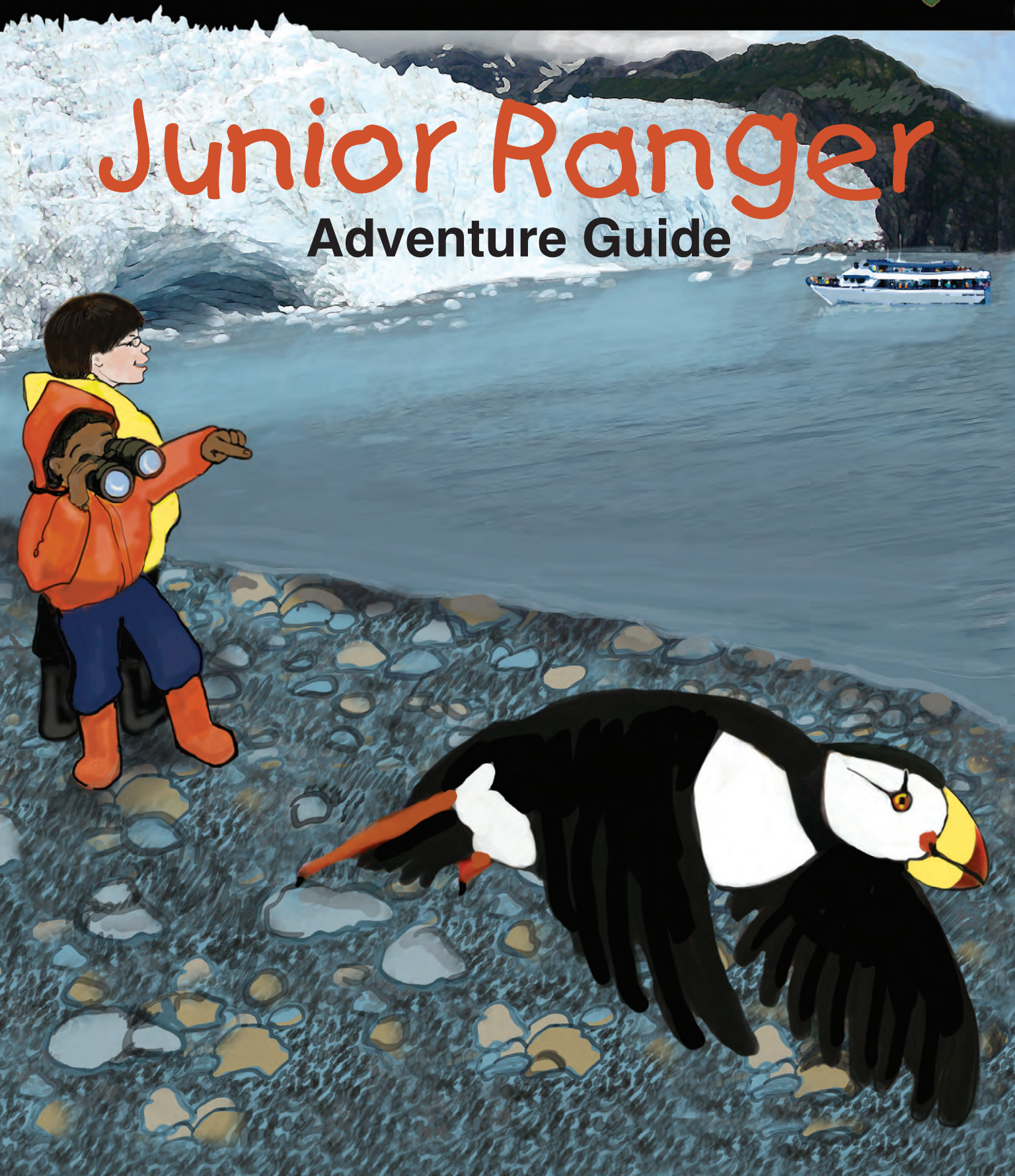
Kenai Fjords National Park

National Park Service
U.S. Department of the Interior

Junior Ranger

Adventure Guide



YOU can become a Junior Ranger

Junior Rangers:

Explore your national parks.

Learn about your national parks so you can teach others about them.

Protect your national parks by learning and asking others to help take care of the plants, animals, and features of the parks.

To Become a Junior Ranger:

1. Complete these pages in this booklet:
   - If you are 4-6 years old do all of the **otter** pages (10,14 and 21) plus do at least 1 page of your choice.
   - If you are 7-9 years old do all of the **whale** pages (17,19 and 20) plus do at least 3 pages of your choice.
   - If you are 10-12 years old do all of the **black bear** pages (3,4 and 22) plus do at least 5 pages of your choice.

2. Complete the certificate on the back cover, take the Junior Ranger oath, and get a ranger's signature.

3. Wear your Junior Ranger badge proudly.

Who are National Park Rangers? What do they do?

Many different people become National Park Rangers. They are all dedicated to protecting and preserving the national parks and helping people like you learn about them. There are five types of rangers who work at Kenai Fjords National Park.

Draw a line from each description to the picture of each kind of ranger.

Law Enforcement

These rangers help you learn about the park. They give programs to help visitors discover the park.

Interpretation

These rangers keep the park looking nice. They build trails, keep machines running, and take care of park buildings.

Administration

These rangers are the park scientists and historians. They do research and help inform the interpretive rangers.

Resource Management

These rangers do the park paperwork. They pay the park's bills and keep communication systems running smoothly.

Maintenance

These rangers protect the park, enforce rules, and help if visitors get hurt.

Welcome to Kenai Fjords National Park

There are nearly 400 national park sites in the United States. Each one is protected for its own unique reason.

Kenai (*keen-eye*): origin uncertain, either from "Kenayskaya" the Russian name for Cook Inlet or from the language of the Dena'ina Indians meaning "two big flats and a river cut back."

fjord (*fee-yord*) a long, narrow, steep-sided valley carved by glaciers and filled in with seawater.

