

Disappearing Glaciers

Glaciers are rivers of ice that move very slowly. Scientists have been studying and photographing glaciers in the park for almost 100 years. In that time, human activity has caused the earth's temperature to rise and the glaciers to shrink. Many of the glaciers have already disappeared. Scientists are monitoring the others as they melt rapidly.



Directions:

Connect the dots to see what the Shepard Glacier, one of the 26 glaciers left in the park, looked like almost 100 years ago and what it looked like just a few years ago.

Is the glacier getting bigger or smaller? **Smaller**

How many years passed between pictures? **92**

Bonus: Scientists predict that by 2030 there will be no more glaciers in Glacier National Park.

How old will you be in the year 2030? _____

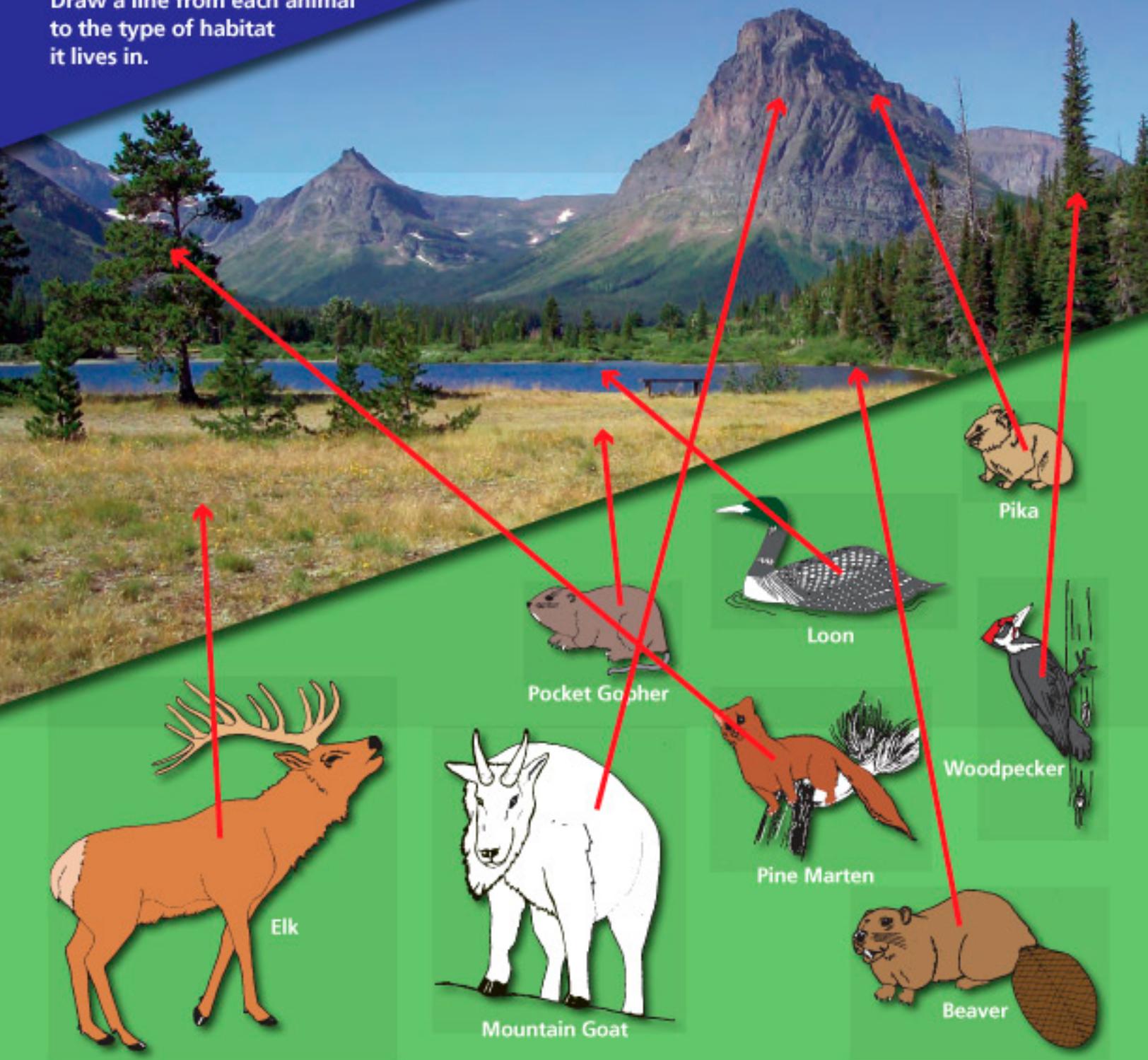
Habitats Are Homes

There are four major habitats in the park: ALPINE, FOREST, AQUATIC and GRASSLAND. You can see all four of these habitats as you drive through the park. To protect wildlife it is important to also protect their habitat.

All living things need food, water, shelter, and space to survive in their habitat. If one of these is missing, animals are at risk and may become threatened or endangered.

Directions:

Draw a line from each animal to the type of habitat it lives in.

