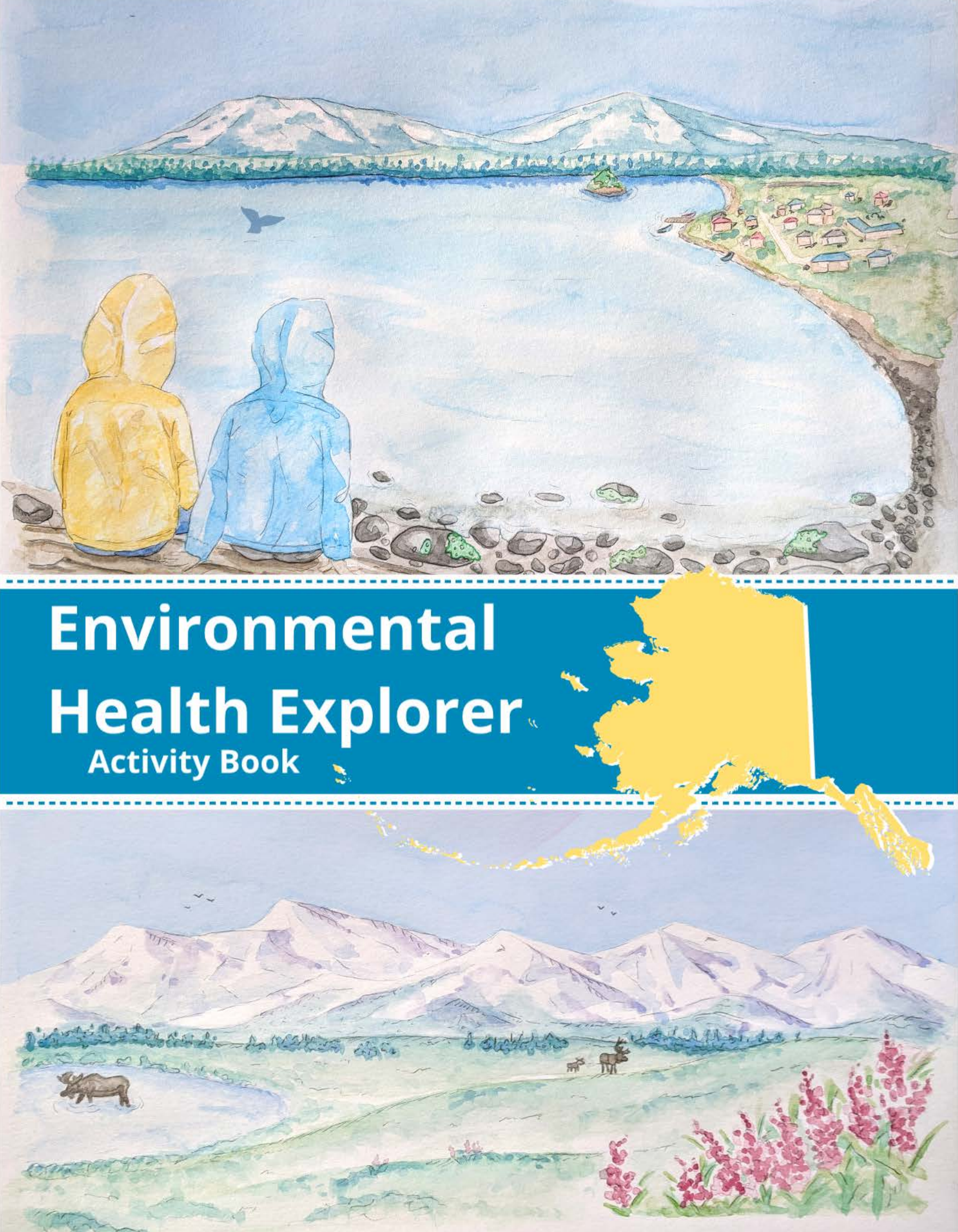
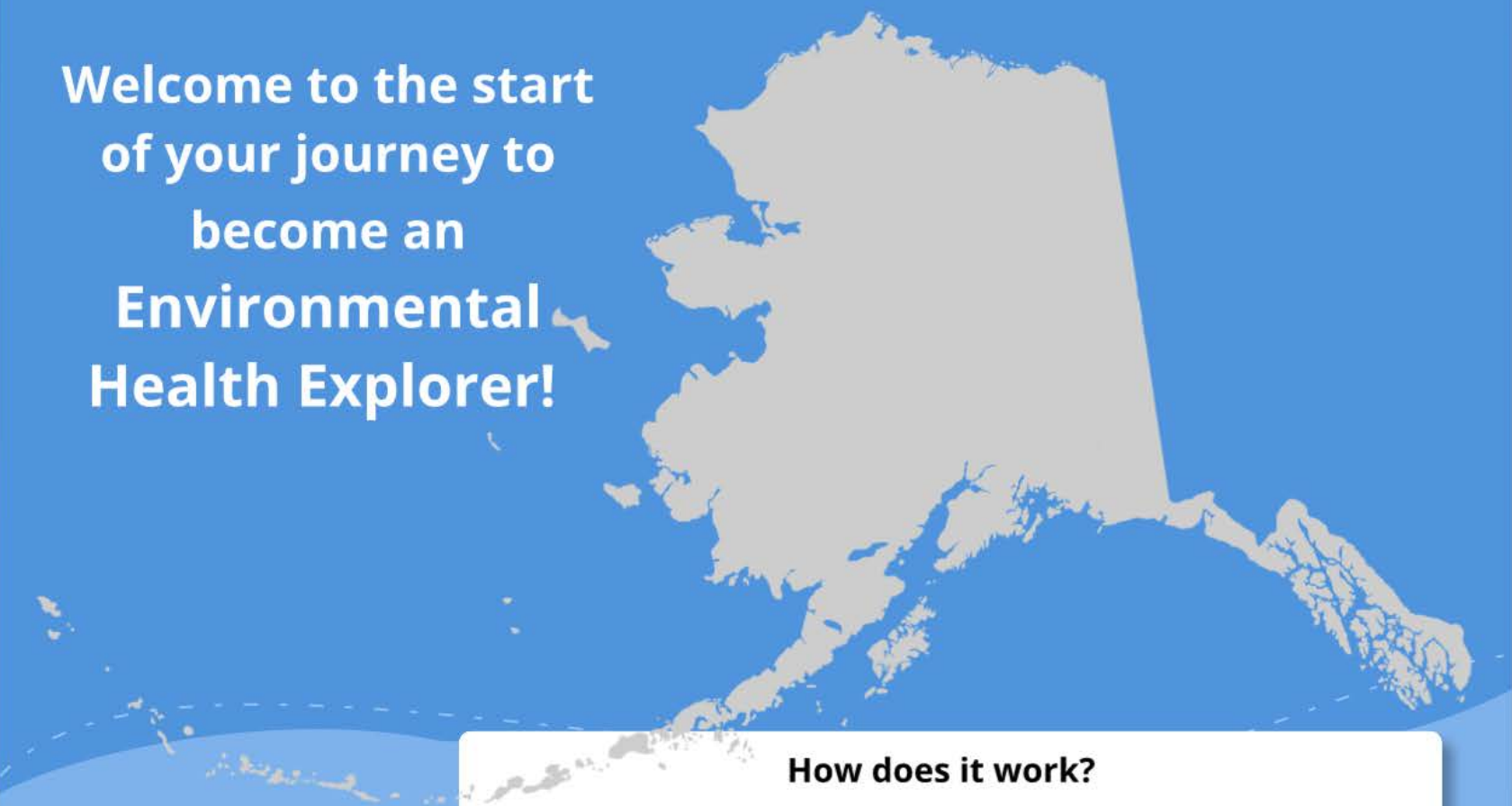
Environmental Health Explorer