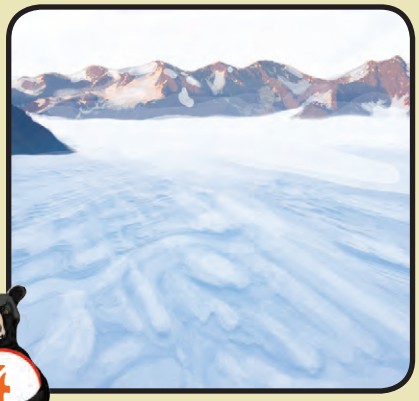
National Park- A place where nature and/or history is protected so that all people can enjoy it without harming the ecosystem or the stories of the past. We are all owners of our country's national parks.

Check off the things below that you will find at Kenai Fjords National Park

☐ Geysers and Hot Springs

☐ A Place for Scientists to Study

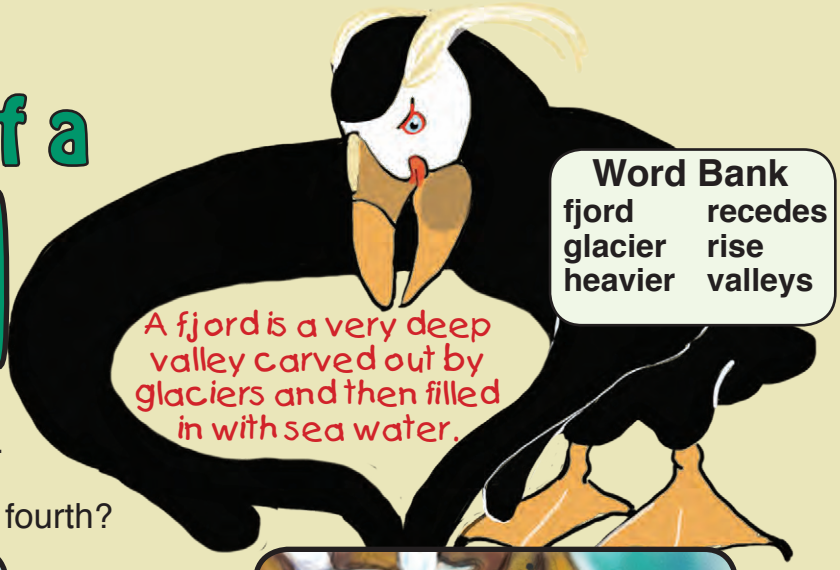
☐ Fjords Full of Wildlife



☐ The Harding Icefield

☐ Historic Battlefield

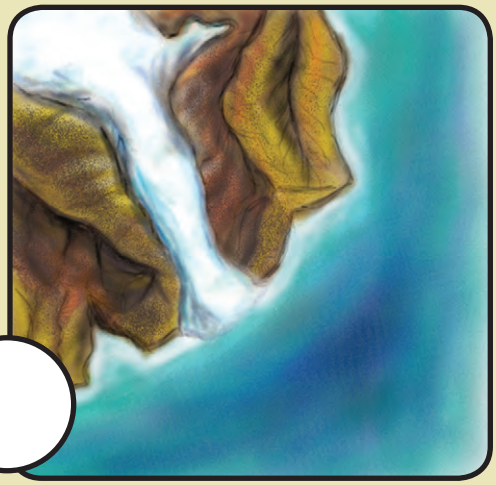
The Creation of a Fjord



Word Bank

fjord	recedes
glacier	rise
heavier	valleys

Fill in the blanks in the story below.
Use the Word Bank if you get stuck.
Give each picture a number.
Which came first, second, third and fourth?

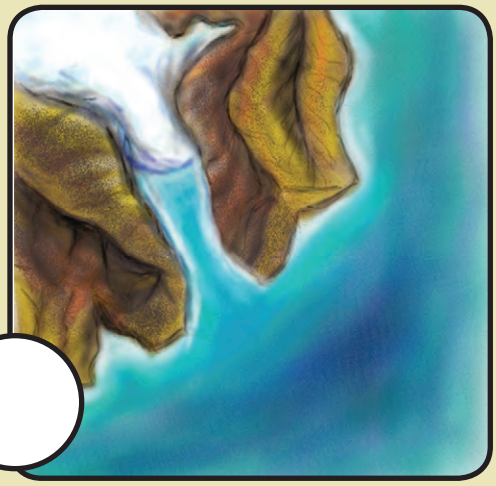


#

The glacier becomes bigger and _____, which causes it to carve _____ between mountain peaks.

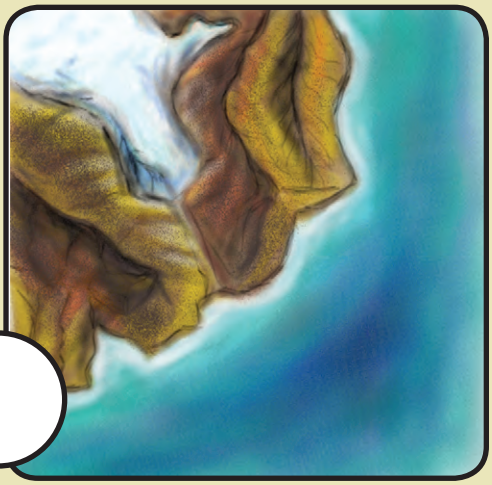
#

As the glacier melts, the sea levels _____. Water floods the valley creating a _____.



#

When the climate warms, the glacier melts, or _____, leaving a deep valley.



