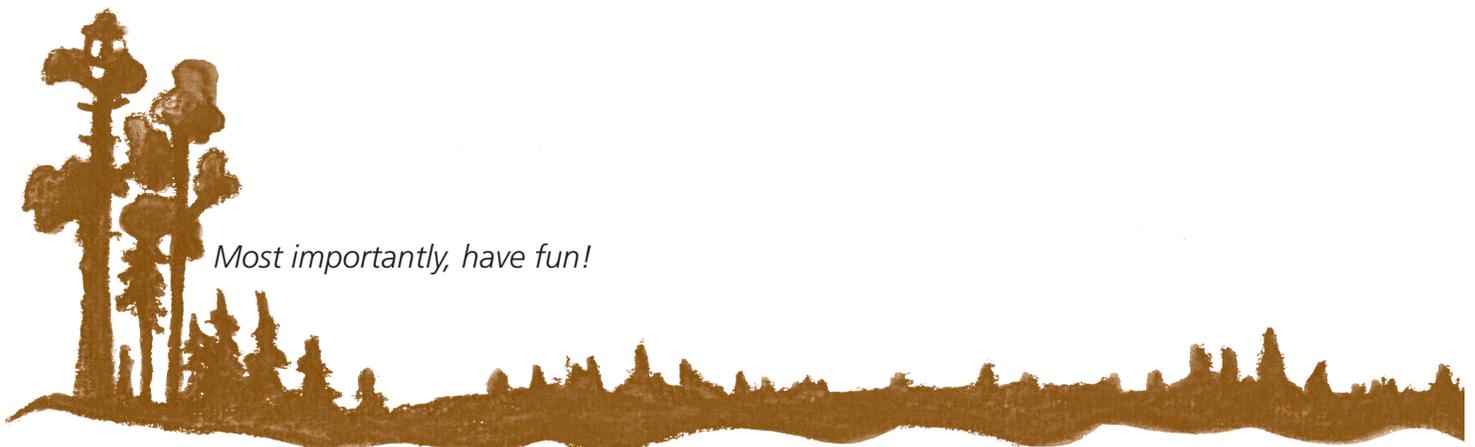
Use ALL of your senses. Find a quiet place to sit for five minutes - describe in words or pictures what you:

See

Hear

Smell

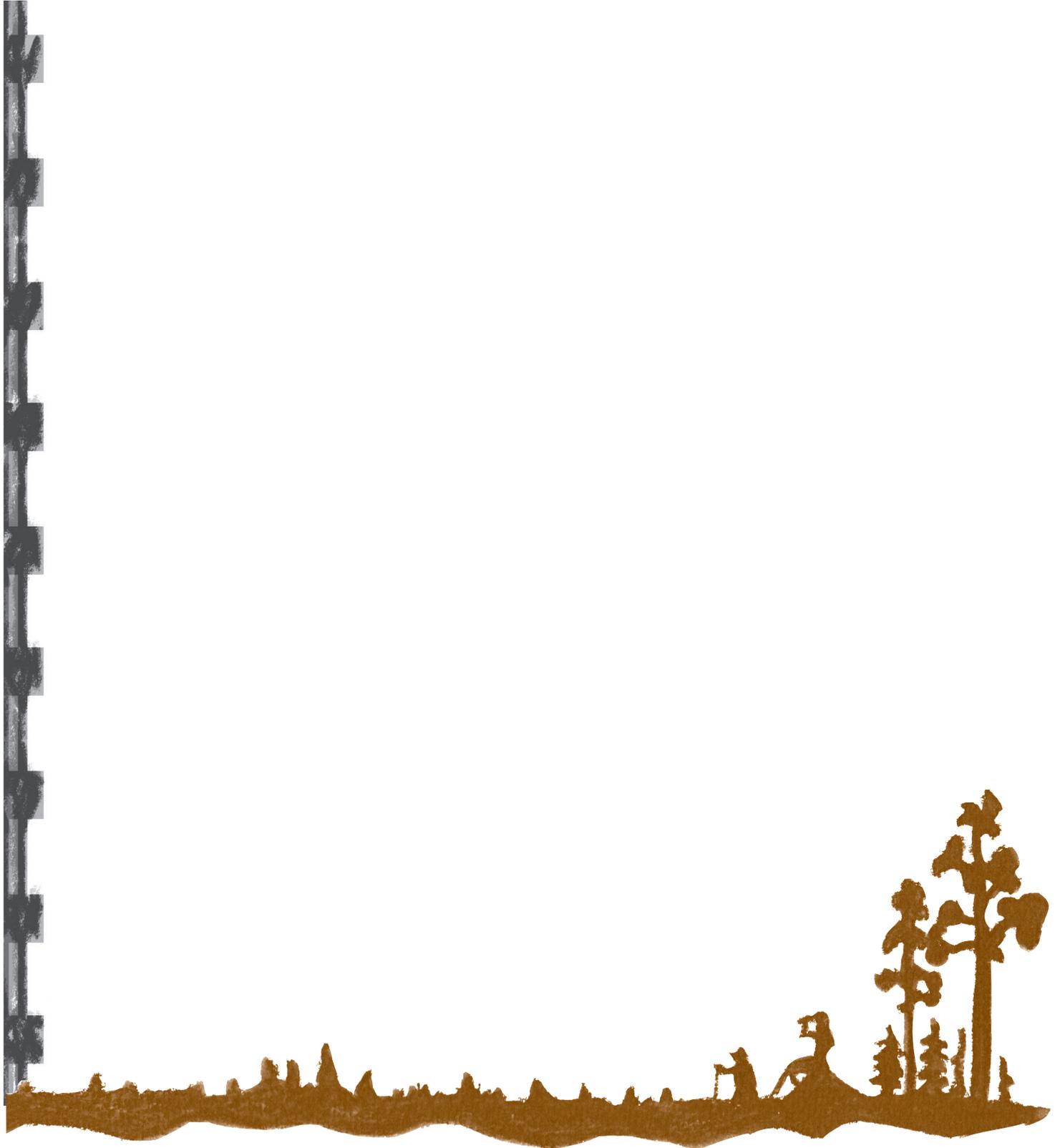
Feel



Most importantly, have fun!

WILDERNESS ADVENTURE

When you get back home, think about what you would tell a friend about your wilderness experience. Be creative! You can write a story or poem, draw a picture, or perhaps make up a song or play. Your notes from page 16 may help you get started. Use the space below to organize your ideas using words and/or pictures.



WILD WORDS

Wander through time and history to explore the idea of wilderness by reading the information in the timetable below.

DATES	HISTORICAL EVENTS	WILDERNESS QUOTES
1607	Jamestown, Virginia settled	<i>"Wilderness is a damp and dreary place where all manner of wild beasts dash about uncooked!"</i> - Anonymous, 1600
1803 1806	Louisiana Purchase Lewis and Clark Expedition returns	<i>"There is a pleasure in the pathless woods. There is a rapture on the lonely shore. There is society where <u>none</u> intrudes. By the deep sea, and music in its roar: I love not man the less, but Nature more..."</i> - Lord Byron, British Poet, 1816
1893	Professory Frederick Jackson Turner states that the American frontier is closed.	<i>"Thousands of tired, over-civilized people are beginning to find that going to the <u>mountains</u> is going home; that wilderness is a necessity..."</i> - John Muir, naturalist and co-founder of the Sierra Club, 1901
1930- 1945	Major road and dam construction in the American West, including Hoover Dam and Grand Coulee Dam.	<i>"Wilderness is melting away like some last snowbank on some south facing mountainside during a hot afternoon in June. The momentum of our <u>blows</u> is so unprecedented that the remaining remnant of wilderness will be pounded into road-dust long before we find out its values."</i> - Bob Marshall, co-founder of The Wilderness Society, 1937
1955	Development of Echo Park Dam at Dinosaur National Monument is defeated.	<i>"Against pressures for economic or recreation development, it is claimed, the efforts for preservation cannot be <u>justified</u> by the relative few who use wilderness regions."</i> - Dr. James P. Gilligan, Forester, 1954
1962	Scientist Rachel Carson publishes <i>Silent Spring</i> , stirring public consciousness about pesticides and the environment.	<i>"The wilderness that has come to us from the eternity of the past we have the boldness to project into the eternity of the <u>future</u>."</i> - Howard Zahnizer, principal author of the Wilderness Act, 1964
1964	President Lyndon Johnson signs the Wilderness Act. Several U.S. Forest Service Wilderness Areas are designated at this time.	<i>"If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the <u>miracles</u> of technology. We must leave them a glimpse of the world as it was in the beginning, not just after we got through with it."</i> - Lyndon Johnson, 1964
1968	The Great Swamp National Wildlife Refuge Wilderness becomes the first U.S. Fish and Wildlife Service designated wilderness.	<i>"In <u>wilderness</u> I sense the miracle of life..."</i> - Charles Lindbergh, American aviator, 1967