Activity Book



Welcome to the start of your journey to become an Environmental Health Explorer!



How does it work?

1. Complete the activity pages in this book.
2. Show your completed activities to the same person that gave you the book to check your work - your tribal environmental coordinator, teacher, or other community member.
3. Receive your certificate and take the pledge to become an Environmental Health Explorer. Congratulations!

Try to complete at least as many activities as your age. Example: If you are 9 years old, try to complete at least 9 activity pages. If you want, try to complete the whole book!

Environmental Health Explorer Pledge

I am an Environmental Health Explorer.
I promise to continue learning about the health of the air, water, land, and places where I live.
I promise to teach others how to protect our environmental health.
And I promise to do my best to improve the environmental health of my community.

What is Environmental Health?

(in-vy-urn-MEN-tl helTH)

Environment- where we live. The air you breathe, water you drink, food you eat, and land and buildings you live in.

Health- how we feel. We are healthy when we feel good and are free from sickness or injury.

"This is what our Elders taught in our Qasiq's (men's house) in the days before contact with the outside world."
-Mike Williams Sr., Akiak

ENVIRONMENTAL HEALTH tries to make the places where we live healthy so we can stay healthy too. Environmental health workers help us have clean air, safe water, safe food, healthy homes, and healthy lands. Just like doctors and health aides, environmental health workers help keep us strong and healthy. They protect our health by keeping the environment healthy and removing dangers before they can make us sick. When environmental health workers are doing a really good job, you might even forget they are there!

