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

Bureau of Land Management
U.S. Department of the Interior

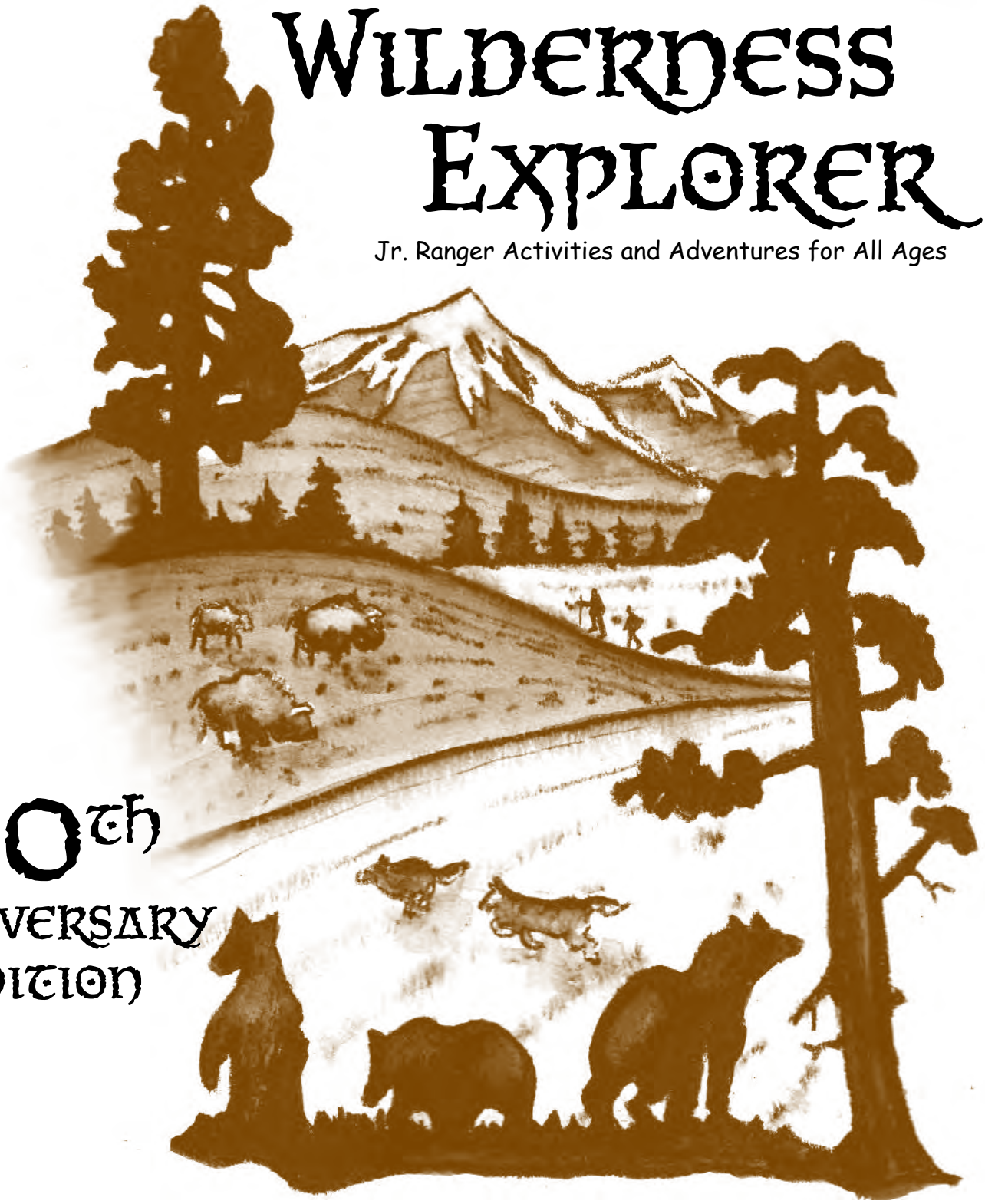
WILDERNESS 50 years 1964–2014 YOURS: TO ENJOY TO PROTECT

National Park Service
U.S. Department of the Interior

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

Wilderness Explorer

Jr. Ranger Activities and Adventures for All Ages



50th Anniversary Edition

Welcome to Wilderness

This activity booklet is designed for exploring wilderness, either at a wilderness area you are visiting, one near your home, one you would like to visit, or one you just want to study. Activities are geared for ages 8 and up to adults, so look for the bear paw and choose the activities that are right for you.

8+ Ages 8 and up 12+ Ages 12 and up

ASK A WILDERNESS RANGER! As you explore, you may find it helpful to ask a ranger or look for information in a visitor center. You and your adult can also look for information on the internet. Five great places to learn more about wilderness:

- Wilderness www.Wilderness.net
- National Park Service wilderness.nps.gov
- U.S. Fish and Wildlife Service www.fws.gov/refuges/whm/wilderness.html
- Bureau of Land Management www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS/Wilderness.html
- U.S. Forest Service www.fs.fed.us/recreation/programs/cda/wilderness.shtml

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

START EXPLORING!

