

Glacier Bay

National Park Service
U.S. Department of the Interior



Glacier Bay National Park
And Preserve

Junior Ranger Activity Book



Name: _____

Are you ready for your Junior Ranger adventure to begin? On the bottom left corner on each activity page of this Junior Ranger book you will find a box with a sea star in it. For extra bonus points complete at least 10 of these tasks, using this space.



Here's where you will find your Star Tasks.

Once you have completed 10 Star Tasks, send a note to: Junior Ranger Stars, Glacier Bay National Park & Preserve, P.O. Box 140, Gustavus, AK 99826. We will send you a cool Glacier Bay postcard.

How to Become a Junior Ranger

Welcome to Glacier Bay National Park and Preserve, one of over 391 special places managed by the National Park Service. These places are protected so that you can enjoy and learn more about this amazing country of ours. Becoming a Junior Ranger is a special honor and has some responsibilities that go with it.

So you want to become a Glacier Bay Junior Ranger? To earn your badge, please complete A, B, and C below. When you are finished, take this book to the Visitor Center on the second floor of the Glacier Bay Lodge and a ranger will issue you your official Junior Ranger badge. Good luck and have fun exploring Glacier Bay.

A. Booklet

If you are 4-6 years old, complete at least 5 activity pages in this book (check out activities like Our National Treasure, Bingo, Life Returns to the Land, Bergy Bits, Are You My Mother). If you are 7-9 years old, complete at least 8 activity pages in this book. If you are 10-12 years old, complete at least 11 activity pages in this book.

Number of activities completed: _____

B. Ranger-led Activity

Attend a Ranger-led activity such as a walk, talk, boat tour, movie, demonstration or evening program.

Title of program: _____

Ranger's name: _____

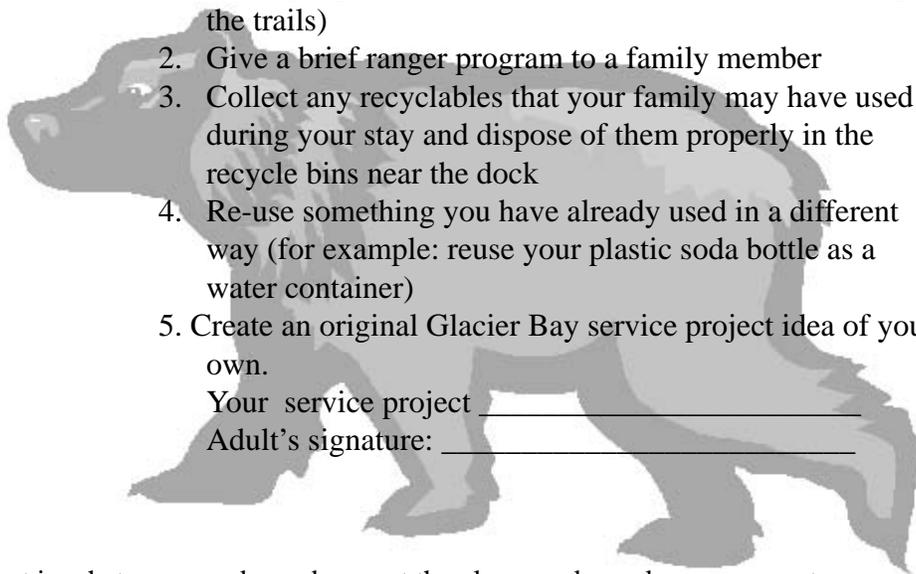
C. Service Project

Complete one of the projects listed and then have your parents or another adult sign when it's finished.

1. Pick up 5 pieces of trash (check the dock area, the lodge, the trails)
2. Give a brief ranger program to a family member
3. Collect any recyclables that your family may have used during your stay and dispose of them properly in the recycle bins near the dock
4. Re-use something you have already used in a different way (for example: reuse your plastic soda bottle as a water container)
5. Create an original Glacier Bay service project idea of your own.

Your service project _____

Adult's signature: _____



Always remember to put safety first in whatever you do, and respect the places and people you encounter on your Glacier Bay exploration.

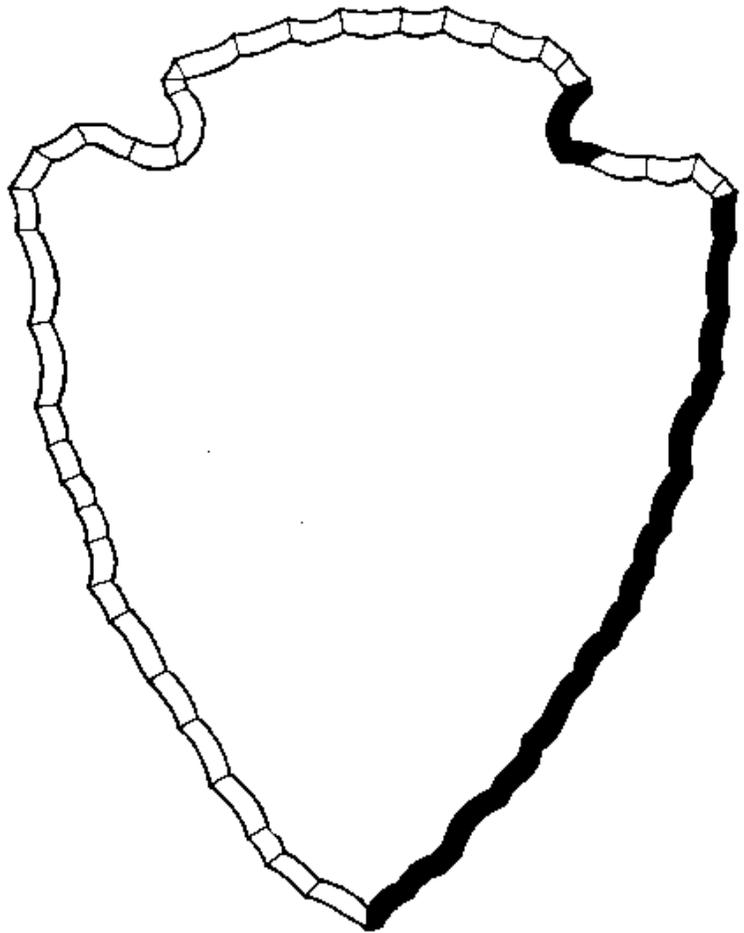
Our National Treasures

The Statue of Liberty, the Battlefield at Gettysburg, the Liberty Bell, the Grand Canyon, Yellowstone's Old Faithful. These are some of the amazing treasures our national parks protect. The arrowhead is the symbol of the National Park Service. It is worn by all uniformed National Park Service employees and stands for the importance of protecting special areas like Glacier Bay. Every Park Ranger in the more than 391 units of the National Park Service also wears a badge. Seek out a Park Ranger during your visit and take a close look at his or her badge and arrowhead patch.