WILD WORDS

DATES	HISTORICAL EVENTS	WILDERNESS QUOTES
1970	The Craters of the Moon Wilderness and Petrified Forest Wilderness become the first National Park Service designated Wilderness Areas.	<i>"We have forgotten how to be good guests, how to walk lightly on the <u>earth</u> as its other creatures do."</i> - Barbara Ward, 1972
1983	The Lee Metcalf Wilderness becomes the first Bureau of Land Management designated wilderness.	<i>"I hope the United States of America is not so rich that she can afford to let these wildernesses pass by, or so poor she cannot afford to keep them."</i> - Margaret (Mardy) Murie, Conservationist, 1980
2014	50th anniversary of the Wilderness Act	<i>"The character of wilderness is unique. Its combination of biophysical, eperiential, and symbolic ideals distinguish it from other protected places... Wilderness can be a life-changing experience, and it's part of our <u>m</u>ission to preserve wilderness for future generations."</i> - Jon Jarvis, former Director of the National Park Service, 2014



1. Wild Word Scramble: Find the one bold and underlined letter in each quote, and write them here:

□ □ □ □ □ □ □ □ □ □ □ □

Now unscramble the letters to form a special word in The Wilderness Act (hint: see the quote from The Wilderness Act on page 4).

2. What significant event in the history of wilderness occurred in 1964?

□ □ □ □ □ □ □ □ □ □ □ □



3. How do you think society's thoughts about wilderness have changed over time?

RAIDERS OF THE WILD

Many plants and animals have been moved from one side of the world to another for food, farming, hunting, and sometimes by accident (like hitching a ride on a boat). Some times these plants and animals (called "invasive") escape and have big effects on natural systems and change wild places.

An example is buffelgrass, a South African plant that is invading the Saguaro Wilderness. Buffelgrass easily catches fire. It pushes out the native plants including saguaro cacti. An area of buffelgrass can double every year.