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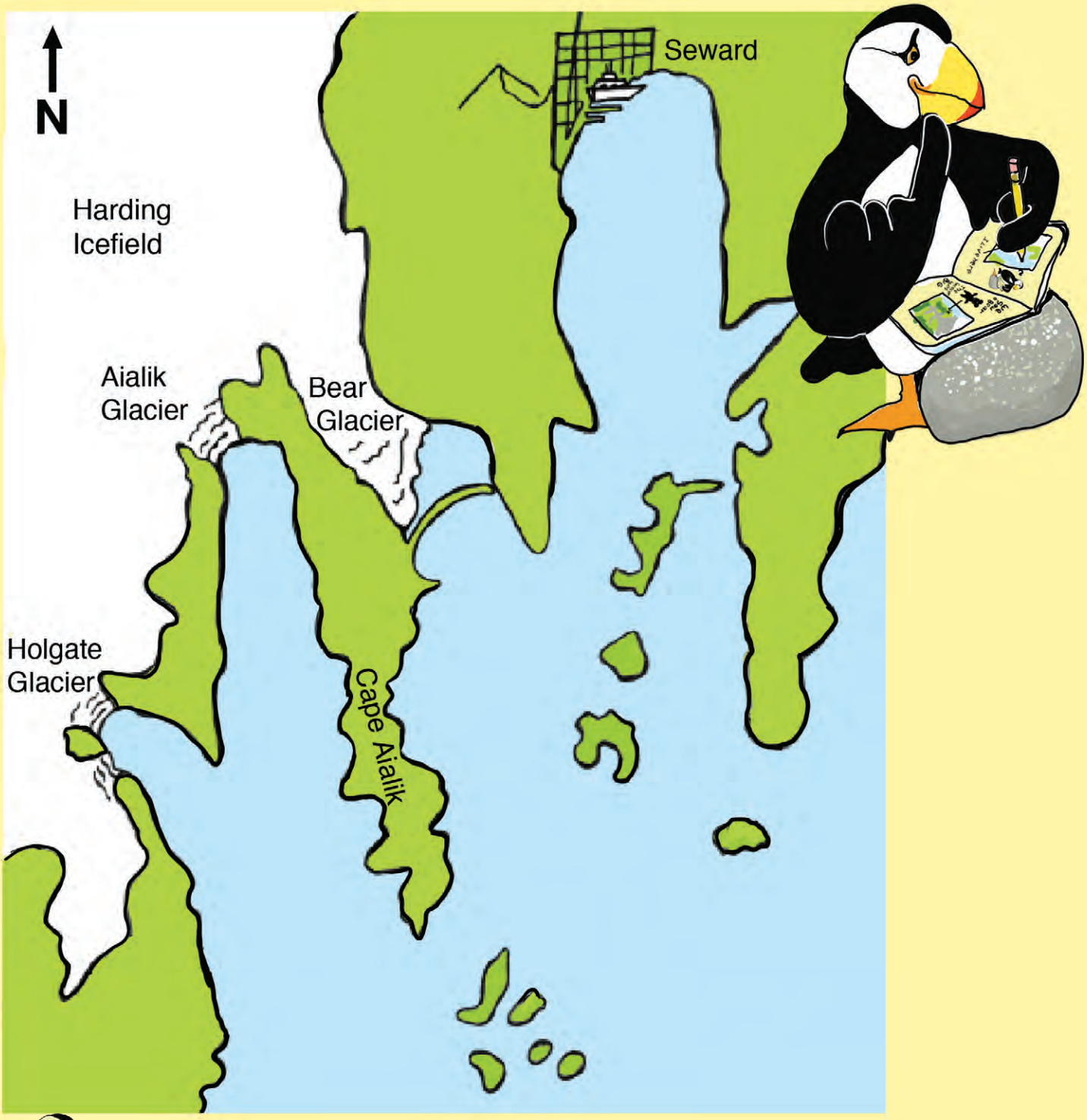
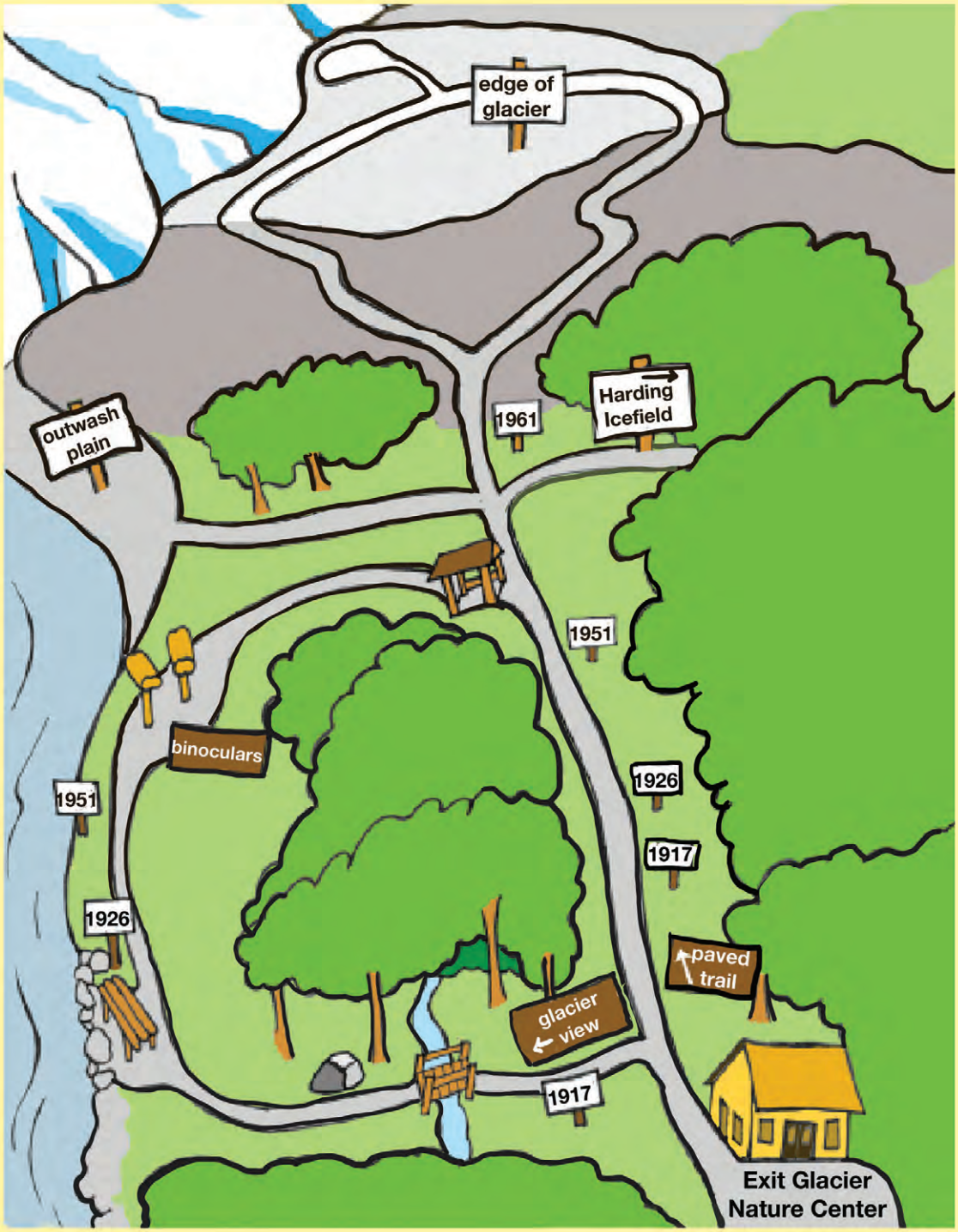
Snow builds up in an icefield and ice spills over the edges creating a _____.