Here is the National Park Service arrowhead symbol. Each item in the arrowhead represents a feature protected within National Park sites. The sequoia tree represents all plants; the bison represents all animals; the mountain represents all land forms; the lake represents all waters; and the arrowhead outline represents culture and history.



If you were going to design your own badge or patch just for Glacier Bay National Park, what would it look like? Use the blank badge below to design yours.



1. Can you think of an area near your home that you'd like to nominate to become a national park?

Ranger Report

What do National Park Rangers really do? They tell the park stories, conduct research, maintain buildings, and protect visitors and the resources. Rangers also can help answer any questions you might have about Glacier Bay National Park. When you are in the park, look for a ranger wearing the gray and green uniform with the special arrowhead patch.

Would you like to be a National Park Ranger sometime? Where would you like to work and what type of work would you like to do?



If you could ask a Glacier Bay National Park Ranger a question about the place they work in, what would it be?

In the space below, record your question and then seek out a Park Ranger (look for that gray and green uniform with the arrowhead patch.) Ask your question and then record the Ranger's answer below.

Your Question:



Park Ranger's Answer:

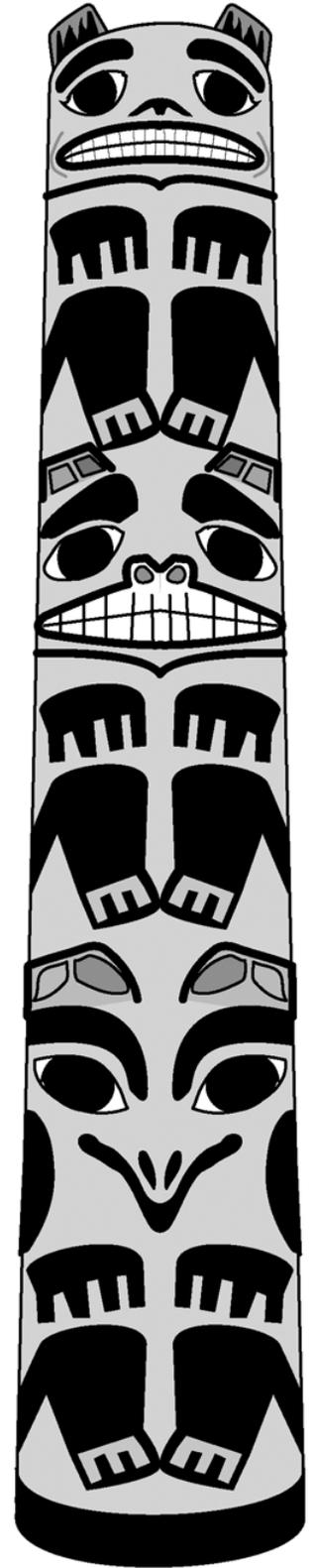


2. Which national park is closest to your home? What is special about it?

Hidden Stories

The Tlingit (pronounced klink-it') people have been living in this area for thousands of years. Throughout time they have been observing and using nature to make things. Totems are objects or animals that tell the stories of these native people of Glacier Bay and Southeast Alaska. They tell of the lives and histories of families and villages. Totem poles carved from trees, show several totems stacked one on top of the other and traditionally stood along the village fronts. Carved house posts and screens containing totems were part of the interior of many of the clan houses of Glacier Bay.

If you were going to design your own totem pole that represented your life, what animals or objects would you use to tell the story? Do a simple sketch of your totem pole below.



3. How are your family stories passed on? Share a family story with a new friend you've made.

The First People

Imagine a glacier forcing you to leave your home. This is exactly what happened to the Tlingit people who lived in Glacier Bay for centuries. The advancing glacier forced them to leave their home and canoe across Icy Strait to Hoonah, where they now live. Before the Little Ice Age 3,500 years ago, the Tlingit people depended on salmon, seals, berries, and plants of Glacier Bay.

Hunted for centuries by the Tlingit people, the harbor seal is used in many different ways. All parts of the seal can be used. How do you think a person might use the following seal parts? Write your ideas in the blanks below, (See a ranger if you're not sure).

Seal fur/hide:

Seal bones:

Seal fat:

Seal stomach:

Seal meat:



4. List five ways you might use a tree.

Charting Your Course

John Muir did it. Captain Vancouver did it and you can do it too! Just like the explorers from years ago, you can travel on the waterways. This is an exciting way to see Glacier Bay National Park. These explorers created maps to orient themselves to this new land. Here is a map so you can orient yourself on your journey.

One fun way to see Glacier Bay is by traveling on the water. If you get this opportunity, use the map on the next page to chart your course through Glacier Bay. Using the map, complete the anchor assignments below.



Draw your boat's route.



Circle the name of the glaciers you visited.



Record at least 5 animals you have seen on your boat voyage on the map at the location where you saw them.