Special Places 8+

Draw or describe a place that is SPECIAL to you in this space. Why is it special?

What might be SPECIAL about a place that is WILD?

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

People and Wilderness Ideas 8+

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

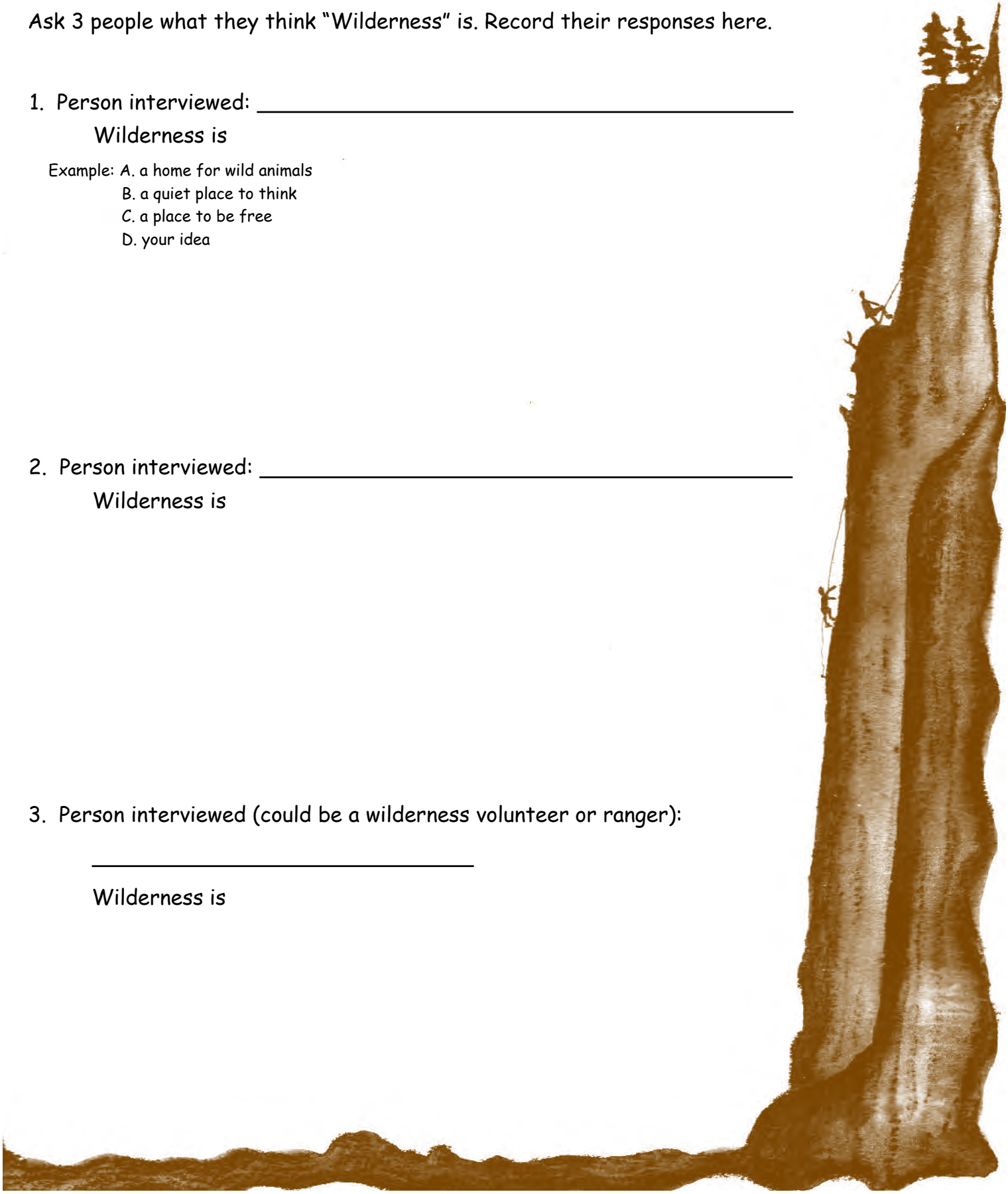
2. Person interviewed: _____

   Wilderness is

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

   _____

   Wilderness is



WHAT IS WILDERNESS?

WILDERNESS is an area that is ... wild.

You know what it means to be wild - when you are free to follow your own will. When you aren't controlled by others.

Complete the following description of wilderness by using these words to fill in the blanks:

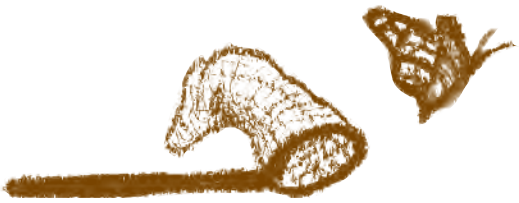
Wild, will, controlled, free, nature, cut, changed

In _____erness, 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.