B=buffelgrass



S=saguaro cactus

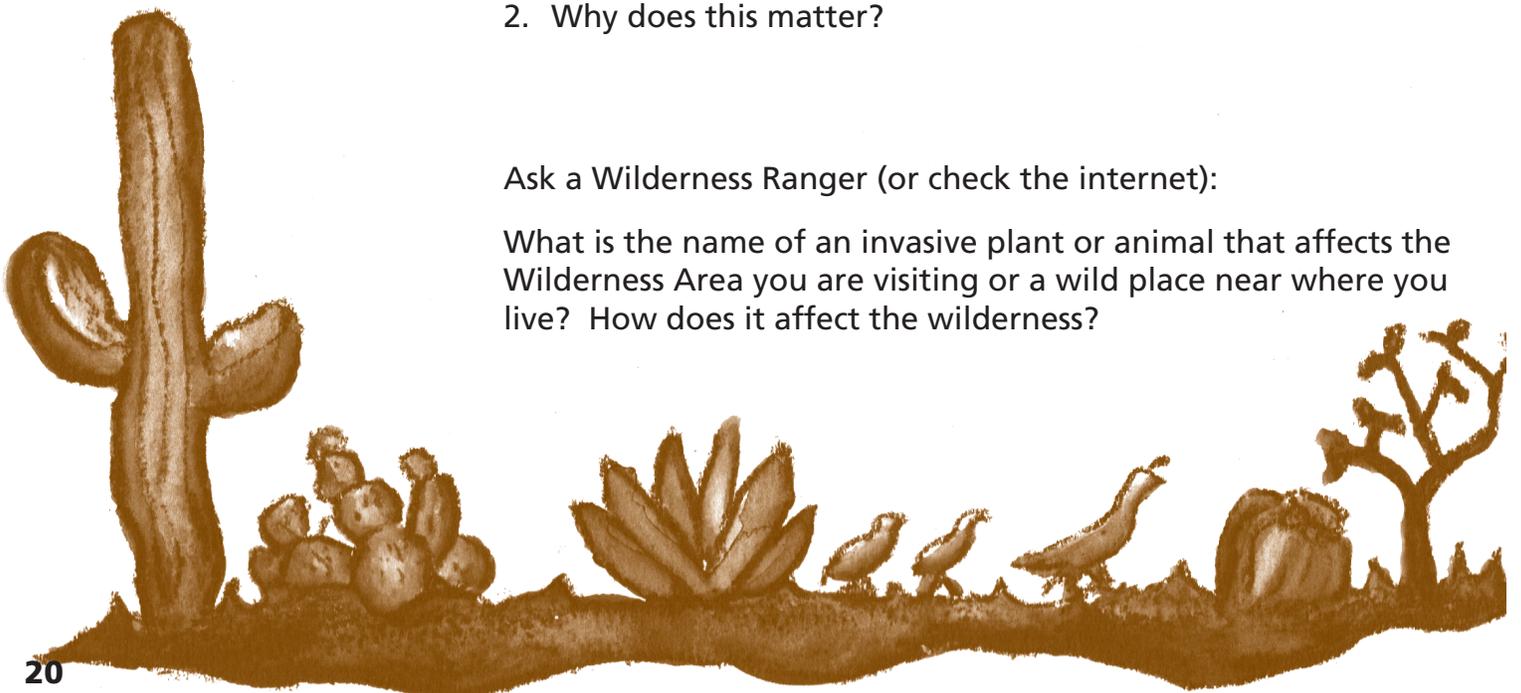
1. Use the table below to calculate how many years it would take for buffelgrass to push out saguaro cacti in this simplified model of the ecosystem. In year 1, buffelgrass occupies one square (B) and the rest are occupied by saguaros (S). In year two, put a B in two times as many squares, and put an S in remaining squares. Continue to double the amount of buffelgrass each year. In what year is there no more room for saguaro cacti? _____

Year 1	B	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Year 2																
Year 3																
Year 4																
Year 5																
Year 6																
Year 7																

2. Why does this matter?

Ask a Wilderness Ranger (or check the internet):

What is the name of an invasive plant or animal that affects the Wilderness Area you are visiting or a wild place near where you live? How does it affect the wilderness?



ANSWER KEY

For these activities, there is no "right" answer. Check the ones you have completed.

- | | |
|--|---|
| <input type="checkbox"/> Page 2, Special Places | <input type="checkbox"/> Page 10, Leave No Trace Litter Pick-up |
| <input type="checkbox"/> Page 3, People and Wilderness Ideas | <input type="checkbox"/> Page 12-13, Be a Scientist |
| <input type="checkbox"/> Page 4, What is Wilderness? | <input type="checkbox"/> Page 16-17, Wilderness Adventure |
| <input type="checkbox"/> Page 8, Who Was Here Before? | <input type="checkbox"/> Pages 22-23, Wild Windows |

Page 4, Two Kinds of Wilderness

will, controlled, free, nature, changed,

Page 5, Wilderness Safety

1. Ten Essentials

1. Map of the area
2. Compass
3. Flashlight
4. Extra food, such as energy bar
5. Extra clothing, including rain gear
6. Sunglasses and sunscreen
7. Matches, waterproof container, fire starter
8. Pocket knife
9. First aid kit
10. Water

2. What Else to Bring

Things you might want to leave at home: TV, hair dryer, toaster, boombox, high heeled shoes.