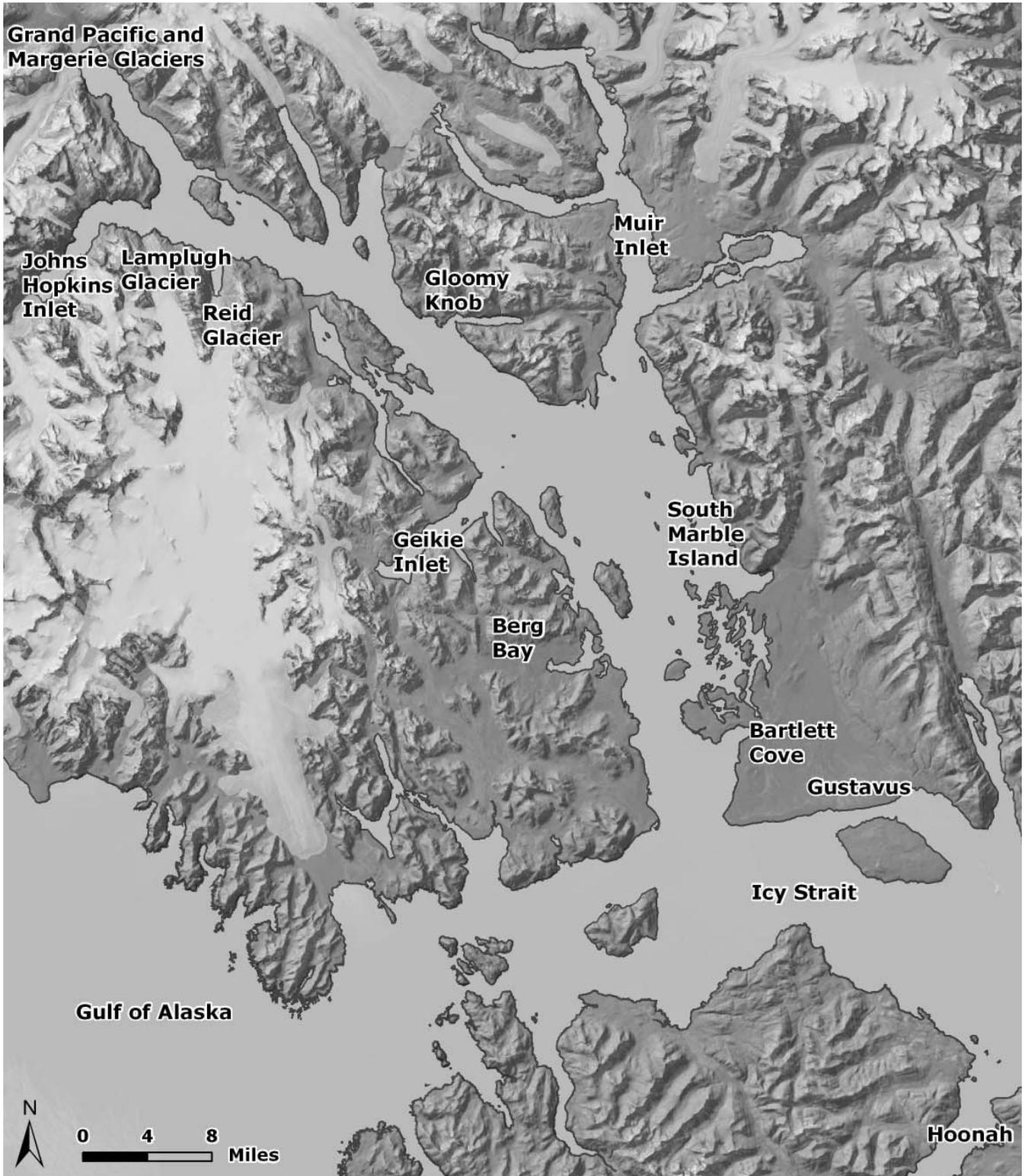


Put a star next to an interesting spot that you'd like to come back and explore more some day.



5. Draw a map of the area around your home and mark at least 3 locations where you might see animals.

Glacier Bay Map



Birds of a Feather Nest Here Together

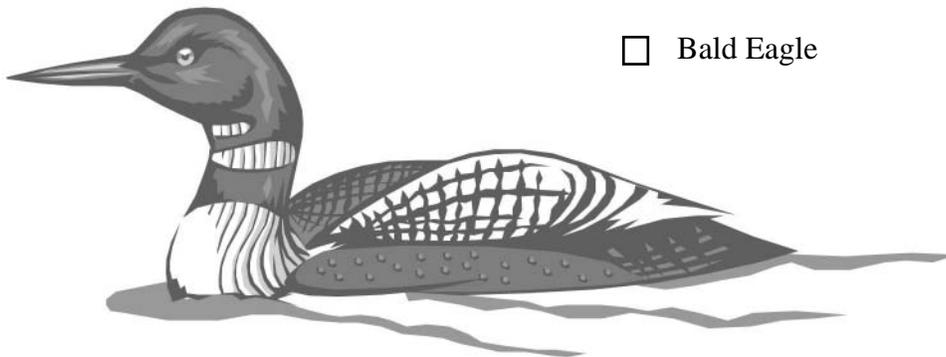
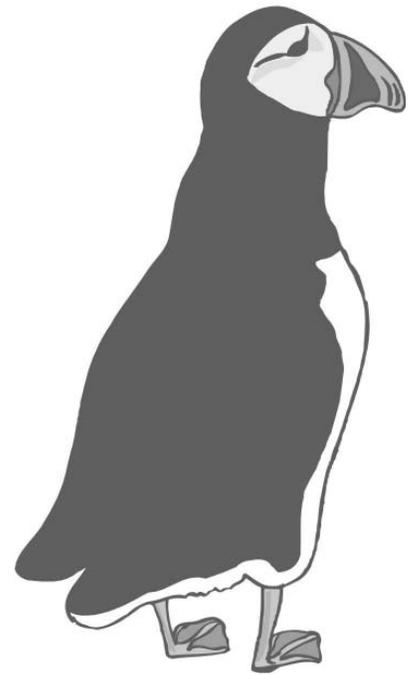
A wide variety of birds feed in and around Glacier Bay's rich waters during the summer months. This abundance of life is due in part to the long daylight hours of summer, the cold rich waters of the glacial fjords, and the currents and tides which mix the ocean nutrients.