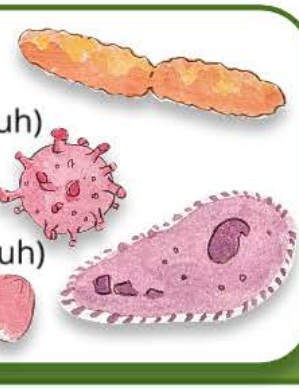
Important environmental health workers in your community might be: the person who keeps your drinking water clean and safe to drink, the people who take care of your trash and waste, or your tribal environmental coordinator, health aides, or teachers.

Your family also teaches you a lot about environmental health. Your family does a lot to try to keep you, your home, and your food safe to keep you healthy. Have they ever told you to wash your hands before eating or taught you the best way to catch, clean, and cook a fish? They might not know it, but that's all a part of environmental health!

What are germs?

Germs are tiny living things that live all around us. There are good germs and bad germs. Some of them, like the bacteria that live in our stomachs, actually help keep us healthy. But when bad germs, like the viruses that cause COVID-19, get inside our bodies we can get really sick.

Kinds of germs



bacteria (back-TEER-ee-uh)

viruses (VY-russ-iz)

protozoa (pro-toe-ZOH-uh)

fungi (FUN-guy)

Germs can come from other people, animals, or the environment like in food or water. Germs can get into our bodies through our mouths, noses, eyes, when we have a cut, or we can breathe them in.

Tilly's sister was sick with a cold and Tilly breathed in some of the bad germs that her sister coughed out. Now they are both sick, but they will feel better in a few days when their bodies fight off the bad germs.

Donald ate some food that wasn't properly cooked and had some bad germs in it. The bad germs got into his stomach. Now he feels sick and has to go to the bathroom a lot. Donald will feel better in a few days when his body gets rid of the bad germs.

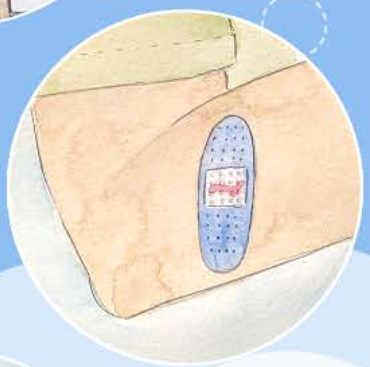
Draw a picture of what you think germs look like.

Why do we wash our hands?

Germs live all over the place, like on phones, tablets, door knobs, and tables. A lot of the time they get into our bodies by riding on our hands. Our hands always have lots of germs on them since we use them to touch so many things. When we touch our mouths, eyes, or even when we eat food with our hands, the germs can get into our bodies and make us sick.

Luckily we can get rid of most bad germs before they can get into our bodies by washing our hands with soap. And it only takes **20 seconds!**

Place a mark in the box if you should wash your hands before or after each activity. Some might be before AND after.