In 1964, Congress passed the Wilderness Act, recognizing that certain wild places are special and worthy of being protected forever. Here is the definition of wilderness from the Act:

> *"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain."*



Note: A trammel is a word that can refer to a net, or a shackle for horses. Most generally, it means a barrier to free action; a restraint.

8+

Think about what you have just heard and read about wilderness. Create your own definition of wilderness here.

Wilderness is

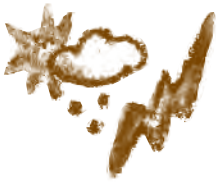
* Hold booklet to a mirror to find the order of the missing words:

Wild, will, controlled, cut, free, nature, changed

Wilderness Safety

Wilderness Explorers need to know about how to be safe when they're exploring the wilderness. Being safe in wilderness begins before you start your trip.

- Always go with another person, such as a parent, friend, or sibling.



- Check the weather and conditions for the area you are visiting.
- Tell someone who is staying behind exactly where you are going and when you plan to return.

TEN ESSENTIALS

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

1. There are "10 essentials" you and your adult should have with you to be safe and prepared for emergencies.
   Each are outlined in a box below. Put them on the list.
2. What else would you like to bring? Circle the items below. Don't make your pack too heavy!

WHERE IS WILDERNESS? 8+

There are over 750 wilderness areas containing 110 million acres of wilderness. The National Park Service manages 60 units of wilderness (40% of the land area within the National Wilderness Preservation System (NWPS). The U.S. Forest Service manages 439 units (33% of the land area within the NWPS). The Bureau of Land Management manages 221 wilderness areas (8% of the land area within the NWPS). The U.S. Fish and Wildlife Service manages 72 units (18% of the land area within the NWPS).

Draw or name something you would find in wilderness in Alaska.

Draw or name something you would find in wilderness in Hawaii.

Using the map at the right, find the answers:

1. How many wilderness areas are in your home state?

2. How many wilderness areas are in the state you are visiting?

3. Which state has the greatest number of wilderness areas?

4. Six states have no wilderness areas. Name them here:

Ask a wilderness ranger (or check the visitor center or the internet):

How much wilderness is in this forest or park?

Just for fun, color all the states you have visited.

Put an X on the Olympic Wilderness and the Saguaro 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).

What might you find that is different between the two wilderness areas?

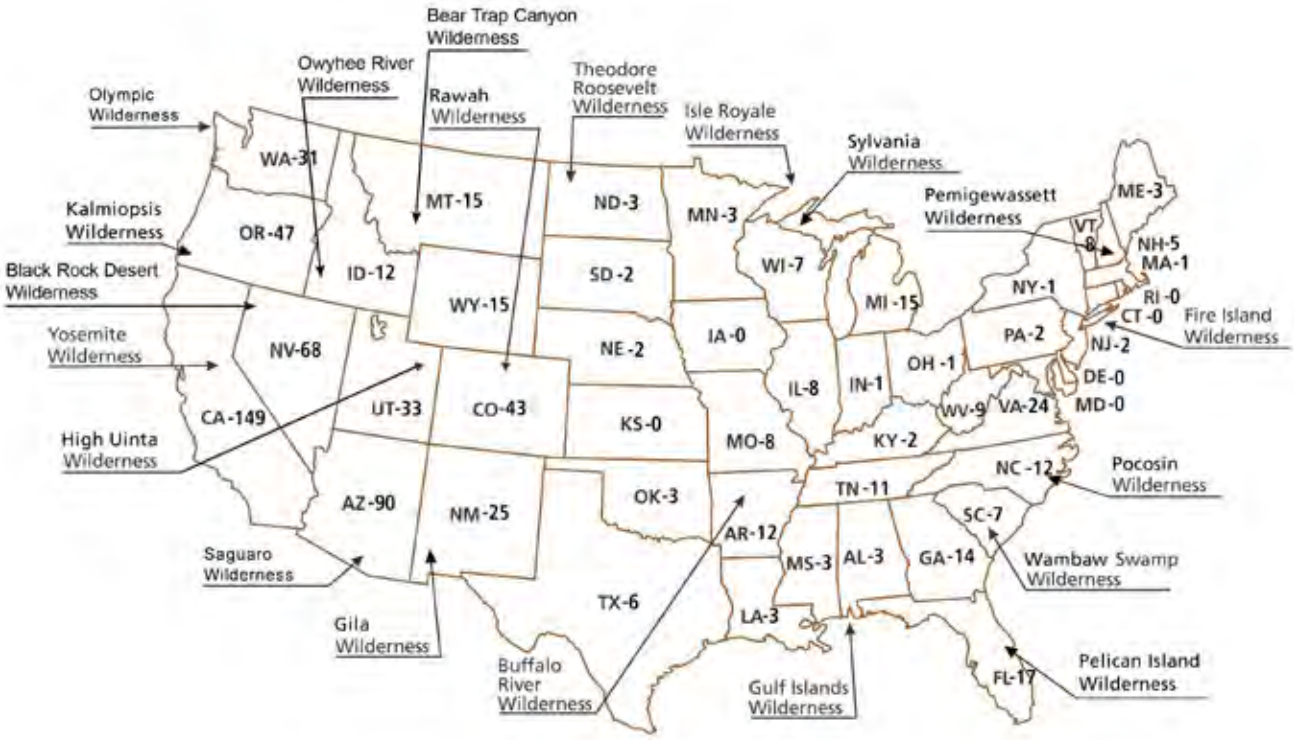
Which wilderness area named below is closest to:

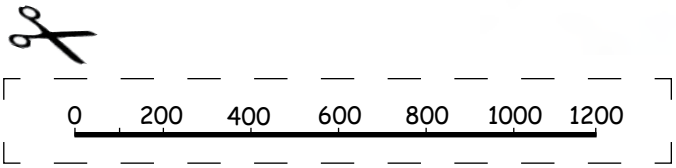
New York City?

Denver?

San Francisco?

The names are just a few of the wilderness areas in national forests and parks.





WHO WAS HERE BEFORE?

8+

Ask a wilderness ranger (or check the visitor center or the internet):

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!

12+

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 one of the names here:

6. Is this name different than the one on the forest or park map?

Wilderness Word Search

W	H	G	K	F	Z	B	E	J	L	Q	W	P	Y	R	V	N	S	U	E	H	F	K	C	T	
S	X	O	N	Q	U	H	P	H	O	T	O	G	R	A	P	H	I	N	G	S	B	R	Y	W	
A	V	O	R	L	N	E	H	I	D	C	L	W	C	I	B	E	T	D	A	H	I	D	E	L	
M	C	I	P	S	W	O	N	K	U	R	N	A	M	L	R	O	D	E	H	P	O	C	B	E	
R	A	H	C	Z	E	I	P	I	V	D	O	S	V	R	U	Z	F	V	R	E	G	S	K	P	
E	J	Y	O	A	S	B	L	N	M	P	R	I	M	I	T	I	V	E	N	D	T	O	N	H	
S	X	C	N	V	B	N	A	G	W	U	I	C	G	P	E	X	S	L	A	V	R	L	Q	F	
E	A	H	T	L	R	T	I	C	P	E	D	O	R	K	N	W	Y	O	P	Q	U	I	E	T	
A	D	G	R	J	E	Y	F	I	K	N	A	F	D	I	R	E	S	P	L	A	S	T	V	P	
R	U	L	A	W	O	B	E	S	J	O	B	S	H	N	B	T	A	E	O	G	E	U	L	C	
C	M	K	S	L	P	A	H	U	N	T	R	A	M	M	E	L	E	D	H	J	R	D	O	S	
H	T	R	T	O	F	R	K	D	I	L	F	P	C	A	Y	R	U	N	I	Q	U	E	T	H	
S	V	N	K	I	P	A	C	T	H	U	T	E	G	K	L	X	W	P	F	S	A	R	N	K	
W	A	T	E	R	S	H	E	D	E	P	A	U	N	S	P	O	I	L	E	D	E	F	C	B	
R	Y	E	G	C	D	T	O	F	M	K	B	S	G	R	M	A	D	U	L	C	Y	A	P	Z	
T	A	H	N	W	E	L	N	Q	S	G	A	L	W	H	T	E	C	N	S	H	E	R	N	K	
E	R	W	S	B	N	T	M	A	D	E	Q	U	R	C	L	V	D	K	P	C	U	L	F	S	
F	U	T	U	R	E	S	G	R	T	L	A	T	S	K	R	A	P	J	I	L	Z	E	M	C	
D	A	C	H	T	K	Z	B	Y	E	U	G	N	U	L	O	W	A	Y	R	N	O	K	D	E	
L	W	U	S	V	N	P	R	E	S	E	R	V	E	H	S	M	D	K	I	W	G	F	H	N	
R	I	B	E	L	G	E	J	K	I	T	B	A	T	O	N	E	X	P	T	A	S	P	N	E	
Y	L	P	T	N	S	U	F	M	R	O	M	E	L	N	I	T	A	L	U	V	E	G	W	R	
A	D	C	H	I	T	A	W	U	B	K	V	A	P	C	F	I	J	Q	A	B	R	A	H	Y	
N	S	U	N	C	O	N	F	I	N	E	D	W	E	N	T	P	H	D	L	N	I	C	E	R	
Z	S	E	R	I	L	T	D	H	R	E	C	R	E	A	T	I	O	N	Y	D	E	M	P	S	

Words may be horizontal or diagonal, left to right

8+ Find at least 8 words

12+ Find at least 12 words

BACKPACKING	NATURAL	RESEARCH	UNIQUE
CONTRAST	PHOTOGRAPHING	SCENERY	UNSPOILED
FREE	PRESERVE	SOLITUDE	UNTRAMMELED
FUTURE	PRIMITIVE	SPIRITUAL	VIEWS
HIKING	QUIET	UNCONFINED	WATERSHED
HORSEBACK	RECREATION	UNDEVELOPED	WILD

LEAVE NO TRACE

The Wilderness Act defines wilderness as a place where "man himself is a visitor who does not remain." 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

Did you ever hear 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!

