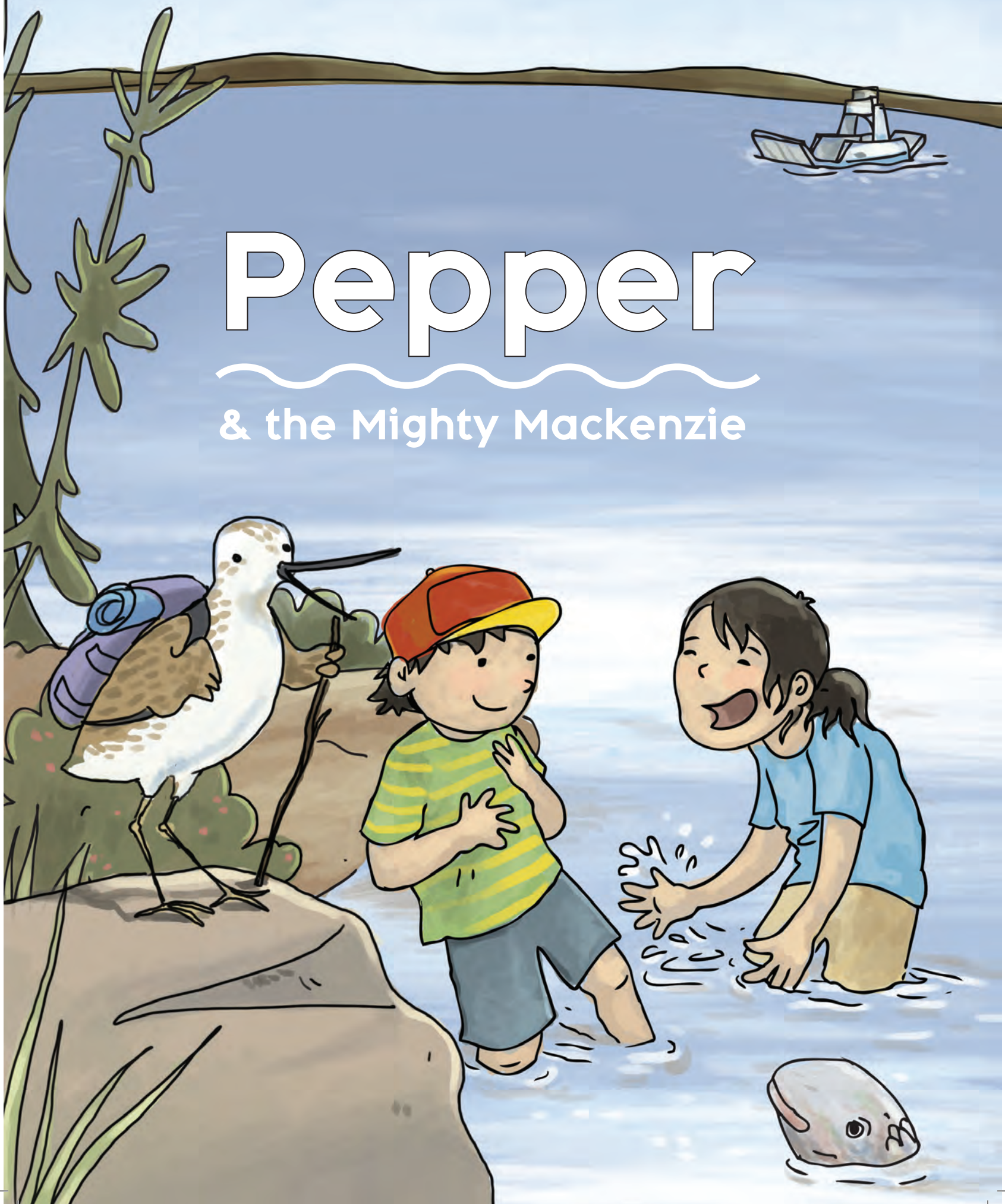


# Pepper

& the Mighty Mackenzie





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Written by: Ecology North  
Illustration: Alison McCreesh  
Design: Jazmine Gardner  
Supported by: The Government  
of Northwest Territories







# Meet Pepper

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Meet Pepper the sandpiper. She has come all the way from South America! She is on a long journey to the Arctic Ocean where she will nest for the summer. But she is an easily distracted sandpiper so she is very late. The rest of her flock flew in the spring and now she is hurrying to find them. She knows to follow the flow of the Mackenzie River and that will lead her to the ocean. But there is so much to see on the way!

There are five main watersheds in Canada: the Atlantic, the Hudson Bay, the Arctic, the Pacific and the Gulf of Mexico. Almost all of the Northwest Territories is contained within the Arctic watershed.

It is called the Arctic watershed because nearly all of the rivers eventually flow towards the Arctic Ocean.

Our watershed contains the mighty Mackenzie River. Many people who live here call the river Deh Cho. This means Big River in Dene languages. It is Canada's largest river.

## What is a Watershed?

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Watersheds can be all different sizes, from small to very large. Imagine you are on a canoe in the middle of the lake. The watershed of that lake could be all the land that you can see around you. When rain or snow falls on that land, it will flow over land or under the ground into the lake. A watershed is all the land that drains into a river or lake. The Mackenzie River is a very long river so its watershed is huge!

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# Pepper starts her NWT journey in Fort Smith

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Pepper is mesmerized by the rapids on the Slave River and the kayakers who play in them. She stops to watch but the pelicans chase her away.