Where did you go? Use the maps on these two pages to record your visit to Kenai Fjords National Park.



A coastal trip into Kenai Fjords National Park

What did you see? What did you hear? What did you smell? Where were you? You can write and draw right on the maps.



The Exit Glacier area

A Whale Tail's Tale

The research boat Natoa has seen four humpback whales today.

Use the Fluke Records book to identify the whales and write their names or numbers in the spaces under their tails!

Just like every human has unique fingerprints, each humpback whale's tail, or "fluke," has different cuts, scratches, and color patterns that make it unique.

Puffin tails are not so easy to use for identification.

An **ecosystem** is a community of living things and all the non-living things on which they depend. An **estuary** is an ecosystem where fresh water and seawater meet.
Help Mother Nature whip up one of her favorite recipes:

Fjord Es-STEW-ary Ecosystem!

Fill in the missing words on the recipe cards. Use the Word Bank below if you get stuck.

1.

Start with_____ water and _____ water, well chilled by subarctic weather and _____ ice.

2.

Add more non-living things like _____ and_____.

3.

Add living things like:

_____, _____

_____, _____

and _____

4. Don't forget the clean-up crew:

isopods,

sea cucumbers,

and _____.

5. Mix well using _____ and _____.

All the living and non-living things working together = A healthy fjord estuary ecosystem

Word Bank

currents	plankton	sunshine
fresh (water)	puffins	tides
glacial	rocks	crabs
whales	sea lions	
otters	sea (water)	

Summer is the time for babies in Kenai Fjords National Park

When summer comes to Kenai Fjords, puffins feed pufflings at the rookery, otters float with pups nestled in their fur, and humpback whales teach their calves to find bait balls and krill to eat.

Draw lines matching up these parents with their babies.

Plant Succession

When glaciers melt, plants begin to take over the rocky land in a special order. Some plants are good at starting in poor soil and building it up. Others take over when the soil is rich. This process is called plant succession.

Read the clues to discover the order that plants move on to the landscape as Exit Glacier recedes. Then number the pictures 1- 6 to show which plant came 1st, 2nd etc.

#

Cottonwood needs bright sunlight to sprout but also require other plants to prepare the soil so they can grow.

#

Sitka Alder can make its own nitrogen, an important nutrient for plant growth. This shrub grows in the rocky area in front of the glacier and helps prepare the land for larger trees to follow.

#

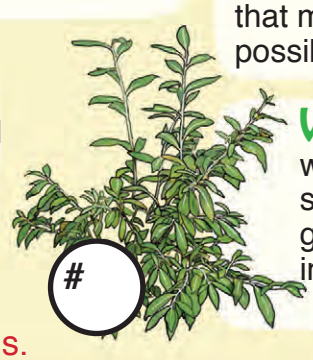
Spruce and Hemlock begin to sprout in the cottonwood forest and eventually shade out the forest of plants that made their growth possible.

#

Dwarf Fireweed seeds are blown in on the wind and can grow on the broken down rock near the glacier.

#

Lichen and Moss create the first soil by breaking down newly exposed rock.



#

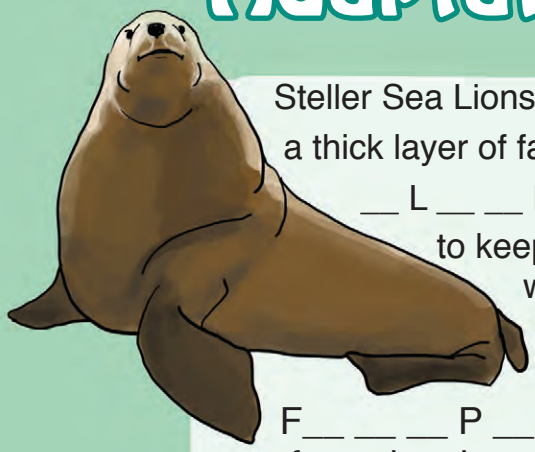
Willows prefer wet areas slightly sheltered from the glacier. They move in soon after alders.

If you visit Exit Glacier try to spot each of the plants mentioned above. Draw the plants into a picture that shows where you find them in the glacial landscape below. Feel free to add rocks, mountains, and streams.

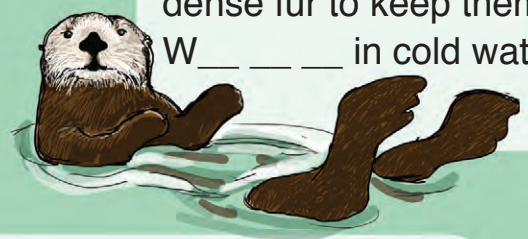
glacier

Adaptation!

I have webbed feet and strong wings to help me swim. Living things can adapt to be more successful in the environments in which they live. Fill in the blanks below to reveal some of these animals' adaptations.