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

12+ Pick up a bag of litter and put it in the trash.

16+ 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 you water bottle and conserve the Earth's resources.

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

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

LEAVE NO TRACE MAZE 8+

These Wilderness Explorers are about to go on a trip through a Wilderness. 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.

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 8+

Wilderness is a place where scientists can go to understand plants, animals, and landscapes that are in a natural state, unaffected 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 …" or I think that the plant will grow in soil that is …."

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.

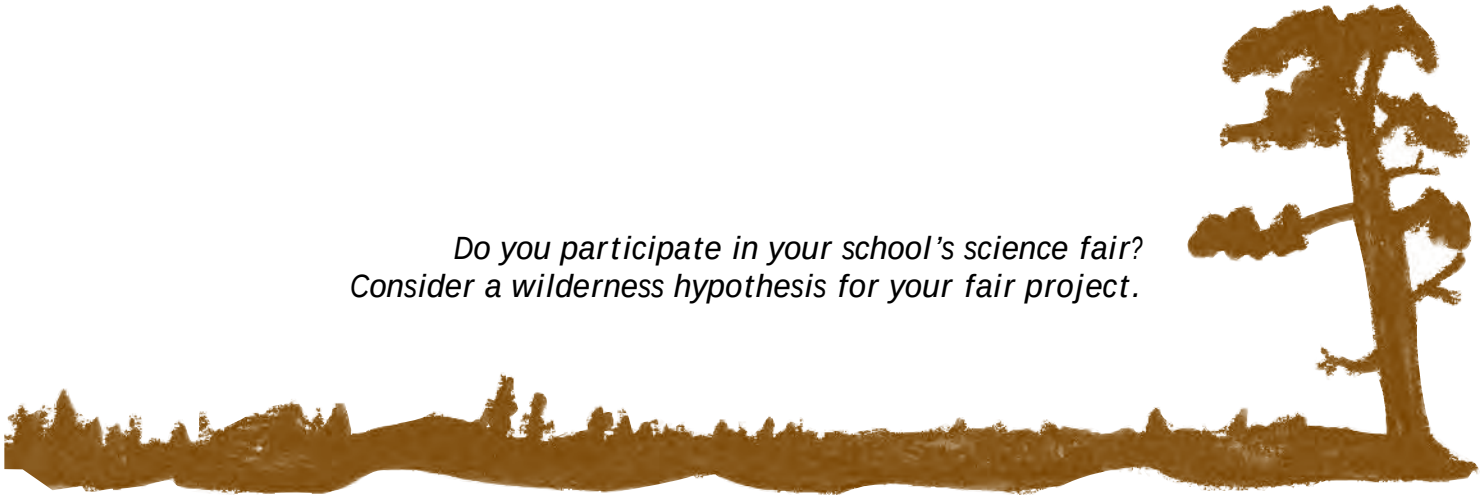
6. Do you think the animal or plant you observed was affected by people being nearby? If so, how?

12+ Complete the six previous questions, plus

ASK A WILDERNESS RANGER (or check the visitor center or internet):
What kinds of research are going on in the wilderness you are visiting or studying?

16+ Complete the seven previous questions, plus:
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.
- Color the things that you think DO belong in wilderness.

in Wilderness Areas? 8+

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

Wilderness Adventure

The best way to learn about wilderness is to get out and explore it! Find out where the wilderness areas are, and plan an outing with your family. If you are unable to go to a Wilderness area, ask a wilderness ranger to help you find an accessible place that is away from development like roads and buildings. Make sure you complete the "Wilderness Safety" activity before you head out.

Try to notice what makes wilderness different from places you usually spend time in. Use ALL of your senses. Sit still for 5 minutes and notice what you:

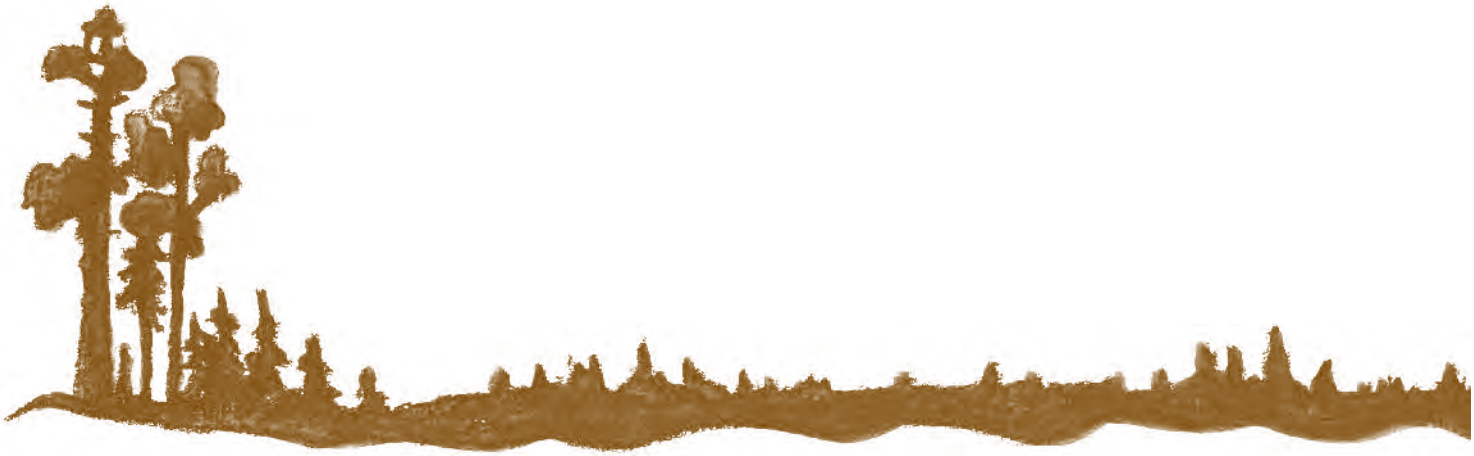
See

Hear

Smell

Feel

Most importantly, enjoy yourself!



Wilderness Adventure

When you get back, 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 the last page may help you get started. Use the space below to write, sketch, or organize your ideas for a performance.

Wild Words

Wander through time and history to explore the idea of wilderness.

Dates	Historical Events	Wilderness Quotes
1607	Jamestown, Virginia settled	*"Wilderness is **a** damp and dreary place where all manner of wild beasts dash about uncooked!"* – Anonymous, 1600
1803 1806	Louisiana Purchase Lewis and Clark Expedition returns	*"There is a pleasure in the pathless woods, There is a rapture on the lonely shore, There is society where none intrudes, By the deep sea, and music in its roar: I love not man the less, but Nature mor**e**,..."* – Lord Byron, British Poet, 1816
1869	Transcontinental Railroad completed	*"That morning's march was one not easily to be forgotten. It led us through a sublime waste, a wilderness of mountains and pine forests, over which the spiri**t** of loneliness and silence seemed brooding."* *– Francis Parkman, author of Oregon Trail, 1849*
1893	Professor Frederick Jackson Turner states that the American frontier is closed.	*"Thousands of tired, over-civilized people are beginning to find that going to the mountains is going home; that wil**d**erness is a necessity,..."* – 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 Coolee Dam.	*"Wilderness is melting away like some last snowbank on some south facing mountainside during a hot afternoon in June. The momentum of our blows is so unprecedented that the remaining remnant of wilderness will be pounded into road-dust lo**n**g before we find out its values."* – Bob Marshall, co-founder of the Wilderness Society, 1937
1955	Development of Echo Park Dam at Dinosaur National Monument is defeated.	*"Against pressures for econo**m**ic or recreation development, it is claimed, the efforts for preservation cannot be justified by the relative few who use wilderness regions."* – Dr. James P. Gilligan, Forester, 1954
1962	Scientist Rachel Carson publishes Silent Spring, stirring public consciousness about pesticides and the environment.	*"The wilderness that has come to us from the eternity of the past we have the boldness to project into the eternity of the fut**u**re."* – Howard Zahniser, principal author of The Wilderness Act, 1964
1964	President Lyndon Johnson signs the Wilderness Act	*"If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the **m**iracles 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."* – President Lyndon B. Johnson, 1964

1970

2000

2014

Dates	Historical Events	Wilderness Quotes
1969 - 1973	Era of major environmental legislation, including the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Endangered Species Act	*"[The public lands represent] in a sense, the breathing space of the nation."* – President Richard M. Nixon, 1971
1980	Alaska National Interest Lands and Conservation Act passed, and created a lot more wilderness	*" 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."* – Margaret (Mardy) Murie, known as "Grandmother of the Conservation Movement," 1980
2011	Since 1964, the National Wilderness Preservation System has grown almost every year and now includes over 750 areas (109,500,000+ acres)	*"In the long term, the economy and the environment are the same thing. If it's unenvironmental it is uneconomical. That is the rule of nature."* – Mollie Beatty, Director of the U.S. Fish and Wildlife Service, 1993-1996
2014	Wilderness Turns 50!	

8+

1. Wild Word Scramble: Find the one highlighted 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).

☐☐☐☐☐☐☐☐☐☐☐

12+

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

3. Has more wilderness been created since then?

16+

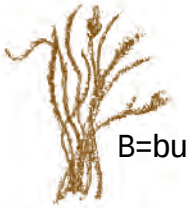
4. How do you think society's thoughts about wilderness have changed over time?