There is no better place to watch the antics of some of Glacier Bay's birds than at the Marble Islands. How can you tell one bird from another? Find a bird field guide onboard your boat or attend a Ranger-led Bird Talk to help you identify which birds you may see at South Marble Island. What were the birds doing? Were they on the water, in the air, or on the island?

Put a check next to the birds you saw.

- Glaucous-winged Gull
- Pigeon Guillemot
- Marbled Murrelet
- Kittlitz's Murrelet
- Black-legged Kittiwake

- Pelagic Cormorant
- Black Oystercatcher
- Harlequin Duck
- Horned Puffin
- Bald Eagle



- Mew Gull
- Common Murre
- Crow
- Raven
- Tufted Puffin
- Other_____



6. Can you think of any other place where large groups of animals come together?

Bingo

Mark the box containing anything you've seen in Glacier Bay. Can you get a Bingo?

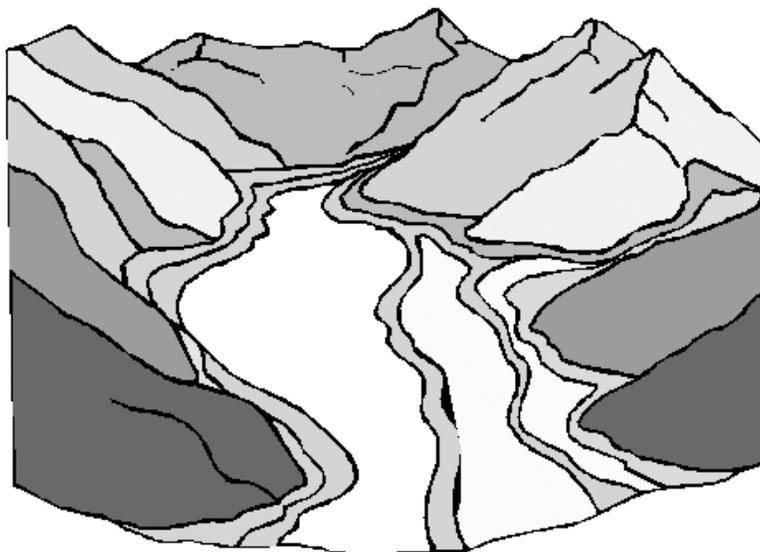
				
Seaweed	Black Bear	Humpback Whale	Marbled Murrelet	Spruce Tree
				
Halibut	Mosquito	Tufted Puffin	Bald Eagle	Orca
				
Wolf	Great Blue Heron	Park Ranger	Alder Tree	Moose
				
Blueberries	Steller Sea lion	Crab	Brown Bear	Kittiwake
				
Iceberg	Pigeon Guillemot	Mtn. Goat	Harbor Seal	The Fairweathers



7. Write a postcard to someone telling them about your coolest animal observations.

Rivers of Ice

They're blue, they're slow, and they're cold! These are the tidewater glaciers of Glacier Bay National Park. This park is famous for the glaciers that flow into the ocean. Be sure to GO OUTSIDE when your boat arrives at these amazing "rivers of ice". These spectacular glaciers may very well be the highlight of your day traveling through Glacier Bay. The faces of these glaciers are constantly changing. Look! Listen! Feel! Use all of your senses to experience these glaciers.



Glaciers are constantly changing. They never look the same from one day to another. While your boat is in front of a glacier, see if you can find some of the glacial features listed below. Circle the ones you find.

Glacial Erratic: a large boulder carried by the glacier, then left behind as the glacier retreats.

Serac: sharp, pointy, jagged tower of ice on a glacier.

Moraine: a jumbled pile of rocks and soil carried along by the glacier; a ribbon of debris.

Calving: the process of ice breaking from the face of a glacier.

Nunatak: a rock or mountain that is surrounded by a glacier.

Crevasse: an open crack in a glacier.

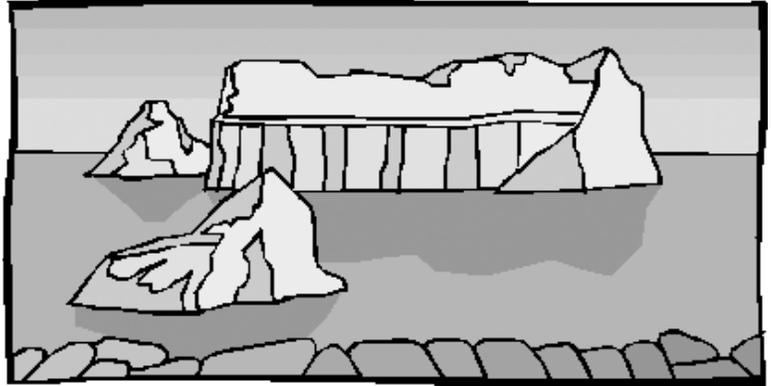
Cirque: a steep-sided cir



8. Did glaciers ever cover the land near your home? How do you know this?

Bergy Bits

What do cows and glaciers have in common? They calve! Icebergs are formed when a piece of ice falls or calves from a glacier into the water. The Tlingit people have a special name for the calving of an iceberg; they call it "White Thunder." Icebergs come in all different shapes, sizes, and colors and they are constantly changing. Bergy bits are icebergs about the size of a two-room cabin. Growlers are icebergs that are even smaller.



People often see different shapes in icebergs like swans, bears, or even tents. While you are at the glaciers, look at some nearby icebergs, use your imagination, and draw what you see.



9. Does everyone you are traveling with see the same things in icebergs that you do?

Life Returns to the Land

Can you believe that just a little over 200 years ago, a great glacier filled Glacier Bay? It was 100 miles long, 5 miles wide and a mile high in places. When that glacier began to melt back, it uncovered barren ground below. But eventually, life returned to the land. Spores and seeds were blown in on the wind, and the first plants began to grow. They in turn made way for the next group of plants to come in. This process is called plant succession. And now thanks to plant succession there's a wide variety of plant communities for animals to call home.