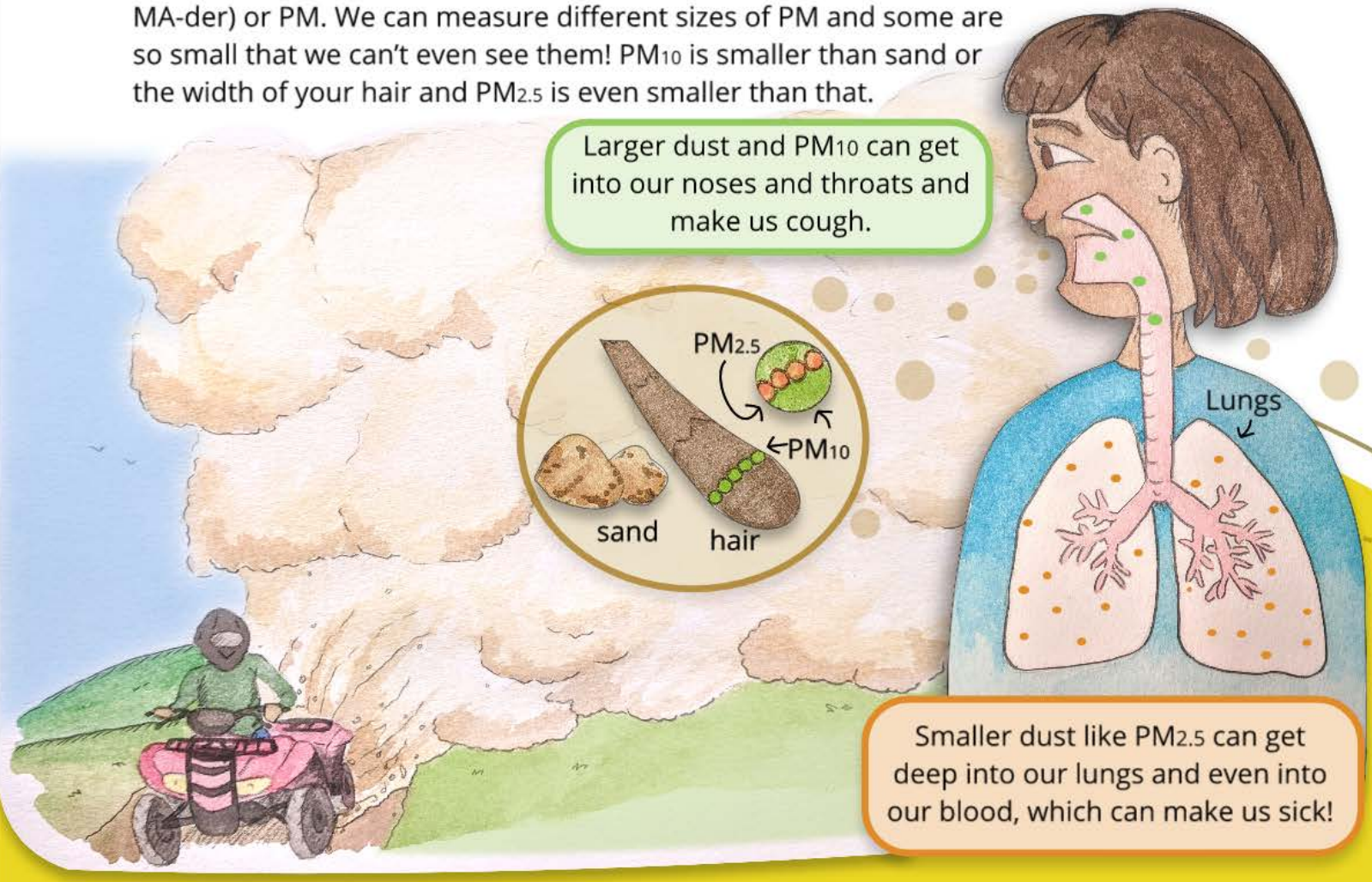
Before	After	
		Eating
		Cooking food
		Preparing fish
		Touching or treating a cut
		Going to the bathroom
		Blowing your nose or coughing
		Taking out the trash
		Playing outside
		Playing with your pet

Do you know how many things you touch with your hands in a day? 10? 100? 1,000? Try to count and write your number here.

_____

Why do some communities have lots of road dust in the summer?

Road dust is made up of little pieces of dirt, dust, and all sorts of things we don't want to breathe in. Road dust also has tiny specs of dust called particulate matter (par-TICK-u-lit MA-der) or PM. We can measure different sizes of PM and some are so small that we can't even see them! PM_{10} is smaller than sand or the width of your hair and $PM_{2.5}$ is even smaller than that.



The easiest way to prevent road dust is for everyone to just drive a little slower. When cars and ATVs drive slower, they throw less road dust up in the air. We can also bike or walk instead of driving somewhere, if its close by and safe.

Draw a picture or write a slogan or saying to show your family how they can help reduce road dust.

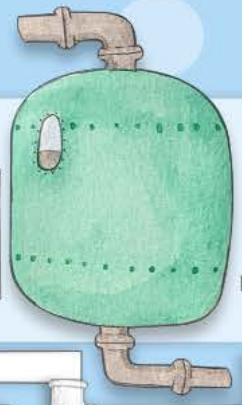
Where does our safe drinking water come from?

Bad germs can also live in water. So where does our safe drinking water come from? We have our water plant operators, the people who test and treat our water before it enters our homes, to thank for that. They take water from a river, a pond, or from underground and clean it for us so we can stay healthy!

In Alaska, people get their drinking water in many different ways. Some people have pipes that run water from the water plant into their home. Sometimes the water plant operator hauls water to people's homes or people haul water themselves.

Complete the water treatment maze from start to end to learn how your water becomes safe to drink!

Start

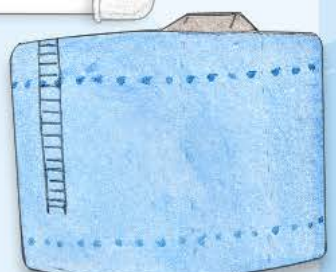


Your water goes through filters made of coal, sand, and other materials that trap dirt and germs.