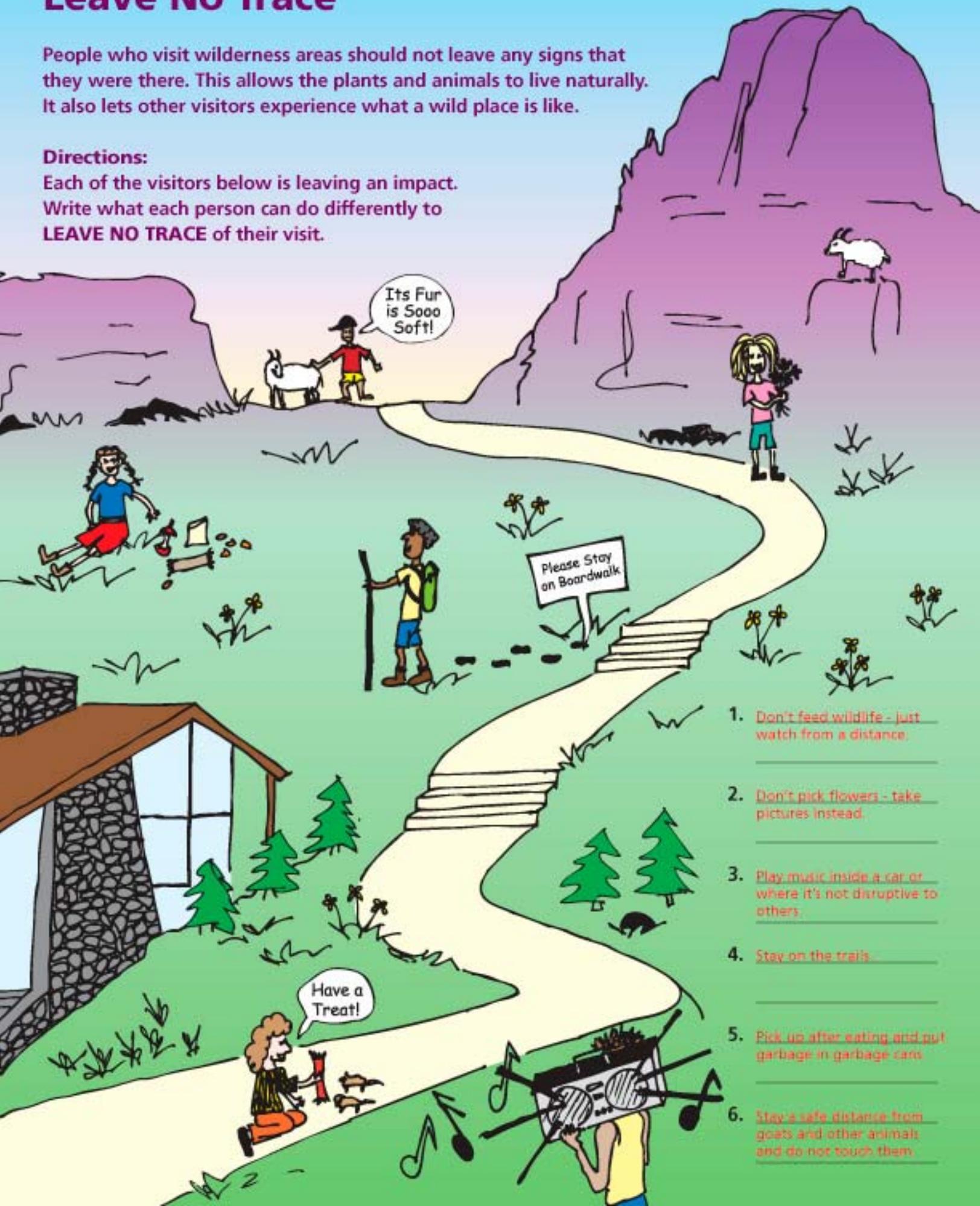


Leave No Trace

People who visit wilderness areas should not leave any signs that they were there. This allows the plants and animals to live naturally. It also lets other visitors experience what a wild place is like.

Directions:

Each of the visitors below is leaving an impact. Write what each person can do differently to **LEAVE NO TRACE** of their visit.



1. Don't feed wildlife - just watch from a distance.
2. Don't pick flowers - take pictures instead.
3. Play music inside a car or where it's not disruptive to others.
4. Stay on the trails.
5. Pick up after eating and put garbage in garbage cans.
6. Stay a safe distance from goats and other animals and do not touch them.

Living Lightly

Our daily lives are busy and hectic. Sometimes it is easy to forget that the choices we make affect the planet we live on. Each of us has the power to make choices that will minimize our human impact on the earth and help to reduce the effects of global climate change. The puzzle below contains ideas for things that each of us can do to live lightly on the earth. Can you think of more?

Directions:

Solve the clues to complete the crossword puzzle.

Across:

- Take reusable tote _____ to the store to carry the items that you buy.
- The process by which used materials are made into new products.
- Plant a tree! Living plants take in _____ and exhale oxygen.
- Conserve water by turning _____ the faucet while you brush your teeth.