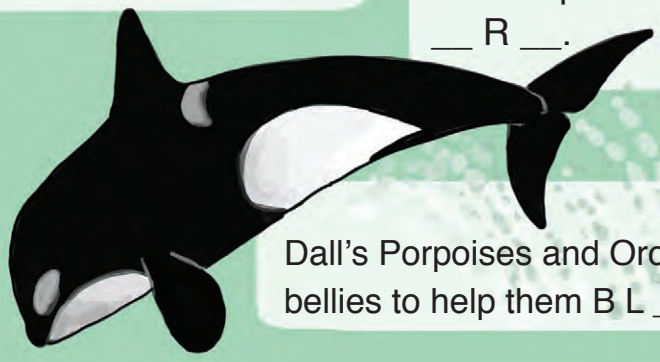
Steller Sea Lions have a thick layer of fat, or __ L __ __ B __ __, to keep them warm, and long F__ __ __ P __ __ __ for swimming and walking on rocks.



Sea Otters have very dense fur to keep them W__ __ __ in cold water.

Cormorants have long, thin bodies made for D __ V __ __ __ deep down into the ocean.

Common Murres have oily feathers to help them F__ __ __ T back up to the surface after a deep dive. Oil also helps keep their feathers __ R __.



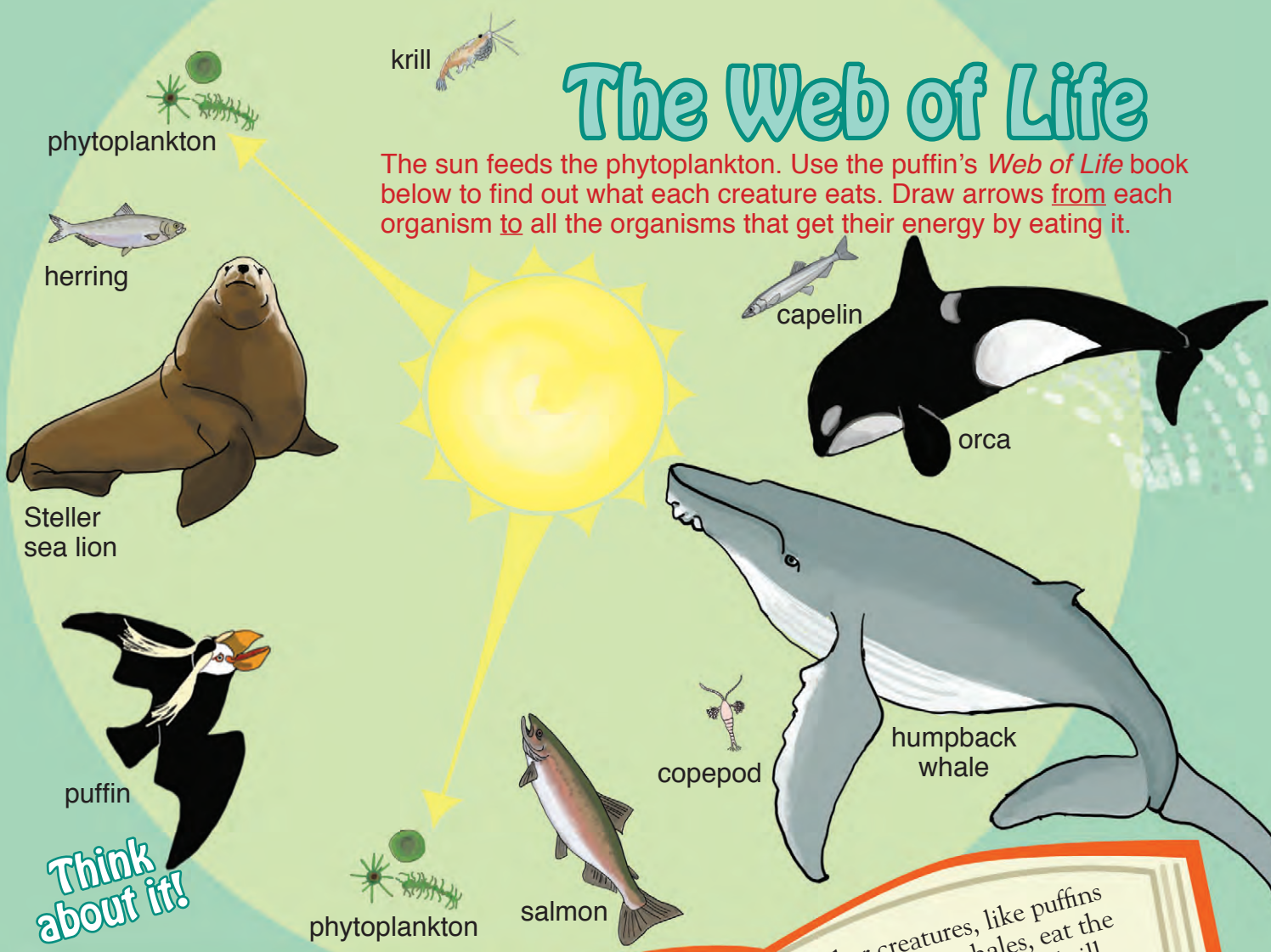
Dall's Porpoises and Orcas have black backs and white bellies to help them B L __ __ D in with their surroundings.

Think about it!

What would you need to live in the waters of Kenai Fjords?
Draw yourself with your adaptations. Write a sentence to describe them.

The Web of Life

The sun feeds the phytoplankton. Use the puffin's *Web of Life* book below to find out what each creature eats. Draw arrows from each organism to all the organisms that get their energy by eating it.



Think about it!

What do you think these animals do to survive in the winter when the daylight hours are short and sunlight no longer feeds the phytoplankton?

What is that Animal?

While visiting Kenai Fjords National Park you will see lots of interesting animals. You can use a field guide to identify them. Practice your identification skills. Circle the animal in the key below that is the same as the one you see to the left.

You see this:

Which one of these is it?