Have you seen lupines on your walks in Glacier Bay? They are beautiful flowering plants that are members of the pea family. Lupines have a special relationship with bacteria in their roots which allows them to convert nitrogen from the air and turn it into fertilizer for the next group of plants to use.

Color the lupine flowers blue or purple. Sometimes their tips are even pinkish in color. Color their hairy leaves a silver green.

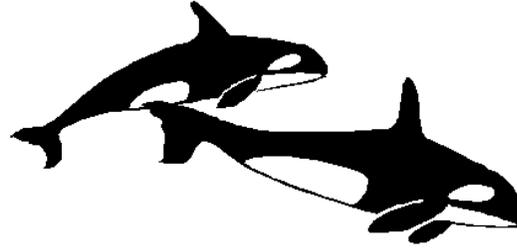


10. Draw a picture of a plant near your home.

Things You Otter Know

Whales, seals, otters... oh my! Some of the most incredible animals in the world live in the waters of Glacier Bay National Park. Marine mammals are warm-blooded, air-breathing animals just like us, but they have different adaptations (something that helps them to survive). They get their food from the ocean, have their babies in the ocean, and even communicate in the ocean.

Read the clues below to learn about marine mammals that call Glacier Bay National Park home.



Marine Mammals are animals that call the _____ their home.

Many harbor seals in Glacier Bay climb out on _____ to have their babies.

A sea otter will often wrap a piece of _____ around its body when it wants to take a nap.

To keep them warm in their cold ocean homes; whales, seals and sea lions have a thick layer of _____.

A _____ has the densest fur of any animal in the world.

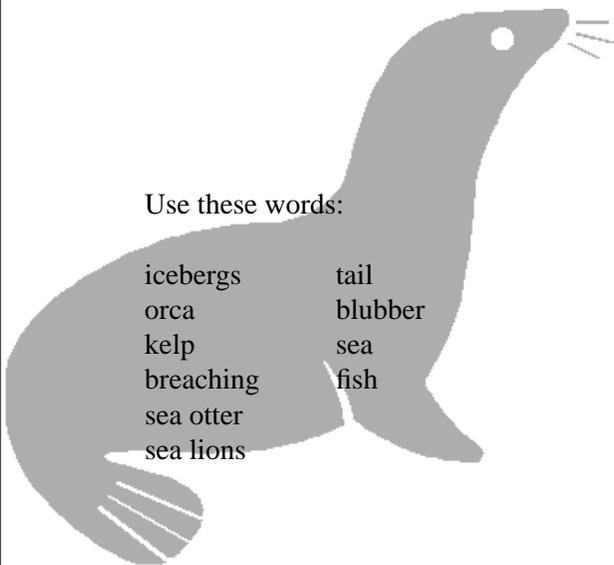
Researchers take a photograph of a humpback whale's _____ to identify it.

The black and white _____ is the largest dolphin. They often hunt for their food in groups.

_____ are very vocal animals. You can hear their bark-like call from a long distance away.

Many whales jump high above the water. This is called _____.

A favorite food of seals and sea lions is _____.



Use these words:

- icebergs
- orca
- kelp
- breaching
- sea otter
- sea lions
- tail
- blubber
- sea
- fish

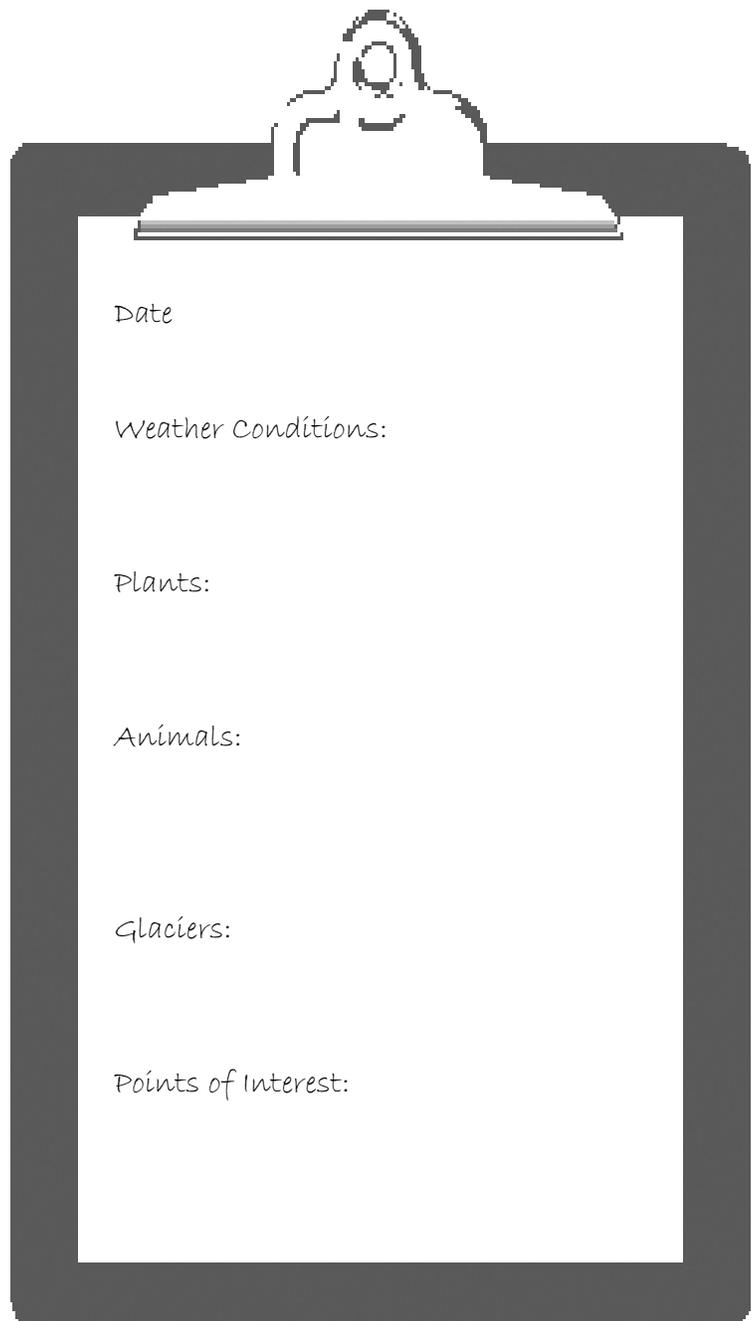


11. What is your favorite marine mammal? Why?

Field Notes

Glacier Bay National Park scientists spend hours observing and then recording what they see. These researchers often carry notebooks with them to record things while they are in the field. This helps them remember the exact details of what they observed so that no vital information is lost. We can learn much about our world by observing nature. So be on the lookout...you never know what you might see!!