- _____ electronic devices when not in use so that they do not continue to draw power from the outlet.
- By swapping incandescent light bulbs for _____ light bulbs, you can reduce the amount of energy you use to light a room.
- To get better gas mileage, make sure your tires are properly _____.
- When you ride your _____ you generate the power to make it move by pedaling.
- Turn this up a few degrees in the summer and down a few degrees in the winter to save energy and reduce heating costs.
- Buying food and other products that are produced _____ reduces energy consumption by limiting the need for transportation.

Down:

- Type of gases in the atmosphere that trap heat.
- When you share a ride with your friends, you'll enjoy their company and save gas. This way to travel is called _____.
- Avoid buying items with additional _____ like plastic and paper wrappers that will end up in the trash.
- Solar and wind-generated power are two examples of _____ energy.
- Reduce, _____, recycle!
- Fuel efficiency is measured in _____ per gallon.



Moving Through Glacier's History



*The first Americans who lived in this great land,
Traveled through the mountains in tribal bands,
They could not avoid the heat or the sleet,
The only way to travel was on their two* **F E E T**.



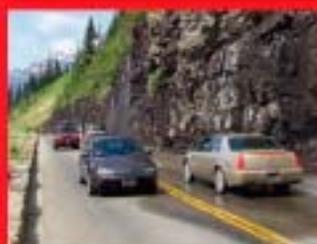
*Hundreds of years ago the Spanish brought it by boat,
With four legs and a tail, it's not a deer or a goat,
You can ride it, but take heed, it moves with great force.
So saddle up partner! You're riding a* **H O R S E**.