# Pepper arrives at Great Slave Lake!

She has heard about all the things to see here so she flies around the lake and visits Fort Resolution, Łutsel K'e, Yellowknife, Dettah, N'Dilo, Behchokò, and Hay River.



Behchokò

Whati

Great Slave Lake

Fort Pelly



zhokó

Yellowknife, Dettah & N'Dilo



Great Slave Lake

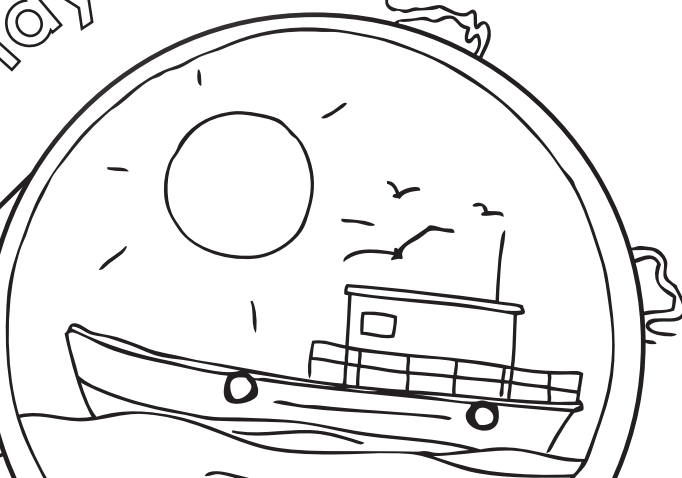
Hay River

Port Providence

Kakisa  
Enterprise



Lutsel K'e



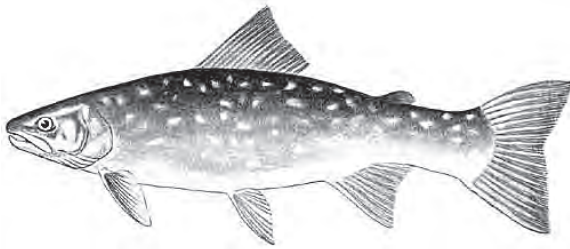
# Watershed Words

Everywhere she goes, Pepper is reminded of the importance of water. Water is everywhere! Sometimes she gets mixed up. Can you help her match the watershed words to their definitions?

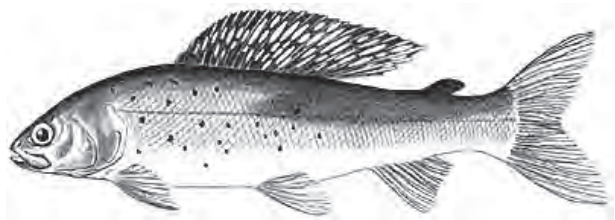


- |               |  |
|---------------|--|
| Groundwater   | Something that dirties land, water or air and makes it dangerous             |
| Stream        | Water that cannot be seen because it is flowing underneath the ground        |
| Freshwater    | Plants and animals that live together and help each other survive            |
| River         | The movement of water  |
| Precipitation | Water that is not salty  |
| Contaminant   | A large body of water  |
| Watershed     | Water that falls from the sky as snow or rain                                |
| Lake          | A flowing, moving stream of water  |
| Tributary     | A small, steady flowing body of water  |
| Stewardship   | Caring for land and water  |
| Flow          | A river that flows into a bigger river                                       |
| Ecosystem     | An area of land where every drop of water ends up in the same lake or river. |

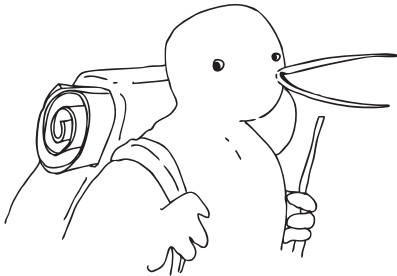
# Make Your Own Fish Cards!



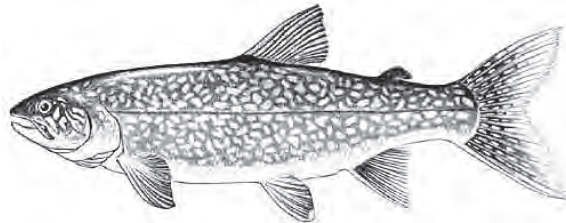
①



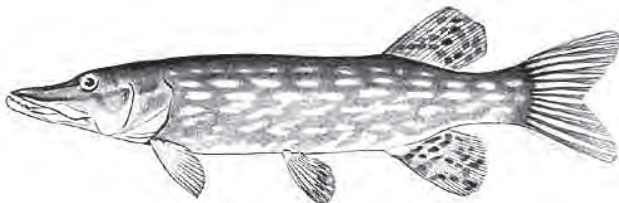
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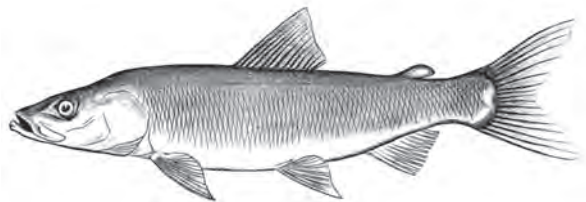
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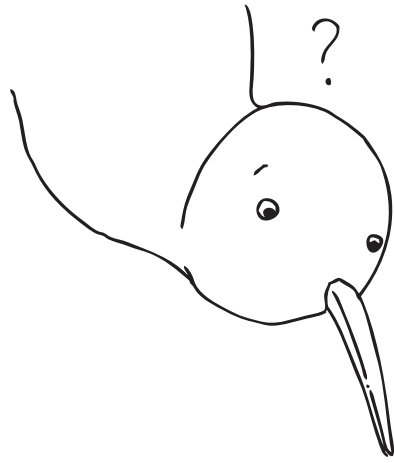
④