Rhinoceros Auklet

Parakeet Auklet

Red Squirrel

Short-tailed Weasel

Violet-Green Swallow

Magpie

Dall's Porpoise

Orca

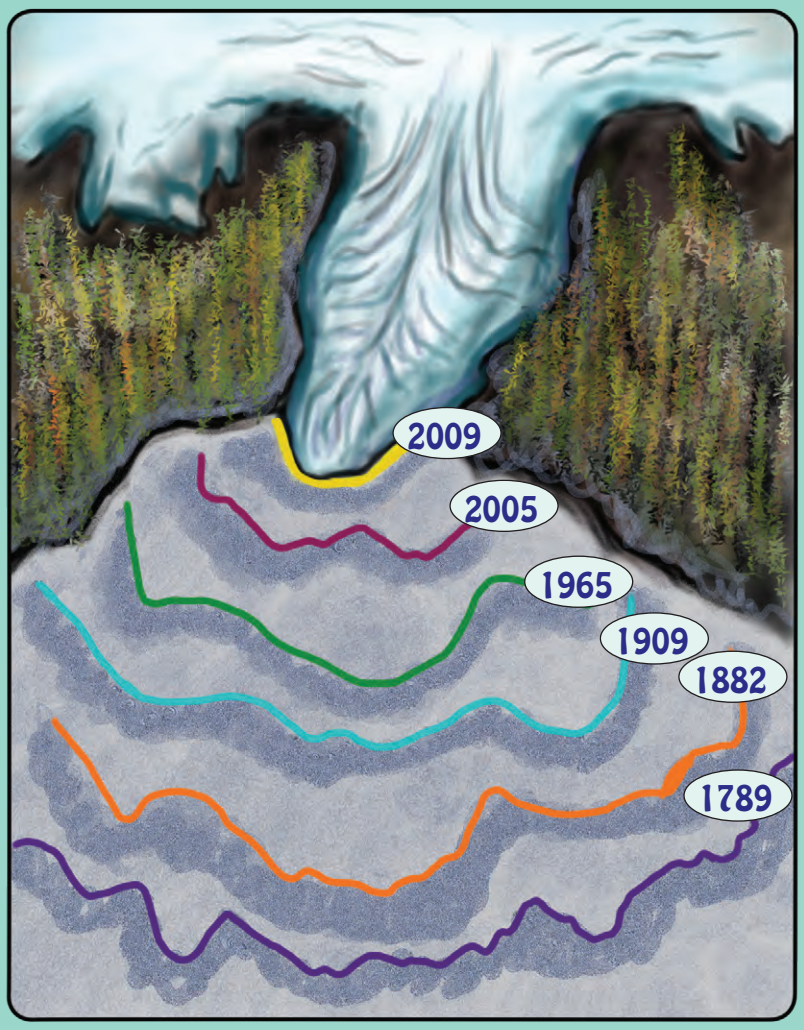
Snowshoe Hare

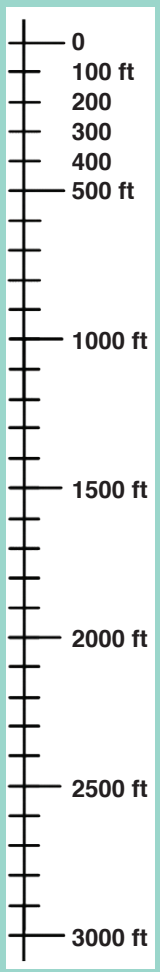
Hoary Marmot

Moraines:
the footprints a glacier leaves behind

As a glacier melts, rock that was carried in the ice drops out of it. This rock pile at the toe of the glacier can grow into a hill we call a "moraine" if the glacier remains stable and melts in the same spot for several years. One way scientists study glacial activity is to measure how far the glacier has receded since the year when the last moraine was formed.

See what you can learn by measuring moraines:





These measurements are not as easy as you might think at first glance. (You can ask a ranger for his/her thoughts about how to do this.) How will you measure?

Measure how far the glacier has receded since 1789.

_____

Measure how far the glacier receded between 1909 and 2009.

_____

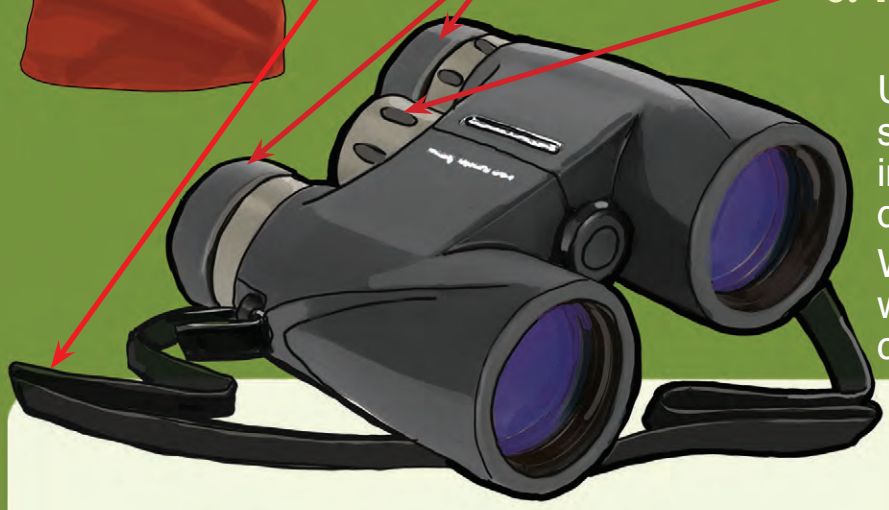
If it keeps melting as fast as it has in the past 100 years, how long will the glacier be in 2059?

_____

The moraines suggest that the glacier was wider in the past. How could that affect the speed at which the glacier recedes?

Use Those Binoculars

Binoculars are a great tool for studying the natural world. You can learn a lot by watching animals or calving glaciers from a safe distance.



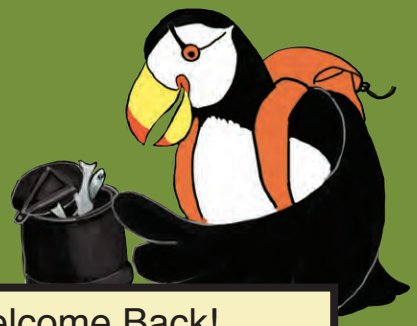
1. Put the strap around your neck so your binoculars don't fall.
2. Look through the eyepiece lenses.
3. Twist the focus dial until your view is sharp and clear.