A small amount of Chlorine (KLO-reen) is added to kill any dangerous germs that could make you sick.

All water has a mineral called Fluoride (FLOOR-ide) in it, but some places add more to help protect your teeth.

Your water plant operator takes samples of your water to make sure it stays safe to drink.



Your water gets stored in a large tank so it's ready when you need it.

End

Now your water is safe to drink and ready for you to use!

Do you know who your water plant operator is? Maybe the next time you see them you can remember to thank them for your safe drinking water!

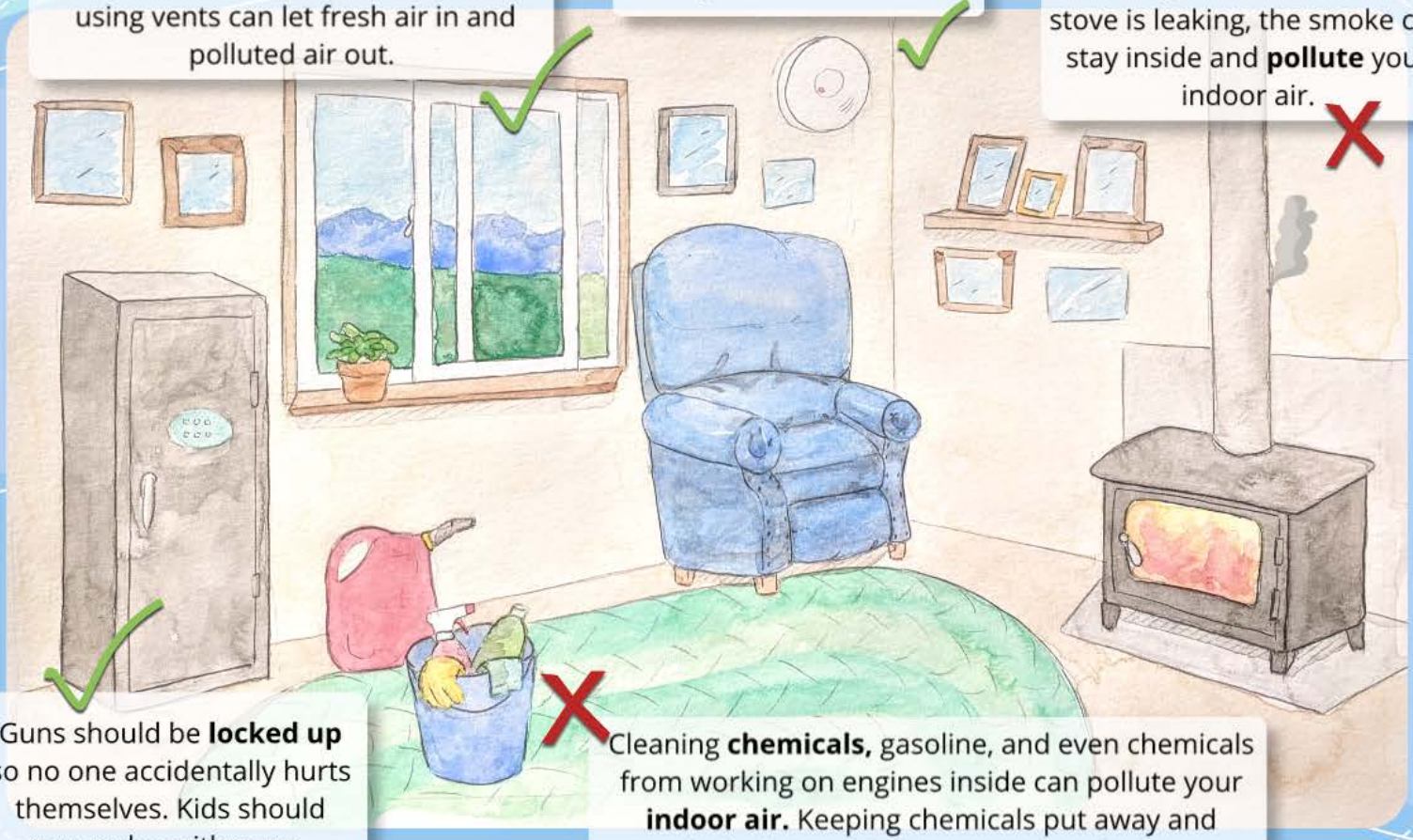
What is a healthy home?

We spend a lot of time in our homes, so they should be healthy too!

Homes need to **breathe,** just like we need to breathe. Opening **windows** or using vents can let fresh air in and polluted air out.

Smoke alarms can help **alert** you if there is a fire.