Note: It's OK to bring a cell phone or a GPS, but do not rely on these devices for safety. There may not be coverage and/or batteries may run down.

Page 6, Where is Wilderness?

- 1 and 2. It depends upon which state you pick.
 3. California—149
 4. CT, DE, IA, KS, MD, RI
- Other questions—many answers

Page 7, Are We There Yet?

5. 1600 miles ÷ 60 mph = ~27 hours
6. Answers vary
7. New York City—Fire Island Wilderness
Phoenix—Saguaro Wilderness
New Orleans—Gulf Islands Wilderness

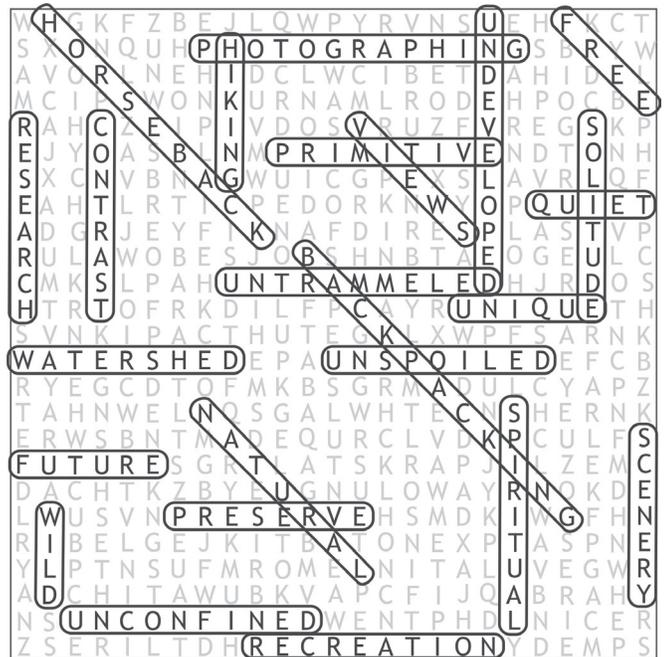
Page 11, Leave No Trace Maze

What was your score?

- 7—GREAT JOB! You are working towards leaving no trace.
8 to 12—Not bad, but please take care.
12 or more—Lighten up, you are leaving impacts.

If you got a 5 on any action—YIKES! You should not be doing this. Check your answer. Ask a ranger if you have any questions.

Page 9, Wild Word Search



Pages 18-19, Wild Words

1. UNTRAMMELED
 2. President Lyndon Johnson signed The Wilderness Act.
- Other question—many answers

Pages 14-16, What Can You Do in Wilderness?

Everything in the picture belongs, except: road, store, jeep, all-terrain vehicle (ATV), cell tower, power line, jet ski and the mountain bike. To learn why, check the definition of Wilderness on page 4. If this is a mountain forest, the palm tree does not belong. The garden gnome? Now that's just silly.

Pages 20, Raiders of the Wild

1. The buffelgrass replaces all of the saguaro cacti in year 5.
 2. Why does it matter? Loss of habitat, loss of saguaro ecosystem, fire danger increases.
- Other question—many answers

WILD WINDOWS

Make a window frame by following the directions on the next page.
Now go outside.



1. Use the window to frame a view where you can see things made by people, such as a road or a building. Draw or describe the view in box # 1 below.
2. Use the window to frame a view where you can't see anything made by people. Draw or describe the view in box # 2 below.