⑤



⑥



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### Arctic Grayling

- A small freshwater fish
- Found throughout much of the Northwest Territories in lakes and rivers that are clear and cold
- Has a large and colourful dorsal fin
- Weighs about as much as one or two big books

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### Arctic Char

- Member of the salmon family
- Breeds in fresh water and either stays in fresh water or migrates to the sea
- The only freshwater fish found as far north as Ellesmere Island
- Ranges from bright red to pale pink during the year

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### Lake Trout

- Lives mainly in northern lakes
- The largest of the char family, up to 45 kg and can be over 1 metre long
- A slow-growing deep water fish
- Ranges from light green or gray to almost black with a light-coloured belly

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### Pepper the Sandpiper

- Loves flying and talks a lot
- Eats bugs, flies and mosquitoes
- A shorebird that winters along the coast of South America and summers in the Arctic
- Has short webbing between toes

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### Inconnu

- Member of the whitefish family
- Common in the Mackenzie Delta, migrates upstream to lay eggs in the Peel, Arctic Red and Mackenzie Rivers
- Dark back, silvery sides and large scales

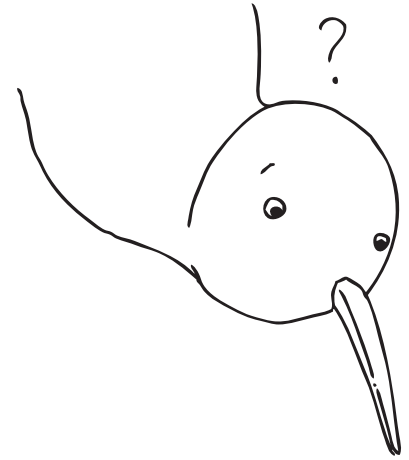
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### Great Northern Pike (Jackfish)

- Likes warm water, slow rivers and weedy bays
- Can grow to be over 1 metre long
- Green in colour with yellow and white shading along the belly
- Has the largest geographic range of any freshwater fish

# Fish Scramble

As she travels, Pepper makes lots of fishy friends. She often has a hard time remembering their names. Can you help her unscramble their names?



① eagtr eohnntrr kiep

② nnncuio

③ iccart hrac

④ riacct glgnyiar

⑤ klea rtout

⑥ parpedisn

"Me and my dad went fishing near my Grandpa's cabin. I was talking and talking and not getting any fish, but when I stopped talking, I got a huge fish! I kept getting more fish after that."