Smoke from **wood stoves** should go outside. If a wood stove is leaking, the smoke can stay inside and **pollute** your indoor air.



Guns should be **locked up** so no one accidentally hurts themselves. Kids should never play with guns.

Cleaning **chemicals,** gasoline, and even chemicals from working on engines inside can pollute your **indoor air.** Keeping chemicals put away and locked up can help prevent accidents.

Find the **8 bold words** from above in the word search below.

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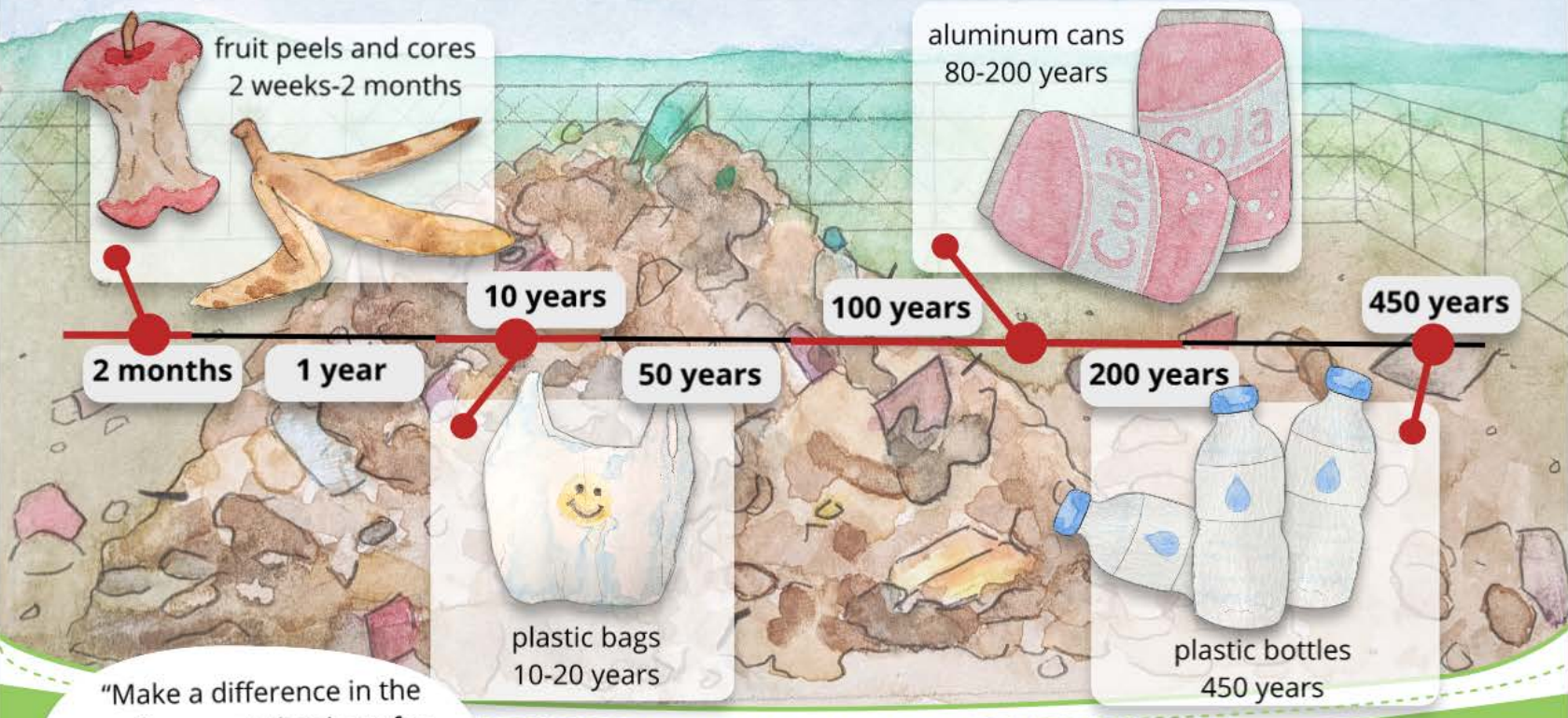
I	L	G	H	V	S	C	V	Q	D	M	G	C	R	P	C	J	Y	H	S	L	G	V	T	M	O	L	F
N	B	I	N	D	O	O	R	A	I	R	W	S	E	T	Z	A	M	F	W	R	J	E	N	A	D	U	C

How long does it take for our trash to break down?



"Make a difference in the environment that lasts for generations to come."
-Leilani Knight-McQueen, Juneau*

Some trash we throw away today will still be around many generations from now! How can we make less trash?