Use this space below to record some of the special things you've seen during your visit to Glacier Bay. Record all plants, animals, glaciers, points of interest. What did you see? What did you hear? What was the area like? What was the weather like? Were there any animals? What were they doing? What plants were around you?



Date

Weather Conditions:

Plants:

Animals:

Glaciers:

Points of Interest:

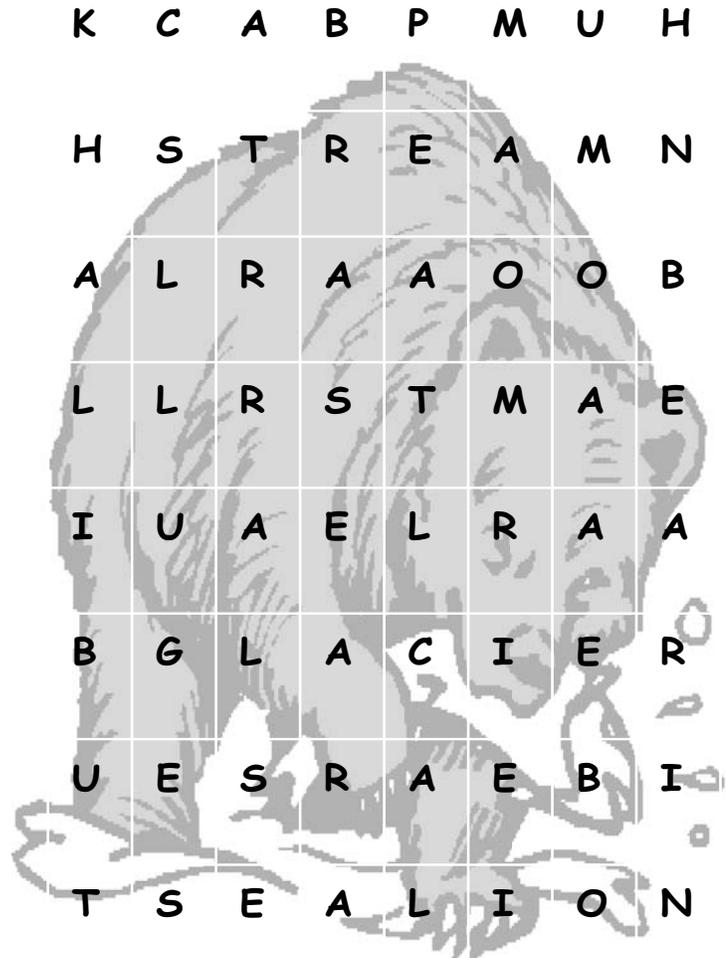


12. Is there a place near your home where you could sit and observe nature? Describe the place and what you might see there.

Research Search

It was cold, it was white, and it was everywhere. Ice filled the valleys and covered most of the mountains you see today in Glacier Bay National Park. Can you imagine a glacier 100 miles long - stretching from Canada to Icy Strait? This huge glacier was here only 250 years ago! As this glacier melted, it left this land naked and exposed. But people discovered this was a perfect place to study how life returns. Even today, people from all over the world study Glacier Bay National Park and its environment.

Use the word search below to identify what type of things are being studied at Glacier Bay National Park.



Use these words:
 Crab Salmon Glacier Bear Humpback
 Sea Stream Gulls Halibut Sea lion

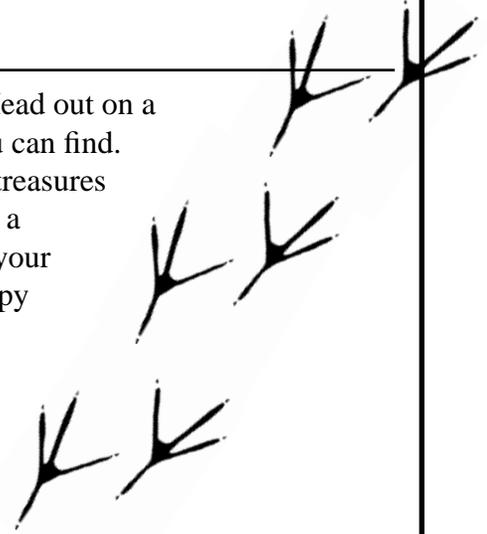


13. If you could do any kind of research in Glacier Bay National Park, what would you study and why? Tell someone about your idea.

Treasure Hunting

Early explorers came to this great land in search of treasures, things of great worth or value. They came seeking gold, furs and the northwest passage. Some even came in search of adventure. Treasures found in nature are like precious gifts that should be respected and cherished.

It's time for some exercise. Head out on a trail to see what treasures you can find. But instead of bringing your treasures back, draw a picture or write a few descriptive words about your finds in the space below. Happy Hunting!!



Evidence that an animal was here.

Something younger than you

Something soft

Something that does not belong

Something sharp

Something older than you

Something that smells good



14. Describe 2 other treasures you have found so far during your visit to Alaska.

In your explorations, please remember to follow park rules, stay on the trails and leave behind the treasures you found for other people to enjoy.

The Sounds of Nature

Our world is filled with noises of all kinds, most of them are generated by people. It is often very difficult to find a quiet spot: a spot where you can hear the wind rustling the leaves on the trees; a spot where you can listen to the bugs going about their business of pollinating flowers; a spot where you can hear the birds calling back and forth to each other. Many people seek out national parks to find a spot where natural noises dominate.