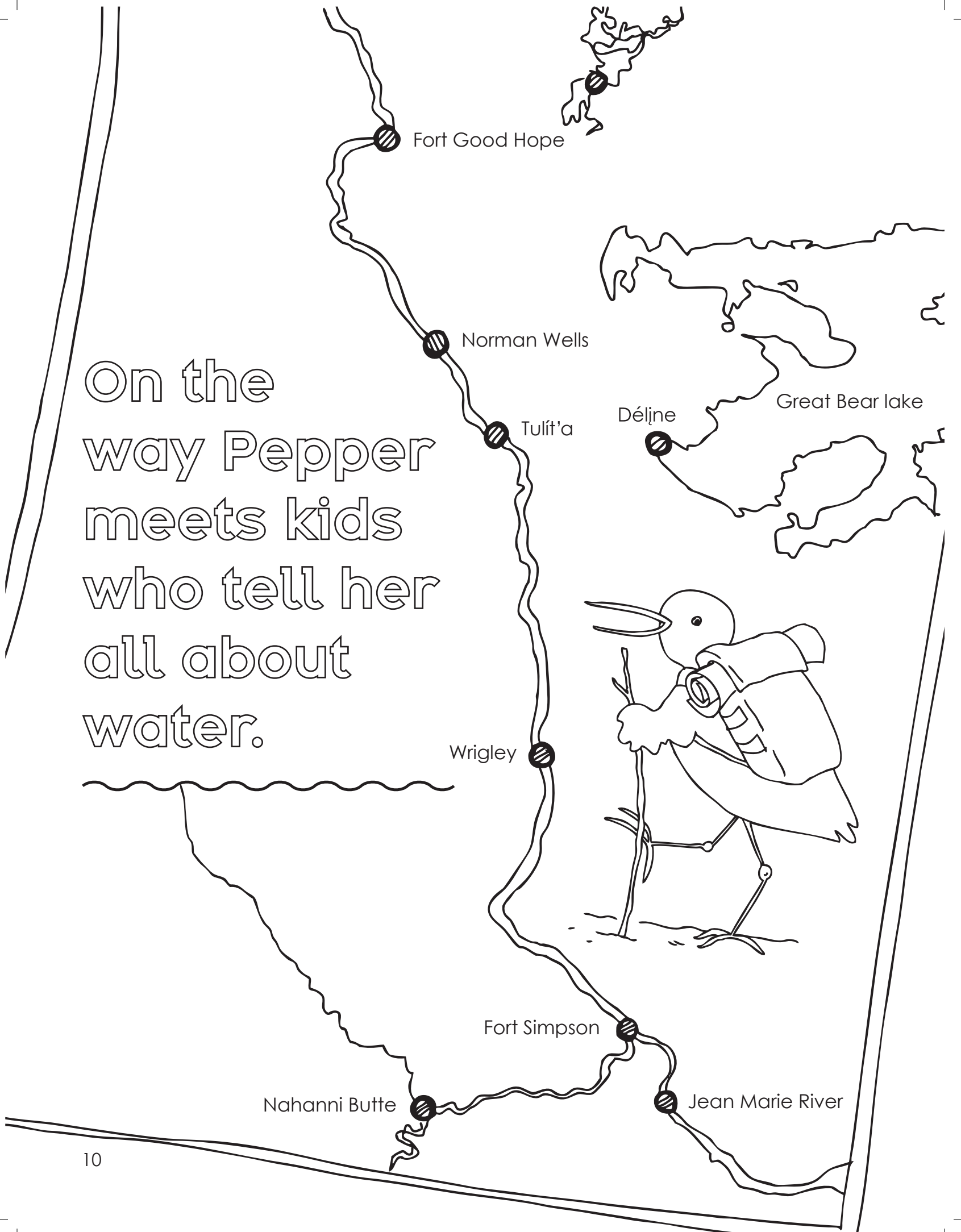
– Michaela Koe, age 7



1. Great Northern Pike 2. Inconnu 3. Arctic Char  
4. Arctic Grayling 5. Lake Trout 6. Sandpiper



On the way Pepper meets kids who tell her all about water.



We went fishing and I put some hooks on my line. We were waiting and waiting. I skipped some rocks and my Mom and I took off our shoes and we went wading in the water and it was super cold.

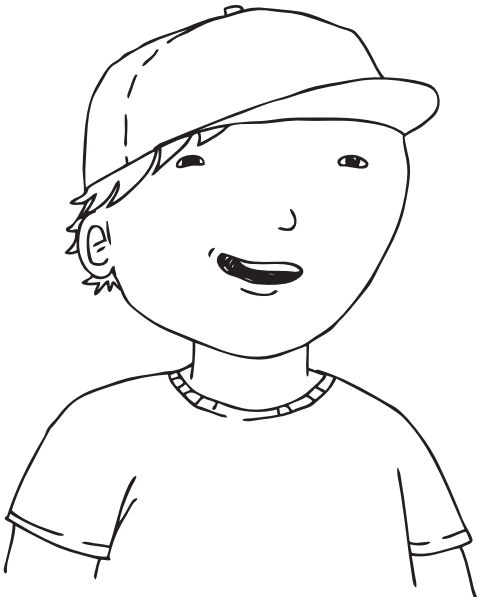
- Cassian (CJ)  
Bonnetplume, 8

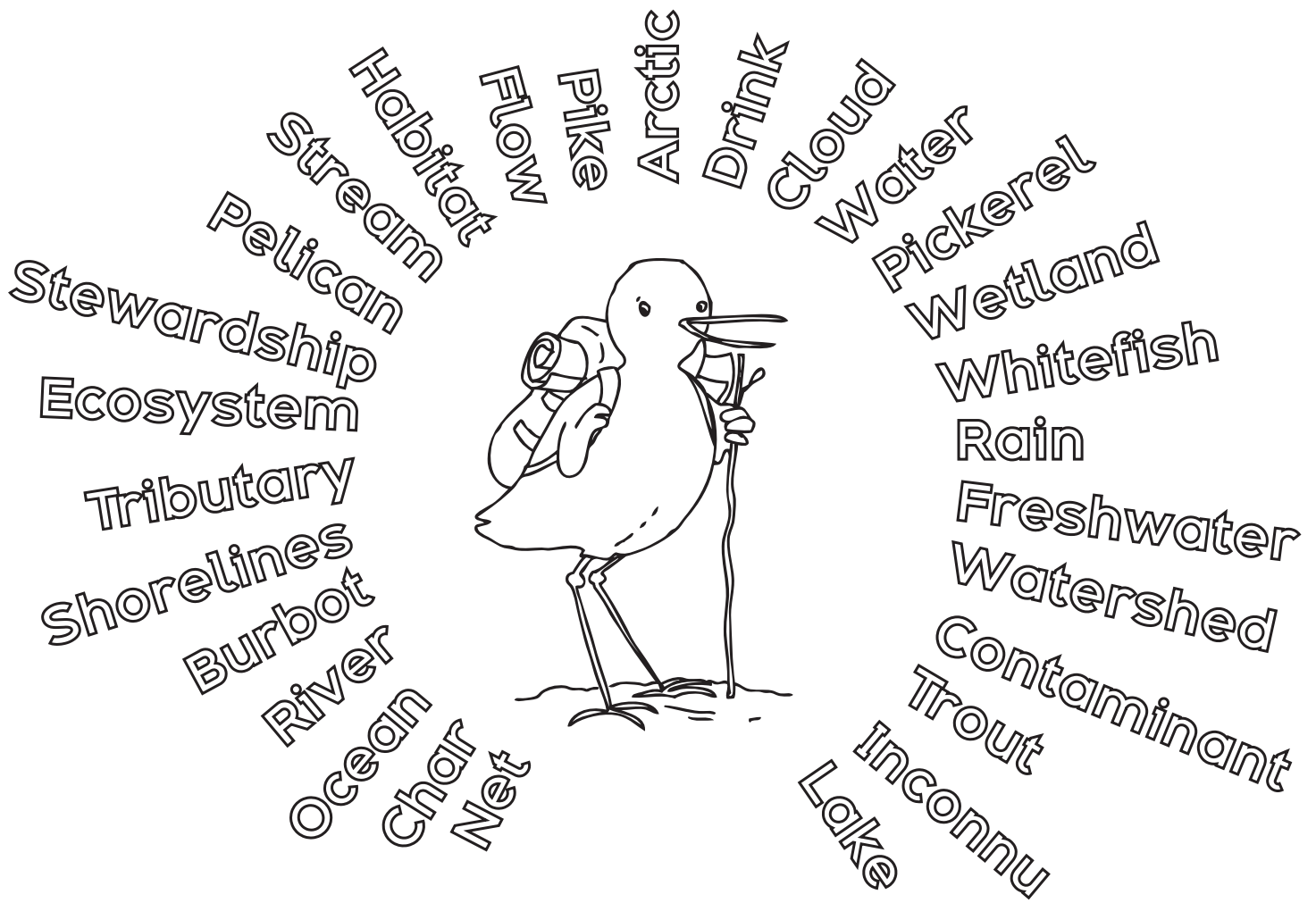
I like the water near Fort McPherson because it makes you healthy.