1

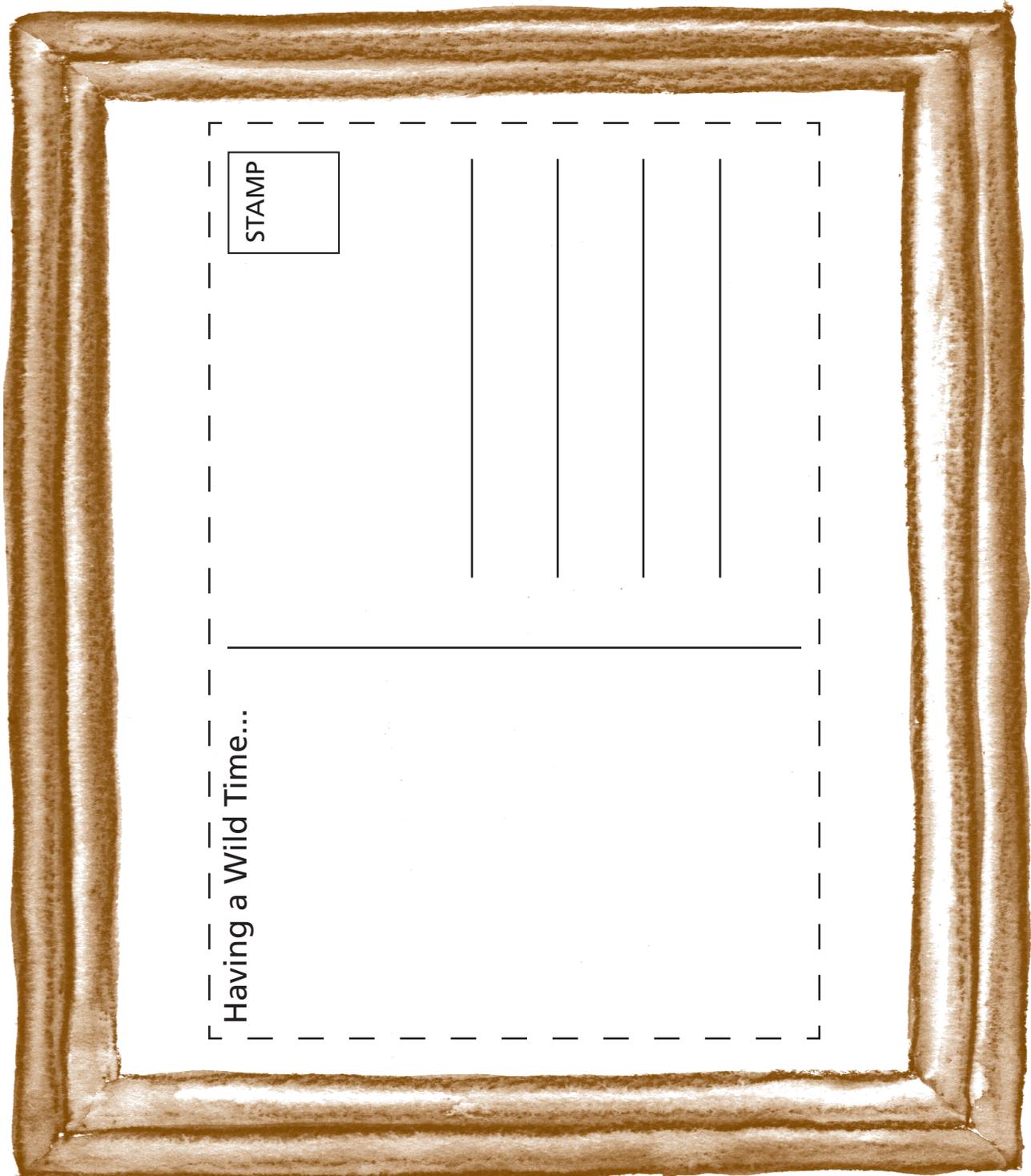
2

3. In which window do you think you would be more likely to see wildlife?
4. What did you like in each window? What did you not like?

WILD WINDOWS

Cut or tear out this post card along the dotted lines.

- Use this page with the hole as a frame for the activity on page 22.
- Save the post card—draw a picture on the other side about your wilderness visit and mail it to a friend.





This booklet is available for download at www.wilderness.net