Find a quiet, comfortable place outside to sit and listen. This spot should be off by yourself, where you are not tempted to talk to anyone else. Sit back, relax, and just listen to the sounds around you for 5-10 minutes. What do you hear?



Use the space below to draw a sound map. Pretend you are the X in the middle of this page. Without using letters or words, record a picture of all the sounds you hear around you. Did your spot have more natural or man-made sounds?

X

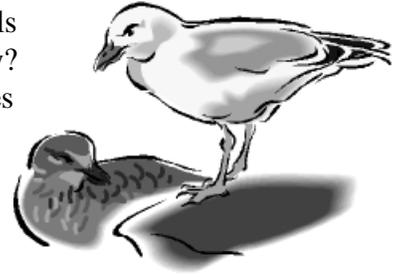


15. How does what you heard here compare to where you live? List 5 things you would hear near your home.

Are You My Mother?

Summertime in Glacier Bay is a time of great abundance. The long day-light hours provide for a rich food supply for all the creatures living on land or in the water. Summertime is also a time of babies. Many, many creatures travel great distances and endure hardships so that they may have their young in this area.

Have you seen any baby animals during your visit to Glacier Bay? Did you know that not all babies look like their mamas when they are born? In fact some young animals don't even resemble their parents until they become adults. Often baby animals even have different names than their parents. But that doesn't make them any less special.



Draw a line to connect each of the Glacier Bay baby animals to its parent.

- | | |
|------------|-------------------------|
| 1. Calf | a. Harbor Seal |
| 2. Eaglet | b. Canada Goose |
| 3. Kid | c. Short-tailed Weasel |
| 4. Chick | d. Mountain Goat |
| 5. Larva | f. Tufted Puffin |
| 6. Cub | g. Coho Salmon |
| 7. Tadpole | h. Bald Eagle |
| 8. Pup | i. King Crab |
| 9. Gosling | j. Boreal Toad |
| 10. Fry | k. Killer Whale or Orca |
| 11. Kit | l. Brown Bear |



16. Can you think of other baby animals that have a different name than their parent?

Riddler Roundup

Nature is full of riddles and the clues are all around. Put the clues together to solve these Glacier Bay riddles.

I am an endangered marine mammal.
Although large in size, my favorite food is small.
I have no teeth, but filter the creatures I eat.
People like to see me spout, dive, and breach.

Who am I? _ _ _ _ _

I am a Native Alaskan.
My ancestors have lived in Southeast Alaska for thousands of years.
At special potlatch gatherings, we exchange gifts and stories.
My people left Glacier Bay when the ice advanced.

Who am I? _ _ _ _ _

I am a national park of 3.3 million acres.
Over 7 tidewater glaciers are within my boundaries.
Research tells the story of how life returns to my land.
I am treasured for my wild areas.

Who am I? _ _ _ _ _

I can have black, cinnamon, or blue-gray fur.
I love to eat blueberries.
I have curved claws, which are great for tree climbing.
I have a flat back. I do not have a hump near my shoulder blades.

Who am I? _ _ _ _ _

I calve off from the face of tidewater glaciers.
I float on the surface of the water,
but you will only see about 10-30% of me on the surface.
Harbor seals escape predators by hauling out of the water and resting on top of me.

Who am I? _ _ _ _ _

I begin and end my life in a river,
but I spend the majority of my time in the ocean.
I eat small fish and bugs.
Some of my nicknames include: humpy, red, silver, king, and dog.

Who am I? _ _ _ _ _

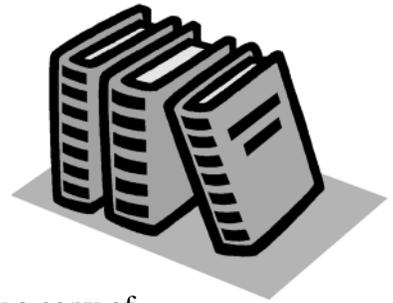


17. Make up your own Alaskan animal riddle.

Once Upon a Time

Stories have been a way to pass information on from one generation to another since the beginning of time. For thousands of years, Tlingit adults have shared stories with their children. Their stories however did not come from books but were told out loud. Some stories come from real experiences, some even come from dreams. Stories can help us understand the world we live in.

Have you ever heard the story of Stickeen? One hundred years ago, a spunky little dog named Stickeen, joined the famous naturalist John Muir as he explored Glacier Bay's Brady Glacier. Ask a ranger at the Visitor Center desk or on the boat to the glacier to borrow a copy of this book to read.



If you were going to write an amazing story about an animal in Glacier Bay, what animal would you choose and what would happen to it? Either draw a picture or write a few sentences or the first paragraph to your story.



18. What was the most exciting adventure you have ever had? Share that story with someone.

Searching for Clues

Often when you go searching for an answer to a question or a solution to a problem, you find something you weren't even expecting. And sometimes, this new discovery is even better than what you were originally looking for!

Use the secret code below to learn more about an early Glacier Bay explorer who came searching for geologic knowledge.

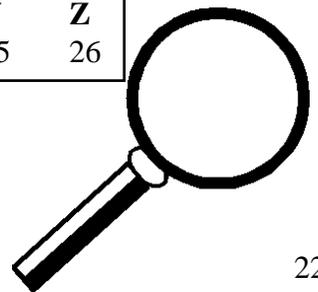
The world knew very little about Glacier Bay until 1879 when naturalist _ _ _ _ _ (10-15-8-14-13-21-9-18), with four _ _ _ _ _ (20-12-9-14-7-9-20) guides and a Presbyterian missionary came to Glacier Bay in a dug-out _ _ _ _ _ (3-1-14-15-5). John Muir was hoping to learn more about the _ _ _ _ _ (7-12-1-3-9-5-18-19) of this area. Navigating with Captain Vancouver's _ _ _ (13-1-16), Muir discovered the _ _ _ (9-3-5) front had moved _ _ _ _ (2-1-3-11) forty miles from where Vancouver's survey party saw it just 85 years before. Muir fell in _ _ _ _ (12-15-22-5) with Glacier Bay and came back several time to study this fascinating icy _ _ _ _ _ (23-9-12-4-5-18-14-5-19-19). By sharing his stories of Alaska, soon the whole _ _ _ _ _ (23-15-18-12-4)knew about this amazing place. His biggest contribution however was that he wrote stories so that the whole world would learn about this amazing place called Glacier Bay, where life was returning to the land.