- Keyanna Nerysoo, 7

"People all over the world pollute the water. Only 3% of the world is freshwater. We use water for showering, cooking and washing hands. Here in Ulukhaktok, we can drink lake and river water."

- Albert Okheena (age 10)





## Help Pepper find words!

Pepper can understand why so many people love water. It gives people and animals food, drink and a place to play! Pepper thinks about water all the time now. She wants to keep it clean so that everyone can enjoy it.

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

# Great Bear Lake



Pepper is so curious about Great Bear Lake that she flies away from the Mackenzie River to get a good look at it. Woah! It is so big!

Great Bear Lake is the deepest lake in Canada and the biggest lake in the Northwest Territories. It is 320 kilometers long. That is about as far as driving from Yellowknife to Fort Providence.

I went swimming with Patrick in a lake and there was tons of mud. We started throwing mud at each other and had a lot of fun.

- Arianna Keevik, 7





# Word scramble



Put the letters in the right order to complete the sentence!

- ① The ..... {ZMEENAKCI}  
is the longest river in Canada.
- ② The Mackenzie River ..... {LOSFW}  
into the Arctic ..... {NEACO}
- ③ Many ..... {HIFS} love to swim in the Mackenzie River.
- ④ Many migratory birds are born in the Mackenzie  
..... {DTLEA} and migrate south during the fall,  
like the ..... {LSNDHIAL} crane, Peregrine  
..... {LNOCF A} and the ..... {DBLA} eagle.
- ⑤ Great ..... {RBAE} Lake is the biggest lake in  
the Northwest ..... {RITROETERIS}
- ⑥ People drive on the Mackenzie River on the  
..... {CEI} roads.

1. Mackenzie 2. Flows, Ocean 3. Fish 4. Delta, Sandhill, Falcon,  
Bald 5. Bear, Territories 6. Ice

# Pepper makes friends!

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Finally Pepper is getting closer to her family. She can see the Mackenzie Delta off in the distance but first she meets many more friends who tell her their favourite things about water.

"My favourite thing in the winter is going ice fishing near Inuvik. I like eating Coney. I make a hole with an auger. It takes a lot of work to make a hole. There are mostly two layers of ice. Some of the fish are very big and it's hard to pull them up."

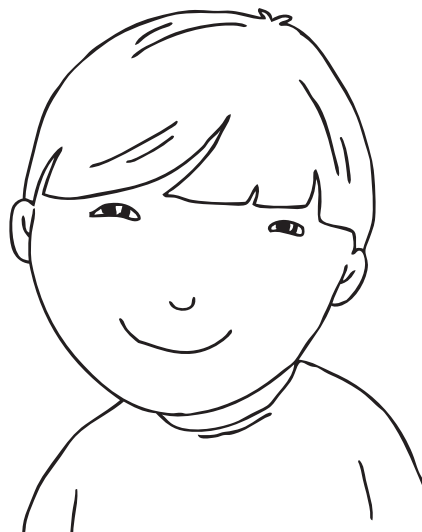
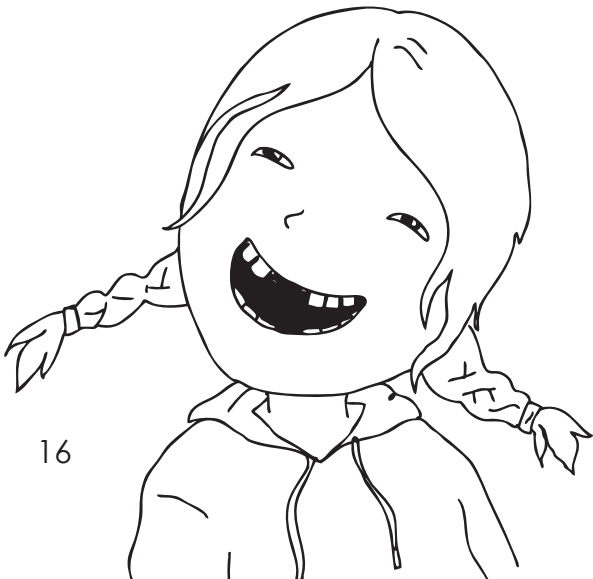
- Adriana H. 8

"Water is fresh in Inuvik, so fresh you would just get it with a cup."