*One rail at a time the Great Northern was erected,
From St. Paul to Seattle, all was connected.
Now it moves cars full of people, lumber, and grain.
"All aboard!" There it goes, the conductor and the* **T R A I N**.



*The Going-To-The-Sun Road took many years to build.
It was finished in 1932 by men who were quite skilled.
This vehicle tours the road carrying a whole bunch of us,
You ride a yellow one to school, on the Sun Road we ride a red* **B U S**.



*Waterton-Glacier is a well-loved resource,
People still visit by bus, train, and horse.
Some come from close and others from afar,
Many families arrive driving their very own* **C A R**.



*We understand now that all those cars emit gases,
As everyone's driving themselves up the steep mountain passes.
Now we can share a ride and together we'll huddle,
'Cause as a team we all win
when we hop on the* **S H U T T L E**.

Directions:

People have traveled through Glacier for a long time.
To see how they moved, look at the pictures and complete the rhymes.

See America First

The Great Northern Railway changed the lives of many forever. The railroad used the saying "See America First" to convince the wealthy to spend their vacations exploring the American West instead of traveling to Europe. After Glacier National Park was established, the railroad company built hotels, chalets, and trails so that visitors could explore the park. Some of these historic buildings are still used today.

For newcomers wanting easy access to the west, the railroad was an improvement that allowed many of them to stay here. For the native peoples already living here, the railroad meant more changes to the lifestyle their grandparents had followed.



Directions:

Find your way from east to west in the maze above.

There is only one pass for the railroad to get through the mountains so choose wisely!

Native Names

Directions:

Native American place names describe the natural processes or characteristics of a place. Use the code breaker below to find out what the Blackfeet and the Kootenai names for this part of the Rocky Mountains mean in English.

Code Breaker

a	b	c	d	e	f	g	h	i	j	k	l	m
1	2	3	4	5	6	7	8	9	10	11	12	13
n	o	p	q	r	s	t	u	v	w	x	y	z
14	15	16	17	18	19	20	21	22	23	24	25	26

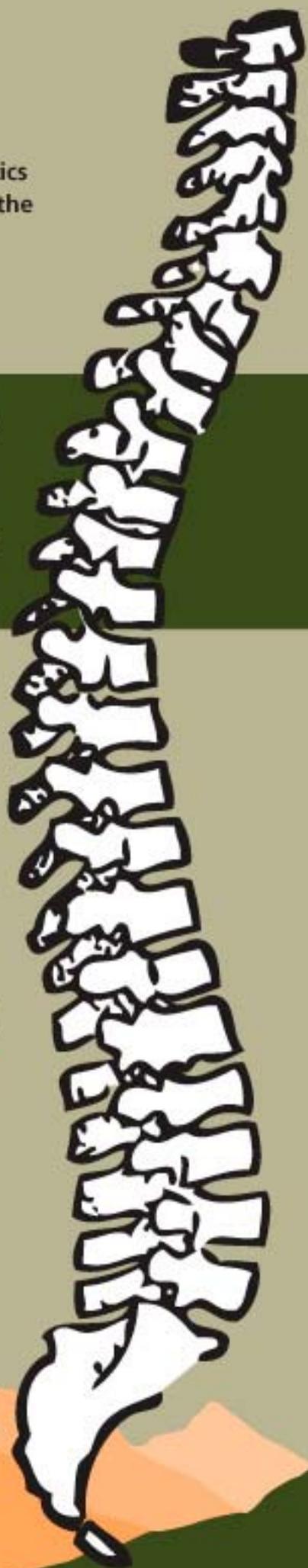
The Blackfeet name for the Rockies is:

B	A	C	K	B	O	N	E	O	F
2	1	3	11	2	15	14	5	15	6
T	H	E	W	O	R	L	D		
20	8	5	23	15	18	12	4		

The Kootenai name is "Ahkwaiswilko," meaning:

G	L	A	C	I	E	R	-	C	A	R	V	E	D
7	12	1	3	9	5	18		3	1	18	22	5	4
M	O	U	N	T	A	I	N	W	A	L	L		
13	15	21	14	20	1	9	14	23	1	12	12		

If you could choose a name that describes the scenery of Glacier National Park, what would it be?