5. Pick a quote and explain why you agree or disagree with it.

Raiders of the Wild 12+

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																

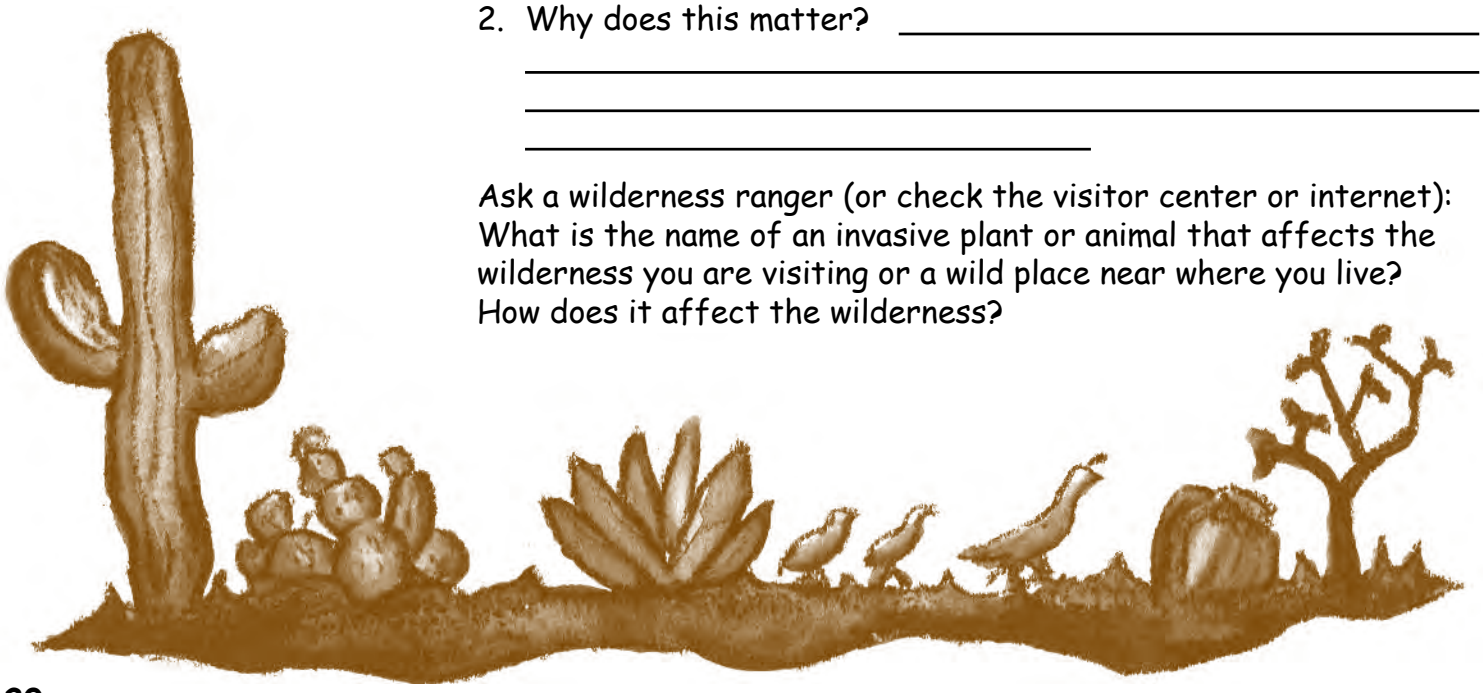
2. Why does this matter? _____

_____

_____

_____

Ask a wilderness ranger (or check the visitor center or internet): What is the name of an invasive plant or animal that affects the wilderness 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.

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

☐ 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.

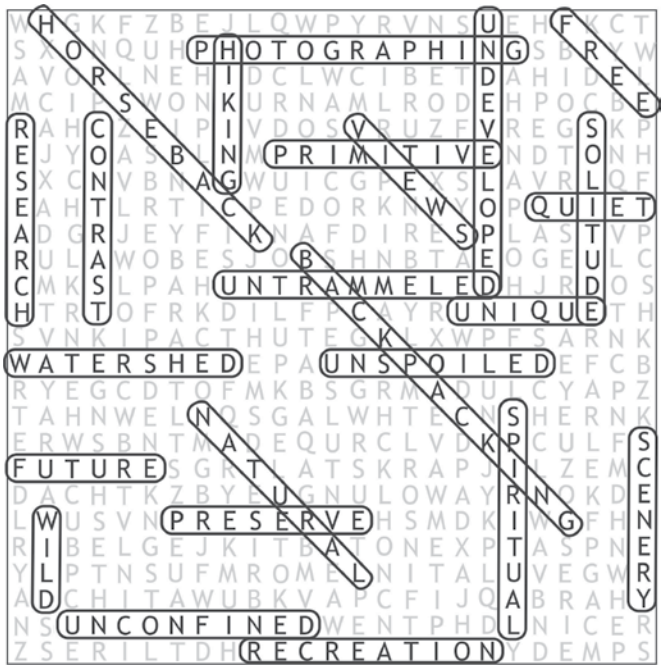
☐ Page 6, Where is Wilderness?