- Justin Rogers 8

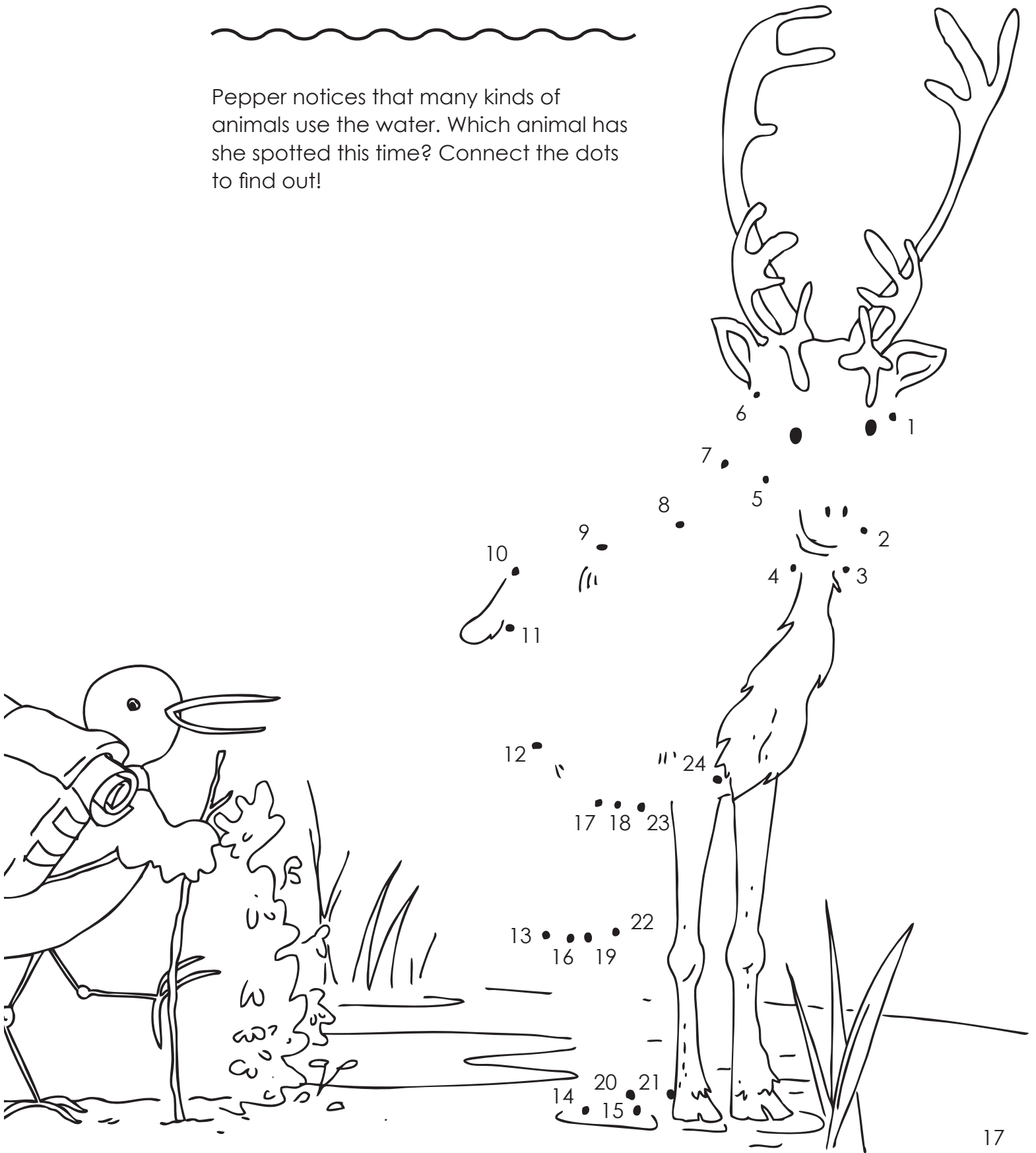
"The Mackenzie River travels all over the Northwest Territories. If a drop of water goes in it, it goes all the way to Inuvik."