Native Names

After European settlers arrived, places were often renamed for the white men and women who lived and worked here. Today, places with English translations of native names like, Running Eagle, Sacred Dancing, Belly River, Chief Mountain, Two Medicine, and Rising Wolf tell the stories of how these lands were used and of the people who lived there.

Directions:

Fill in the blank in each sentence with the English translation from the words highlighted above. Then find the names in the word search. Words can be forward, backward, diagonal or upside down.

♥ Bison (buffalo) were important to the Plains Indians.

BELLY RIVER _____ is from the Blackfeet name referring to the digestive system of the buffalo.

♥ A medicine lodge was erected on each side of a creek in honor of the Blackfeet Sun Dance. This valley is known as **TWO MEDICINE** _____.

♥ A waterfall that flows from Two Medicine Lakes through a cave is called **RUNNING EAGLE** Falls. For the Blackfeet Nation, it is the place where warrior woman, Pitamakan, came for repeated spiritual guidance.

♥ **RISING WOLF** _____, a mountain in Two Medicine, is a translation from the Blackfeet name which means "the way the wolf gets up."

♥ **SACRED DANCING** _____ is what the Kootenai Indians call the Lake McDonald area because it was a good place to dance.

♥ **CHIEF MOUNTAIN** _____ is the name for the lone mountain in the Northeast corner of the park. Even today, many tribes regard this as a holy place. All visitors need to be respectful of this.