Use your binoculars to find something far away that interests you. Describe and draw what you see.

What details could you see with the binoculars that you couldn't see without them?

Take a Walk Through Bear Country

I always keep my capelin and sandlance snacks in a bear-resistant canister when camping in Bear Country.



Start Here

How should you prepare?

Relax. You won't need anything special.

Buy bear spray and learn how to use it.

Should you go alone?

Go alone. Be very quiet. so you can hear everything.

Go with friends. Make noise so you don't surprise a bear.

STOP your last choice was dangerous. Go back.

Welcome Back! How was your walk through Bear Country?

There's a BEAR!

Talk to the bear calmly. Never turn your back on it. Walk sideways at an angle out of its path.

Run as fast as you can and scream as loud as you can.

Your backpack got heavy.

Leave it by the path. Pick it up on your way back.

Take turns carrying it.

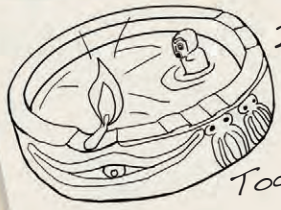
It's lunch time.

Spread out your food so you can easily leave it if a bear shows up.

Keep your food close and defend it from bears.

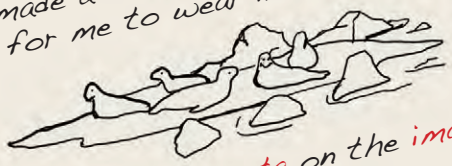
First People of the Fjords...

Below is an invented journal entry of a young Alutiiq hunter. See if you can translate the Sugcestun language and learn a bit about his culture.

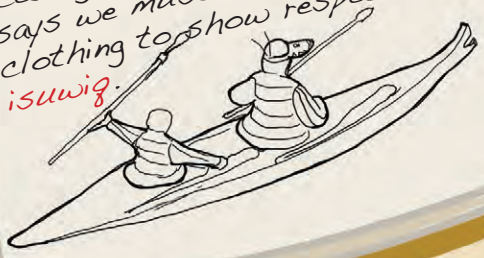


I am writing by the light of our *qangihlat lampat*.

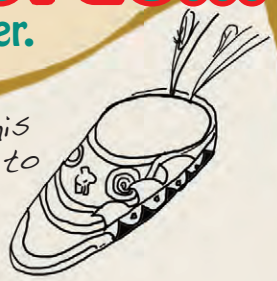
Today was a very exciting day for me. I am preparing for my first *isuwiq* hunt. My *aana* made a *kanagluk* for me to wear in the *qayaq*.



I will travel with my *ata* on the *imaq* to where the *isuwiq* lie on the icebergs in front of the glacier. *Ata* says we must dress in our best clothing to show respect for the *isuwiq*.



Tomorrow he will wear his *caguyaq*. It is decorated to show all of his past hunting trips. It even has the whiskers of a sea lion on it.



Today the *isuwiq* saw me as a worthy hunter. My *ata* and I have brought the village fur for warm clothes, oil for our *qangihlat lampat* and blubber that is so good to eat. My *aana* is proud and says now I can begin making my own *caguyaq*.

People lived on the land we now call Kenai Fjords National Park at least 1000 years ago. These people called themselves the "Sugpiaq" or "real people." "Alutiiq" is another term used to describe the first people who lived here harvesting their food, clothing, housing, and transportation needs from the animals and plants of the Kenai Fjords area.

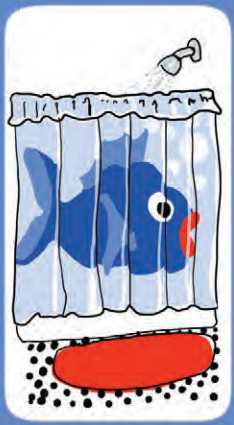
Draw lines from the Sugcestun words to the correct English translations below as you translate the journal entry.

- aana
- ata
- caguyaq
- imaq
- isuwiq
- kanagluk
- qangihlat lampat
- qayaq
- bentwood hunting visor
- father
- kayak
- mother
- ocean
- oil lamp
- seal
- waterproof gut skin parka

Be a Steward of Our Planet

You can practice stewardship (taking care of the earth) every day. The ideas below are just a start. Check the ways you are already a good steward and things you will do in the future to help keep our planet healthy. Don't forget to add one of your own ideas. The creatures at Kenai Fjords will thank you.

Visit National parks.
☐ I do this. ☐ I will do this.



Save Water! Take shorter showers.
☐ I do this.
☐ I will do this.

Eat local fruits and vegetables. They use less packaging and less transportation.
☐ I do this. ☐ I will do this.

Learn about a local plant.
☐ I do this.
☐ I will do this.

Recycle.
☐ I do this.
☐ I will do this.

Unplug electronics not in use.
☐ I do this. ☐ I will do this.

Learn about a local animal.
☐ I do this.
☐ I will do this.

Don't use paper unless you have to.
☐ I do this.
☐ I will do this.

Share photos and stories about your trip to the parks.
☐ I do this.
☐ I will do this.

Bicycle or walk instead of asking your parents to drive.
☐ I do this.
☐ I will do this.

My stewardship idea:

What I love most about Kenai Fjords National Park ...

glacier
thing

calving — action
crashing — action
creaking — action

massive — description
frozen — description
blue-white — description

awe
feeling

Take a few minutes and think about your visit to Kenai Fjords National Park.
Choose an animal, place or other thing you really liked and fill in the blanks below to make a poem about it. I like glaciers, that's my poem.

_____
thing

_____ action
_____ action
_____ action

_____ description
_____ description
_____ description

_____
feeling

and how I will protect it.

Now think about what you can do to protect this park, other parks and our planet. Write a personal oath, or promise, about what you will do.