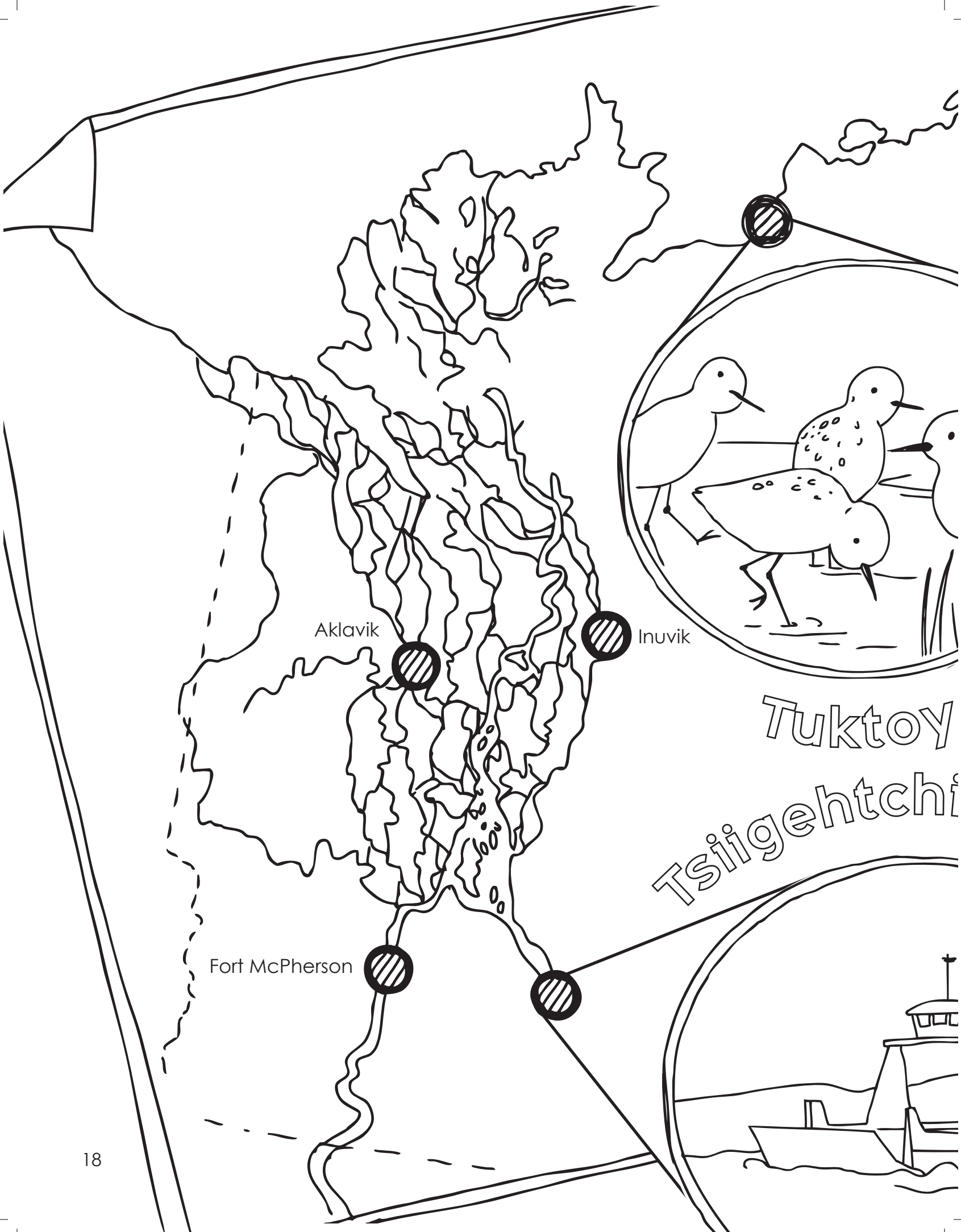
- Livia Miychener 8



# Connect the Dots

Pepper notices that many kinds of animals use the water. Which animal has she spotted this time? Connect the dots to find out!





Aklavik

Inuvik

Fort McPherson

Tuktoy  
Tsiigehtchi

# Pepper finds her family!

Finally, Pepper has made it to the end of the mighty Mackenzie River. She sees her family along the shore in Tuktoyaktuk. They are so happy to find her safe and sound. There they spend the summer enjoying the warmth of the northern sun and eating lots of insects that they find in the shallow ocean water.

"Once, me and my daduk were at the ocean side. I was helping get some fish out of a gillnet. Then my daduk told me to look, he said he saw beluga whales. I looked, I thought it was whitecaps. But I looked closer, than I saw that there were beluga whales."

- Allison Ross (age 9)