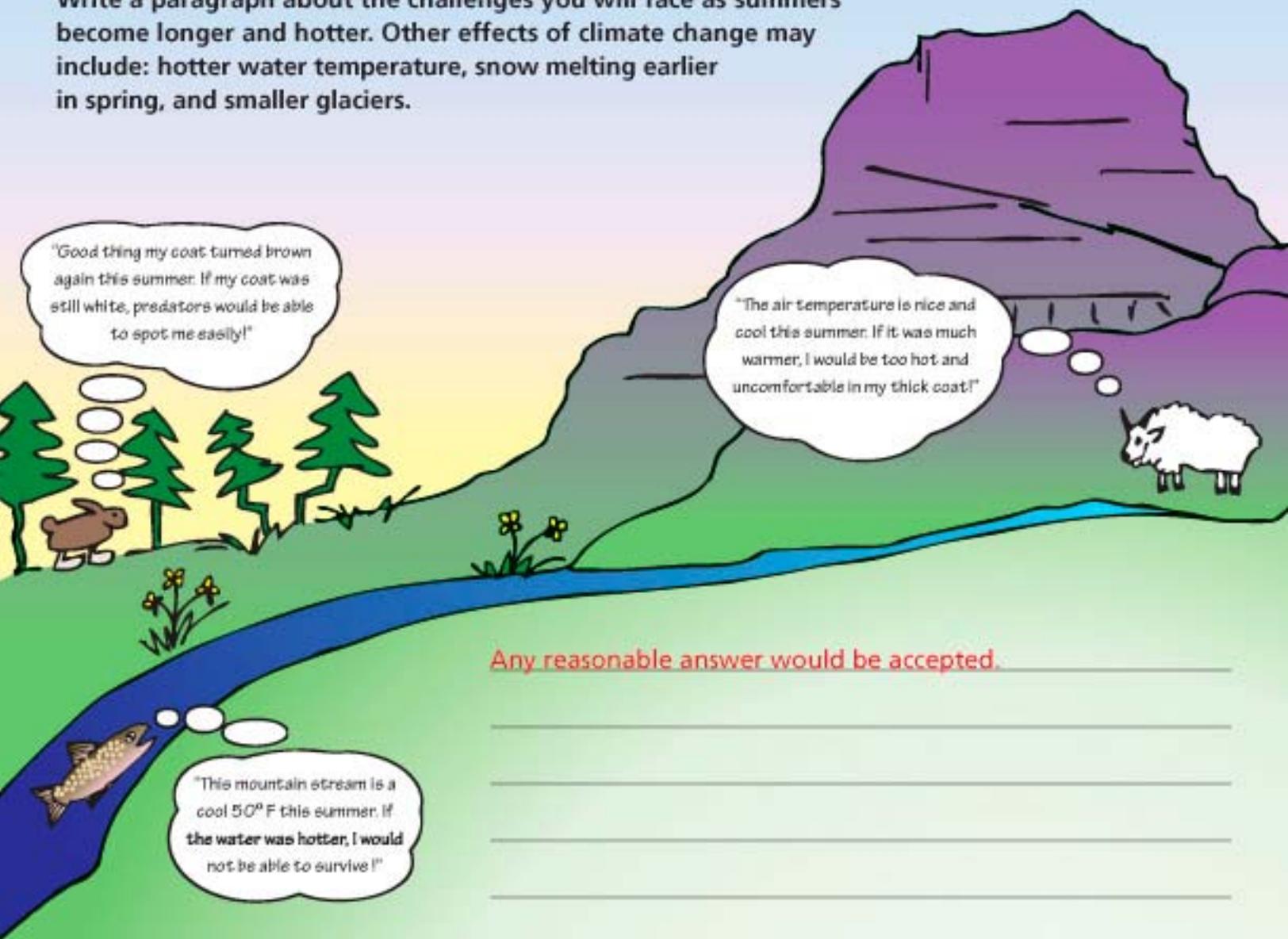


Up Up and Away?

Rising temperatures and longer summers mean big changes for planet Earth! As the climate warms, some species must migrate north, or move higher up the mountains, to find a cold habitat like the one they are used to. Species that can't move must adapt to the new climate. Scientists have predicted that some species may not be able to adapt or migrate and may become extinct.

Directions:

Imagine that you are a snowshoe hare, a mountain goat, or a bull trout in Glacier National Park. Write a paragraph about the challenges you will face as summers become longer and hotter. Other effects of climate change may include: hotter water temperature, snow melting earlier in spring, and smaller glaciers.



Animal Adaptations:

- **Snowshoes** use camouflage to hide from predators. They are rusty brown in summer and white in winter. In spring, it takes 72 days to make a complete color change from white to brown.
- **Bull** grow best when the water temperature is 48-57° F. They thrive in streams kept cool all summer by melting snowfields and glaciers.
- **Mountains** have a thick coat that allows them to survive cold winter temperatures. They shed in spring and a new coat begins to grow back in July.

Wise About Wildlife

Glacier National Park is home to a lot of different kinds of animals. Many people come to National Parks hoping to see wildlife but it is important to remember that these animals are wild. They need plenty of space and a healthy habitat where they can find their own food. We need to be respectful of the animals and their needs while visiting the park. This is their home. We are the visitors.

Directions:

Circle the **highlighted** words that best complete the following sentences.

If an animal changes its behavior because of your presence, that means you are **too close** / goofy looking / smelly.

In a National Park it is **never** / always / sometimes okay to feed human food to wild animals.

Bears look under rocks in hopes of finding potato chips / **insects** / peanuts to eat.

When you're hiking in bear country, you should hike quietly / **make noise** / wear perfume to warn bears that you are entering their space.

At night, Park Rangers care for the animals by putting them back into their cages / feeding them / **leaving them alone**

The place where an animal lives is called its **habitat** / house / bachelor pad.

The **best thing** you and I can do to help wild animals survive is to teach them to dance / **protect their habitat** / take them to dinner and a movie.