Reduce, Reuse, Recycle!

You REDUCE when you avoid making more trash. For example, when you drink water from home instead of soda in a can, when you buy fewer things or used items, or when you walk instead of drive.

You REUSE when you use something again. For example, when you wear secondhand or used clothes, use a refillable water bottle, or turn a used food container into a craft project.

You RECYCLE when you take old things and make them into new things. For example, when you take cans to your recycling center (if you have one) or when you use a notebook made from recycled paper.

Not every community has a recycling program, but every community can reduce and reuse!

Write 3 examples of things you can do in your community to help make less trash.

What are subsistence foods?

Subsistence foods are the foods that people living in Alaska have always relied on. They are foods like fish, seal, moose, and berries that are provided by the land and water. These foods are important for daily life and culture in Alaska. It's important to only take what you need and protect these plants and animals for future Alaskans.

Many subsistence foods are healthier than the food you can buy in a store. Subsistence foods are usually fresher and have more vitamins to help keep you healthy. People living in Alaska have been eating subsistence foods to stay healthy for thousands of years; long before grocery stores or snack foods.

"I enjoy living a subsistence lifestyle, hunter/gatherer. I know our animals, plants and birds are the healthiest food we can eat. I want my children to also enjoy."

-Lonnie Tebbits, Noorvik*

Draw a picture or try writing a haiku poem about your favorite subsistence food.

Haiku poems are made of 3 lines. The first line should have 5 syllables, the middle line should have 7 syllables, and last line should have 5 syllables again. Haiku poems don't even need to rhyme. Here's an example:

1 2 3 4 5
Berry picking time!
1 2 3 4 5 6 7
Salmonberries are the best,
1 2 3 4 5
I'll share them with you.

How can we clean polluted places?

Pollution is when something gets into the environment that is unhealthy, like spilled oil. This polluted site had dangerous old buildings, old oil tanks, and other hazards. The community wanted to clean it up. They got some help from environmental health workers. They removed the dangerous hazards and created a new safe place for the whole community. Now this is a place where the community can enjoy nature and celebrate their culture and community members.

Does your community have a polluted site like this? Draw or write about what a polluted place would look like after clean up if you were in charge.

What is climate change?

Climate describes usual weather conditions. Like how cold it is in the winter or how warm it is in the summer. Weather is what actually happens. When it rains, snows, or is windy. It used to be that our climate was pretty much the same, year after year. But now this is changing and the world is getting warmer with each passing year. This changes our environment. This is climate change.

In Alaska, many communities have started to see local effects of climate change. In some communities, winters aren't as cold, summers are more hot, and there may be less snow or rain. We need to understand climate change so that we can stay healthy. Have you seen signs of climate change in your community?

Ask an Elder what their community looked like when they were a kid.

- What things have changed?
- What things have stayed the same?
- How do they hope it looks in the future?
- How do you hope your community looks in the future?

Write or draw about changes you've seen or changes an Elder talked about.

"I want to be the generation to make a change."
-Megan Russell, Sand Point*

How do you prepare for an emergency?

An emergency can happen with no warning, so it's important to be prepared. Staying prepared is extra important in places with a lot of natural disasters. Alaska has many natural disaster emergencies like: earthquakes, wildfires, floods, volcanoes, and tsunamis.