Secret Code

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



19. What sorts of treasures have you discovered near your home that were really cool?



There's No Place Like Home

Who else do you share your home with? Glacier Bay is home to a wide array of plants and animals who live in a variety of different habitats. A habitat is an animal's home—a place where that animal can find food, shelter and water and be able to defend itself from its enemies.



Below is a list of Glacier Bay habitats and some animals that live in these habitats. See if you can match the animal with its habitat. Some animals may be seen in more than one habitat.

Ice Worm, Puffin, Sea Star, Moose, Minke Whale, Clam, Porcupine, Sandpiper, Salmon, Black Bear

Spruce-Hemlock Forest : _____

Rocky Shoreline: _____

Wet Meadow: _____

Open Ocean: _____

Glaciers: _____

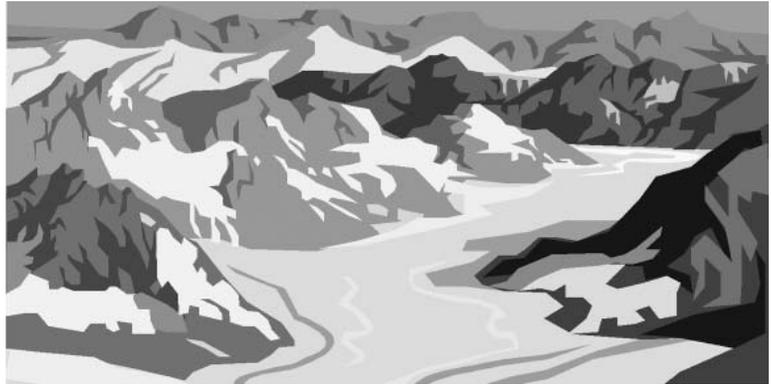
Mud Flats: _____



20. Name a habitat near your home and 2 animals that live in it.

Wilderness Stroll and Poll

Be a reporter for the day and find out why people from all over the world travel great distances to visit Glacier Bay National Park. Is it the spectacular scenery, the abundance of wildlife, the chance to see a tidewater glacier? Or are they possibly drawn to Glacier Bay to experience it's wildness?



Wild places are disappearing from this planet. Introduce yourself to two park visitors and find out what they think about this wild and special place. Be sure to fill out the following information:

Visitor #1

Name:

Home Town:

Why they came here:

Favorite thing about Glacier Bay:

One thing they hope never changes:

Visitor #2

Name:

Home Town:

Why they came here:

Favorite thing about Glacier Bay:

One thing they hope never changes:



21. Why do you think we should continue to protect places like Glacier Bay National Park?

“In wildness is the preservation of the world.”

Henry David Thoreau

You've Got the Whole World In Your Hands

Did you know that over 400,000 people visit Glacier Bay each year? That's a lot of people. And a lot of people can have a huge impact on a special wilderness park like Glacier Bay. Fortunately, most people who come to this park are very responsible and dispose of their garbage properly. But a few careless people leave trash along the road, the trails, or toss it off their boats. It can take this trash years and years to decompose or rot away.



How long does it take your everyday trash to rot away and turn back into soil? Can you guess? Look at the chart below to see the length of time for those things you use most every day.

Paper	2-6 months
Orange Peel	6 months
Milk Carton	3 years
Plastic Bag	10-20 years
Plastic Juice Container...	30-40 Years
Aluminum Can	90-100 Years
Styrofoam cup.....	Over 100 years

As part of the requirements for this Jr. Ranger program you are asked to do a service project for the park. What can you do to help protect Glacier Bay National Park by following the 3 Rs- Reduce, Recycle and Reuse? Record your answer below.



22. List 3 things that you can do at home to help the earth.

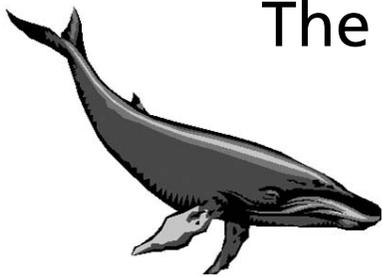
Until We Meet Again

Before you know it your Glacier Bay visit will be over and you will be heading back to your home. Think of all the sights you've seen, the things you've learned about and the people you've met. Hold tight to these memories and do come back and visit Glacier Bay again sometime.

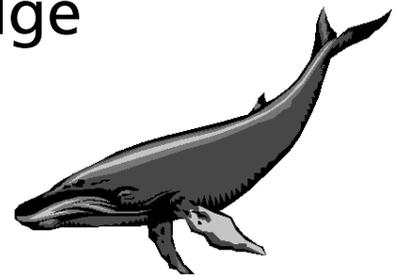
Congratulations. You're almost done. Now's the time to double check to make sure you've completed all the steps to become a Glacier Bay Junior Ranger (*see page 2*). Then take this book to the Visitor Center so a Park Ranger can award you with your very own official Junior Ranger badge.

There are over 385 other National Park units that have Junior Ranger programs. There's even a national Jr. Ranger program. See how many different badges you can collect.

The Junior Ranger Pledge



I am proud to be a Glacier Bay National Park Junior Ranger.



I promise to appreciate, respect, and protect, all national parks.

I will continue learning about the landscape, plants, animals, and history of Glacier Bay.

I will share what I learn with my friends and family.

Junior Ranger Signature

Date

Experience Your America

The National Park Service cares for special places saved by the American people so that all may experience our heritage.



For more information about Glacier Bay National Park:

Superintendent
Glacier Bay National Park,
PO Box 140
Gustavus, AK 99826
907-697-2230
www.nps.gov/glba

To learn more about other national park units, check out these websites:

National Park Service: www.nps.gov
Web Rangers: www.nps.gov/webrangers