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. 1200 miles ÷60 mph = 20 hours
6. Answers vary
7. New York City—Fire Island Wilderness
   Denver—Rawah Wilderness
   San Francisco—Yosemite Wilderness

☐ Page 9, Wild Word Search



☐ 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.

☐ 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 18-19, Wild Words

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

☐ 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

CREDITS: Originally produced by the National Park Service Intermountain Region, adapted by the Bureau of Land Management, U.S. Fish and Wildlife Service and the U.S. Forest Service. The USDA and DOI are an equal opportunity provider and employer.

Wild Windows 8+

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

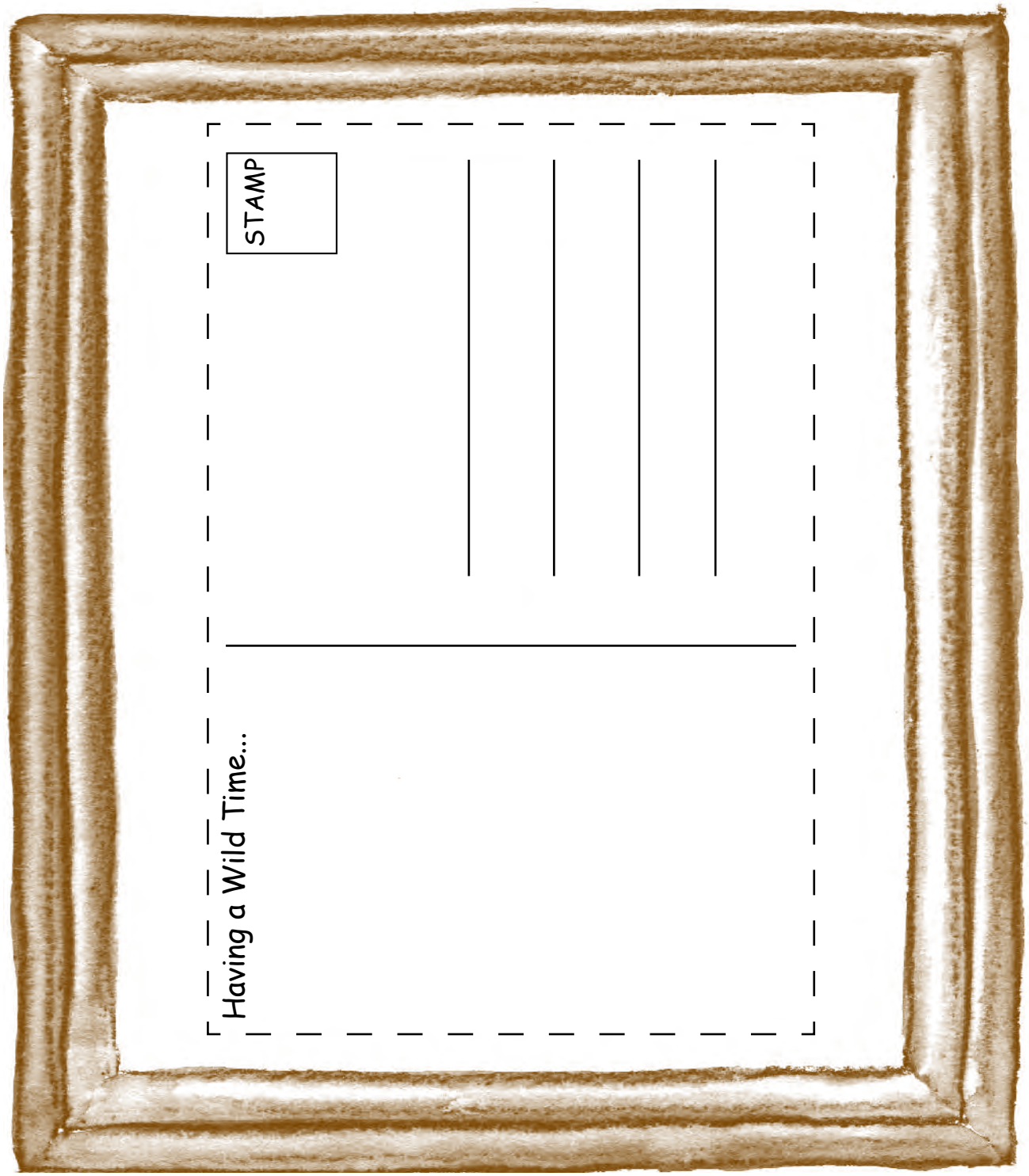
2

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?

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 complements the educational materials presented in the Wilderness Investigations toolkit for teachers. This booklet is available for PDF download at **www.educators.wilderness.net**

Use this cut-out for the Wild Windows activity on pages 22-23, and to make a postcard for a friend.

June 2013