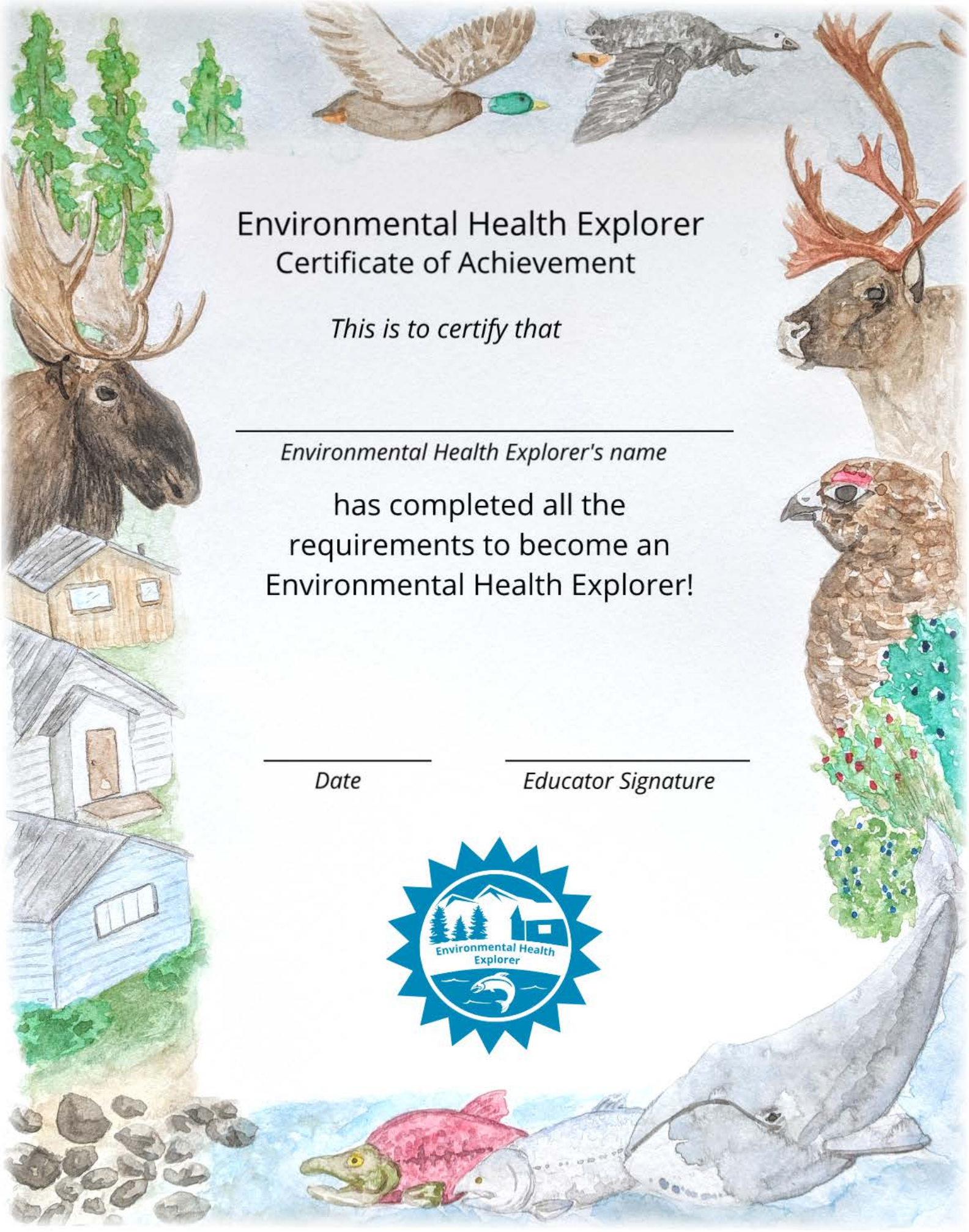
One way to be prepared is to have an emergency plan with your family so you know what to do during an emergency. What is your escape route during a fire? What should you do during an earthquake? If you don't know, ask your family about your emergency plan.

Another way to be prepared is to have an emergency bag packed and ready to leave your house. Below, circle the things you would put in your emergency bag.

Environmental Health BINGO!

Mark a square off if you see or do what's written in the box. Get 5 in a row up and down, across, or diagonally to get Environmental Health BINGO!

B	I	N	G	O
Wash your hands for 20 seconds.	Recycle or reuse a plastic bottle.	Pick up a piece of trash off the ground.	Recycle or reuse an aluminum or tin can.	Find out if your community's water source is surface water or ground water.
Recycle or reuse a glass container.	Tell someone a tip to help improve their indoor air.	Walk somewhere instead of riding in a car or ATV.	Take a shorter shower than normal.	Open a window or use vent when showering.
Thank your teacher or IGAP coordinator for protecting your environment.	See your community's water plant.	**Free Square**	Thank your water plant operator for your safe drinking water.	Eat a food that was grown in Alaska.
Catch, pick, or eat a subsistence food.	Use a reuseable bag when shopping.	Turn off lights when you leave a room.	Tell someone a tip to help reduce road dust.	Recycle or reuse a cardboard item.
Ask about your family's emergency plan.	Thank your health aide for protecting your health.	Clean a room in your house.	Recycle or reuse a paper item.	Tell someone a tip to improve environmental health.



Environmental Health Explorer
Certificate of Achievement

This is to certify that

_____

Environmental Health Explorer's name

has completed all the requirements to become an Environmental Health Explorer!

_____ _____

Date *Educator Signature*

Environmental Health Explorer

For more information about environmental health topics, please contact your local or regional environmental health department or ANTHC's Community Environment and Health Department.

Environmental Health Explorer

The *Environmental Health Explorer Activity Book* was created by the ANTHC Community Environment and Health Department.

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* These quotes were provided by the *7 Generations: Addressing Village Environmental Issues for the Future Generations of Rural Alaska Manual.*

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