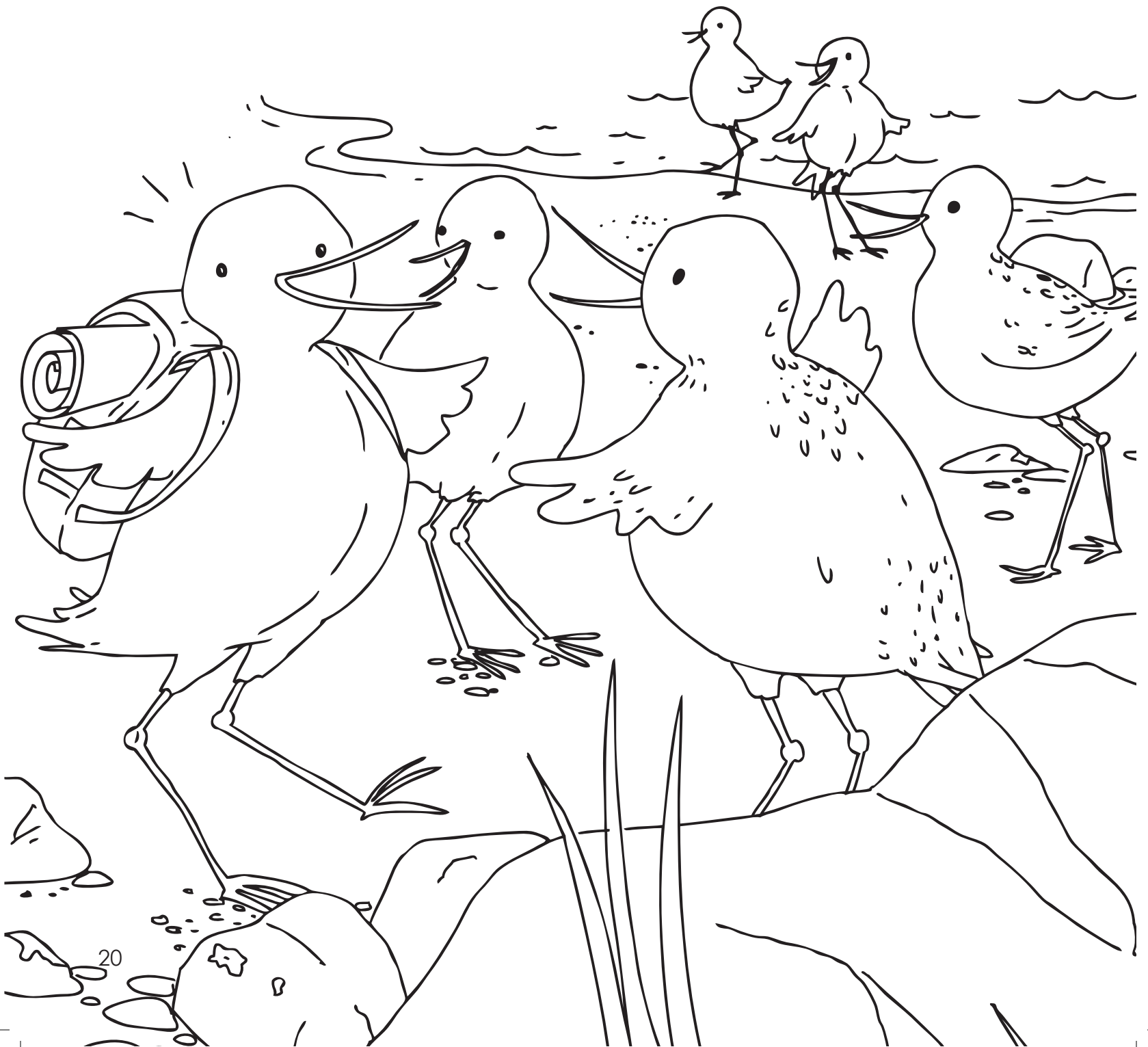
yaktuk

nic





Thanks for  
helping pepper  
get home!



# Answers

Page 9, Answers for Watershed Word Association:

Contaminant: something that dirties land, water or air and makes it dangerous / Groundwater: water that cannot be seen because it is flowing underneath the ground / Ecosystem: plants and animals that live together and help each other survive / Flow: the movement of water / Freshwater: water that is not salty / Lake: a large body of water / Precipitation: water that falls from the sky as snow or rain / River: a flowing, moving stream of water / Stream: a small, steady flowing body of water / Stewardship: caring for land and water / Tributary: a river that flows into a bigger river / Watershed: an area of land where every drop of water ends up in the same lake or river.

Page 12, Water Word Search:

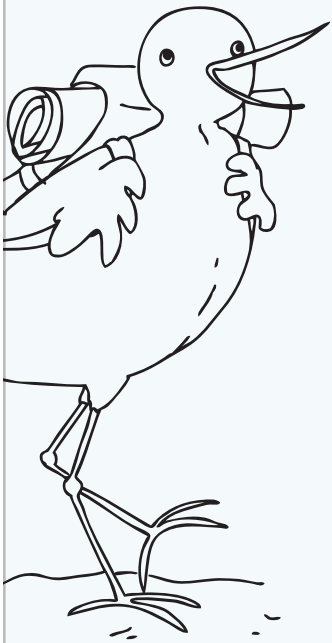
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N	F	N	F	I	W	Y	N	O	U	M	G	R	P	A	U	Y	A	I
T	R	Z	L	C	O	Z	L	M	E	C	I	I	P	M	N	H	E	M
R	T	U	O	K	O	R	N	S	E	C	O	S	Y	S	T	E	M	C
S	N	S	W	E	W	H	I	T	E	F	I	S	H	U	R	P	N	G
F	I	G	V	R	V	I	E	R	A	C	S	E	I	S	I	K	O	I
E	N	I	M	E	R	L	H	E	R	O	Z	M	P	S	I	R	N	N
D	F	V	E	L	D	V	E	A	C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





# Pepper & the Mighty Mackenzie

Join Pepper the sandpiper as she explores the mighty Mackenzie River. The whole family can read along with Pepper's adventures as she follows the flow of the Mackenzie River north to where her family is nesting on the shores of the Arctic Ocean. As you follow her journey, you will meet lots of friends and find many fun games - colouring, word searches, connect the dots and more!



An education project in support of the Northwest Territories Water Stewardship Strategy. Produced and written by Ecology North with support from the Government of the Northwest Territories. Designed by Jazmine Gardner, illustrations by Alison McCreesh.

For more information on water stewardship in the Northwest Territories, visit [www.nwtwaterstewardship.ca](http://www.nwtwaterstewardship.ca).

Ecology North is a charitable, non-profit organization formed in 1971 to support

sound environmental decision-making on an individual, community and regional level.

Through education, research, and project facilitation, Ecology North works with communities throughout Northwest Territories on topics related to water stewardship, food sustainability, waste reduction, and climate change adaptation and mitigation.

More information about Ecology North can be found at: [www.ecologynorth.ca](http://www.ecologynorth.ca).