Here are some words you might like to use:

wildlife	trash
ocean	plants
protect	learn
conserve	explore
respect	clean

What Kenai Fjords National Park means to me.

Badges are reminders of the things that are important to us. Mine reminds me of the Beehive Islands, the ocean, and my family.

All rangers wear an arrowhead-shaped badge. The symbols on the badge, the arrowhead, mountain, sequoia tree, bison, and water remind rangers of what they protect.

Create your own badge about Kenai Fjords National Park. It can have any shape and contain anything you want.

Spotlight on your Ranger

It's your turn to ask the questions. Interview your ranger. Ask whatever you want to know like: "Why did you become a ranger?" or "What was the weirdest thing you ever saw in the park?" I'll get you started with the first two questions then you choose two more to ask.

Ranger's Name _____

1. What does a park ranger do? _____

_____

_____

_____

2. Why is Kenai Fjords a National Park ?_____

_____

_____

_____

_____

3._____

_____

_____

_____

_____

_____

4. _____

_____

_____

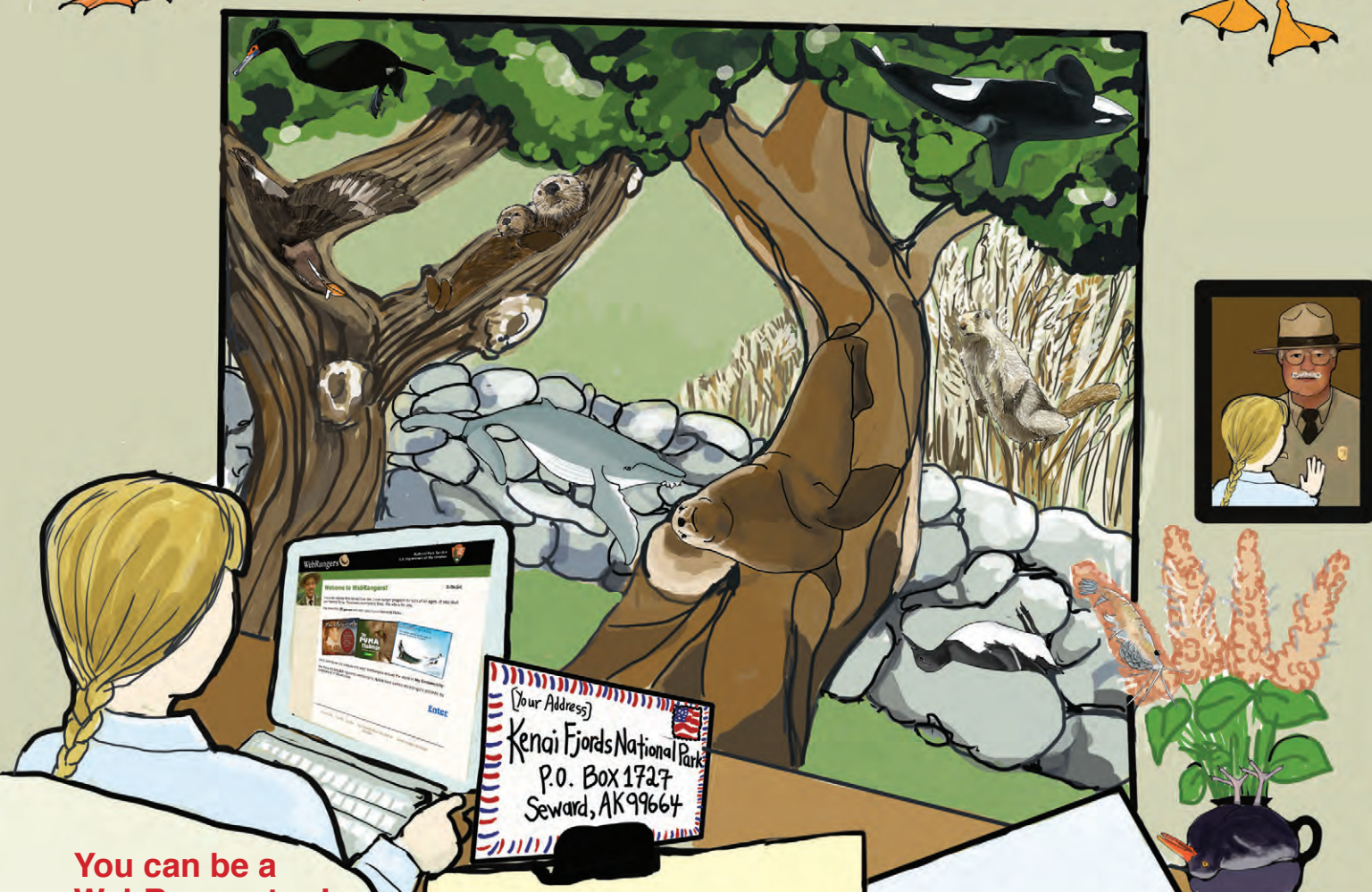
_____

_____

_____

Take your memories home with you...

You'll see reminders of us everywhere as you remember your trip to Kenai Fjords National Park. In this picture find the orca, common murre, sea otter and pup, hoary marmot, oystercatcher, sea lion, cormorant, humpback whale, krill, and rhinoceros auklet.



You can be a WebRanger too!

Just go to: www.nps.gov/webrangers and sign up for free. Play your favorite WebRanger games and learn about your national parks.

Earn your WebRanger badge!

Didn't finish your Junior Ranger activities in time?
That's okay, you can still get your badge!

1. Finish the book at home.
2. Mail it to the park, in an envelope addressed like the one above.
3. We will return your book and badge in the mail!

Acknowledgements:

Special thanks to Ba Rea of Bas Relief LLC, Nareen Bagdassarian, Elise Kahl and Fiona Ritter-Davis.

Kenai Fjords National Park
Junior Ranger

As a Junior Ranger, I promise to help protect Kenai Fjords National Park, my community, and the earth.

I will explore and discover the natural world and other cultures wherever I go!

Presented, on completion of the Junior Ranger Adventure Guide, to:

_____

On _____

_____

Park Ranger